

Mount Alexander Shire Council
Budget Report
2024-2025

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Mayor's Introduction

On behalf of Council, I am pleased to share the 2024/2025 Budget with you. Councillors and council staff have worked thoughtfully and co-operatively to create a budget that reflects needs and priorities, informed by the community. This year's \$47.90 million budget outlines the resources required to continue delivering a significant number of services to our community, and to fund a range of capital works projects throughout the shire.

I don't need to remind anyone about the impact of increased prices in general; as an organisation delivering vital works and services to our community, we feel it too. This year's budget process has again been challenging due to the sheer number of potential projects that could be funded. Unfortunately, we do not have enough funds to do the work that everyone would like us to. We've committed to maintaining current service levels while continuing to maintain infrastructure and we are leveraging funding from other levels of government as much as we can.

We've balanced fiscal responsibility with service delivery priorities, and our financial position remains sound with a positive working capital ratio that supports our ability to meet financial commitments as they fall due, coupled with a low level of debt. Our budget includes an allocation of \$9.94 million for capital works, to improve infrastructure such as roads, bridges, drains, and footpaths, as well as strong investment in our community facilities.

Some highlights of the capital works program include:

- A number of recreation projects including commencement of an upgrade to the Campbells Creek Recreation Reserve pavilion (\$806k, subject to funding), and design works for future year construction, or renovation, of public toilets in Norwood Hill, Newstead, and Harcourt (\$66k).
- Progressing multi-year projects including construction of the Castlemaine and Campbells Creek levees (\$2.17m), and the continued restoration of the former Wesleyan Church in Chewton (\$322k).
- Continuing a number of annual renewal and replacement programs across a range of assets including community buildings (\$556k), plant and machinery (\$1.33m), swimming pools (\$142k), road resheeting and resealing (\$1.91m).
- Several minor projects, including investigation of streetscape improvements for the smaller towns within the shire (\$86k), footpath design and renewal works (\$336k), replacement of a playground (\$218k), and major patching of the road network (\$337k).
- Year one, of a two-year project, to commission a public art installation (\$134k).

We are again seeking grant income to help fund our capital works program, and expect to receive \$3.83 million from both the State and Federal governments for a number of projects. We are very appreciative of the ongoing support of both other tiers of government that allows us to improve the services and facilities for our shire.

Council's focus for the next year will also be on delivering projects and services that continue to meet the needs of our community as identified in the Council Plan 2021-2025. This year's budget will be delivered in the final year of that plan, and the budget contains several new and continuing initiatives. These include:

- Increasing the budget allocation to a number of tree management programs, to ensure best practice tree management and to mitigate potential risks associated with trees in public places.
- Increasing the annual allocation to \$100k, for this year and next year, to the Castlemaine Art Museum, to support them to make the necessary operational and strategic changes to strengthen the future of this much-valued organisation.
- Continued budget allocations to implement actions arising from:
 - Council's Disability Action Plan (2022-2026) to improve accessibility and inclusion for people living with a disability.
 - Strategies contained within Council's Early Years Plan 2022-2026, which focuses on children aged 0-8 and their families, and Middle Years Plan 2023-2026 (for children aged 8-12 and their families).

- Progressing our work on affordable housing solutions within the Shire, which is a priority for all Councillors, and includes an inaugural allocation of \$500,000 to the Mount Alexander Affordable Housing Trust.
- Allocating \$40,000 to continue our support of the Castlemaine-Maryborough Rail Trail Group in their endeavours to transform the disused rail corridor connecting the two towns into a world-class recreational trail.

We appreciate the feedback on budget ideas that we received from community members, predominately through our "Shape Mount Alexander" website. Preservation of our Shire's rich building heritage and surrounding natural environment were the important themes that we heard from contributors (in addition to roads, recreation, parks, gardens, and arts and culture) and I'm pleased to say that we've included support for heritage studies and digital mapping of environmental assets within the budget.

The budget includes an increase to average rates income of 2.75%, in line with the rate cap set by the Victorian Government. Waste charges have been increased by 2.75% as well, to reflect the rising costs of waste management. Making decisions on rates and service charges is never easy, and Councillors have spent much time discussing, and reviewing, what is appropriate for our community and what is financially sustainable for the organisation, both now and in future.

While Council has proposed an increase to average rates income of 2.75%, the actual increase for each ratepayer will vary, based on the amount of their individual property valuation. The Victorian Government values all properties annually, resulting in a redistribution of rates payable, based on the change to a property's value.

The budget has been developed through a rigorous process of consultation and review by staff and Councillors, and Council endorses it as financially responsible. Our decisions were heavily informed by submissions and feedback from ratepayers and residents (as well as our obligations to meet legislative requirements, including the Fair Go Rates System).

I encourage you to read this document to understand the significant investment in capital works and the programs and services we will deliver in the financial year ahead. Thank you to everyone who made a submission during our initial stage of budget consultation - we appreciate your time and engagement more than you know.

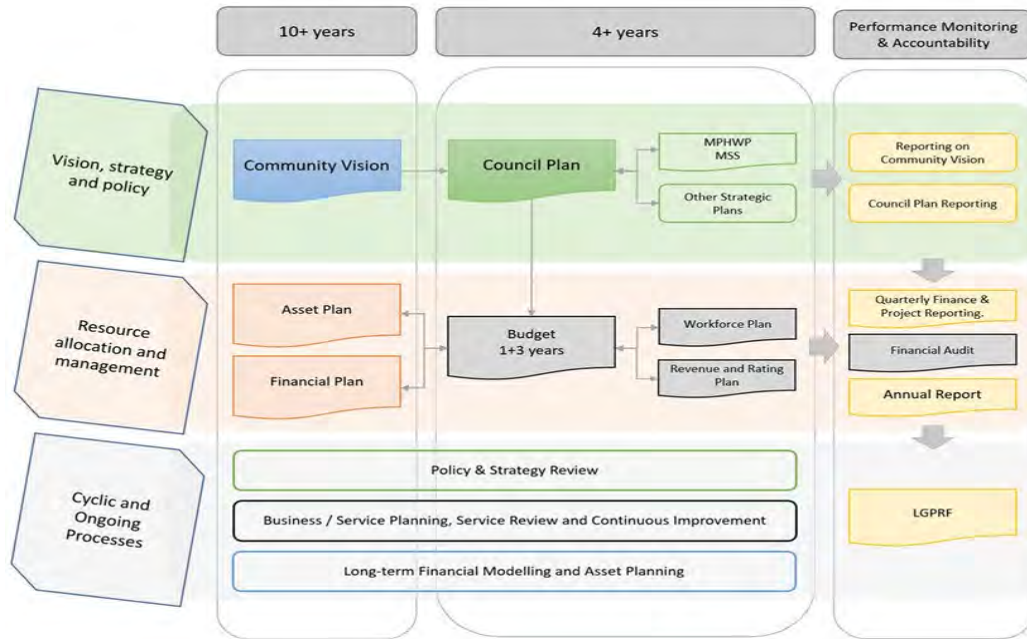
Cr Matthew Driscoll
Mayor

1. Link to the Integrated Strategic Planning and Reporting Framework

This section describes how the Budget links to the achievement of the Community Vision and Council Plan within an overall integrated strategic planning and reporting framework. This framework guides the Council in identifying community needs and aspirations over the long-term (Community Vision and Financial Plan), medium-term (Council Plan, Workforce Plan, and Revenue and Rating Plan) and short-term (Budget) and then holding itself accountable (Annual Report).

1.1 Legislative planning and accountability framework

The Budget is a rolling four-year plan that outlines the financial and non-financial resources that Council requires to achieve the strategic objectives described in the Council Plan. The diagram below depicts the integrated strategic planning and reporting framework that applies to local government in Victoria. At each stage of the integrated strategic planning and reporting framework there are opportunities for community and stakeholder input. This is important to ensure transparency and accountability to both residents and ratepayers.



Source: Department of Jobs, Precincts and Regions

The timing of each component of the integrated strategic planning and reporting framework is critical to the successful achievement of the planned outcomes.

1.1.2 Key planning considerations

Service level planning

Although councils have a legal obligation to provide some services - such as animal management, local roads, food safety and statutory planning - most council services are not legally mandated, including some services closely associated with councils, such as libraries, building permits and sporting facilities. Further, over time, the needs and expectations of communities can change. Therefore councils need to have robust processes for service planning and review to ensure all services continue to provide value for money and are in line with community expectations. In doing so, councils should engage with communities to determine how to prioritise resources and balance service provision against other responsibilities such as asset maintenance and capital works.

Community consultation needs to be in line with a council's adopted Community Engagement Policy and Public Transparency Policy.

1.2 Our purpose

Our Vision

Working together for a healthy, connected shire

Our Principles

We are engaging genuinely with the community

We are always improving

We are delivering together

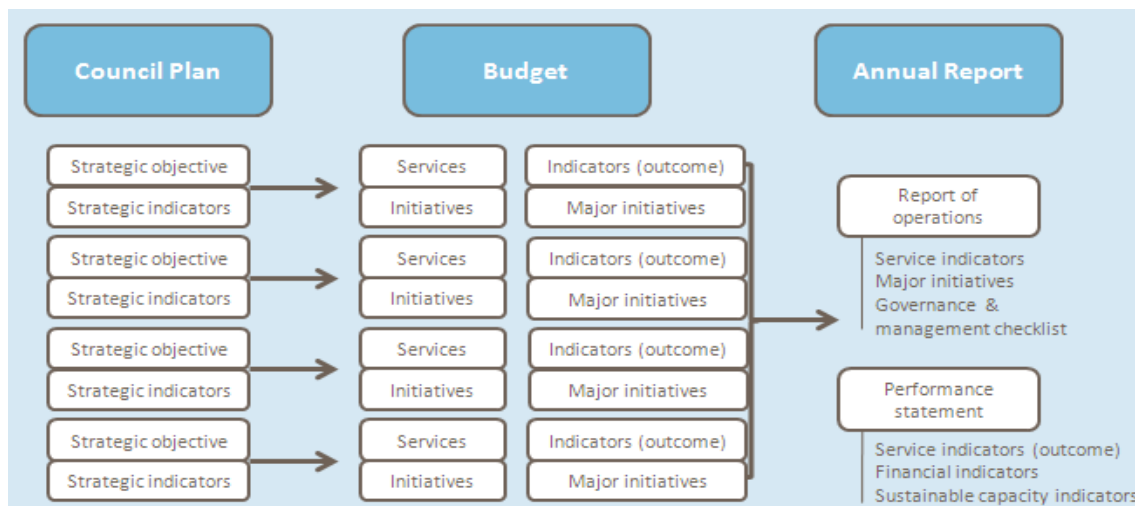
1.3 Strategic objectives

Council delivers activities and initiatives under major service categories. Each contributes to the achievement of one of the pillars as set out in the four-year Council Plan 2021-2025. The three pillars described in the Council Plan are detailed below.

Strategic Objective	Description
A healthy, connected, and inclusive community	<ul style="list-style-type: none">- services in our community are accessible and coordinated- our community is inclusive and connected- our community feels safe, regardless of identity or circumstance- our community is physically and mentally healthy
An environment for people and nature	<ul style="list-style-type: none">- we are working locally to address the climate emergency- we are maintaining, improving, and celebrating our places and spaces- our community is growing in harmony with nature- we are focused on the housing affordability challenge in our community- we are facilitating managed growth of our towns while protecting natural assets
A resilient and growing local economy	<ul style="list-style-type: none">- our local economy is diverse and resilient- we are supporting continuous learning and personal growth- we are helping businesses make their work simpler and more sustainable- we are attracting and building investment in our cultural and creative community

2. Services and service performance indicators

This section provides a description of the services and initiatives to be funded in the Budget for the 2024/25 year and how these will contribute to achieving the strategic objectives outlined in the Council Plan. It also describes several initiatives and service performance outcome indicators for key areas of Council's operations. Council is required by legislation to identify major initiatives, initiatives and service performance outcome indicators in the Budget and report against them in their Annual Report to support transparency and accountability. The relationship between these accountability requirements in the Council Plan, the Budget and the Annual Report is shown below.



Source: Department of Jobs, Precincts and Regions

2.1 A healthy, connected, and inclusive community

Population | Health | Wellbeing | Support | Resilience | Partnerships | Social services | Connections | Venues | Events | Safety | Communication

Services

Service area	Description of services provided		2022/23 Actual \$'000	2023/24 Forecast \$'000	2024/25 Budget \$'000
Aged and Disability Services	Assesses and plans services for older people and people with disabilities to enable them to remain living independently. This includes services for home care, personal care, respite, delivered meals, home safety, as well as social support programs for isolated older people.	<i>Inc</i>	2,722	2,651	3,780
		<i>Exp</i>	(2,824)	(3,055)	(3,636)
		<i>Surplus / (deficit)</i>	(101)	(405)	144
Community Safety and Amenity	Improves safety and amenity in the shire by supervising school crossings, controlling domestic animals and livestock, regulating parking, issuing local law permits and infringement notices, and providing information and advice to the community.	<i>Inc</i>	305	439	462
		<i>Exp</i>	(887)	(972)	(1,041)
		<i>Surplus / (deficit)</i>	(582)	(533)	(578)
Communication	Provides information to the community about our programs and services through media, social media, advertising, newsletters, and web. Assists and provides advice to staff on sharing information and engaging with the community.	<i>Inc</i>	1	-	-
		<i>Exp</i>	(500)	(481)	(687)
		<i>Surplus / (deficit)</i>	(499)	(481)	(687)
Community Partnerships	Works with local residents, community organisations, and service providers to build community capacity and strengthen our engagement with the community.	<i>Inc</i>	34	-	-
		<i>Exp</i>	(674)	(727)	(669)
		<i>Surplus / (deficit)</i>	(640)	(727)	(669)

Service area	Description of services provided		2022/23 Actual \$'000	2023/24 Forecast \$'000	2024/25 Budget \$'000
Venue Coordination and Events	Provides hire and management services for public venues, support of events within the shire, as well as cleaning and maintenance of public restrooms.	<i>Inc</i>	39	12	12
		<i>Exp</i>	(871)	(910)	(937)
		<i>Surplus / (deficit)</i>	(832)	(898)	(925)
Customer Service	Assists customers with general enquiries, shares information, registers community requests for service, and processes payments.	<i>Inc</i>	-	-	-
		<i>Exp</i>	(434)	(461)	(522)
		<i>Surplus / (deficit)</i>	(434)	(461)	(522)
Emergency Management	Develops and implements strategies to increase the emergency management capability of the shire and community. Undertakes prevention measures to reduce risk from all natural disasters, particularly fire and flood.	<i>Inc</i>	963	290	129
		<i>Exp</i>	(377)	(1,230)	(369)
		<i>Surplus / (deficit)</i>	586	(939)	(240)
Environmental Health	Conducts inspections and maintains registrations for food and public health businesses, including registration and approval of temporary food permits, assessment of septic tank applications, as well as investigation of complaints.	<i>Inc</i>	178	196	188
		<i>Exp</i>	(342)	(391)	(379)
		<i>Surplus / (deficit)</i>	(164)	(194)	(191)
Executive	Strategically manages the organisation in keeping with the requirements of good governance. This function also includes projects managed by the Executive team, including: - commitments to address the housing affordability challenge in our community, including an affordable housing trust. - supporting local resources for homelessness services. - facilitating projects on behalf of Healthy Loddon Campaspe, including the Healthy Schools project.	<i>Inc</i>	21	-	-
		<i>Exp</i>	(1,400)	(1,588)	(2,060)
		<i>Surplus / (deficit)</i>	(1,379)	(1,588)	(2,060)
Library	Provides accessible information and resources for the recreational, cultural, educational and social development of our community. The service is provided by Goldfields Library Corporation via the library located in Castlemaine.	<i>Inc</i>	0	5	5
		<i>Exp</i>	(550)	(569)	(586)
		<i>Surplus / (deficit)</i>	(549)	(564)	(581)
Early Years	Provides consultations, information, referrals, advice and support for children from birth to school age, and their families.	<i>Inc</i>	518	342	335
		<i>Exp</i>	(574)	(788)	(514)
		<i>Surplus / (deficit)</i>	(55)	(446)	(179)
People and Culture	Provides strategic and operational organisation capability support including human resources and industrial relations strategies, policies and procedures, as well as training and development opportunities.	<i>Inc</i>	-	-	-
		<i>Exp</i>	(1,049)	(981)	(1,111)
		<i>Surplus / (deficit)</i>	(1,049)	(981)	(1,111)
Records	Receives, stores, retrieves and archives records and ensures legislative and privacy requirements are met.	<i>Inc</i>	-	-	-
		<i>Exp</i>	(283)	(322)	(369)
		<i>Surplus / (deficit)</i>	(283)	(322)	(369)
Youth Development	Works in partnership with young people and the community, organisations, and service providers to support and promote initiatives, activities, and programs that strengthen young people's connections and place within the community.	<i>Inc</i>	143	98	98
		<i>Exp</i>	(263)	(286)	(232)
		<i>Surplus / (deficit)</i>	(120)	(189)	(135)

Other Initiatives

- 1) Investing in the Mount Alexander Affordable Housing Trust, to contribute to affordable and social housing - \$500,000
- 2) As a precursor to our customer engagement strategy, investing in minor improvements to the phone system - \$39k.
- 3) Implementing actions from our Disability Action Plan 2023-2027 (\$15k), Early Years Plan 2022-2025 (\$15k) and Middle Years Plan 2023-2026 (\$10k).
- 4) On election of a new Council in late-2024, creating a new four-year Council Plan and Municipal Public Health and Wellbeing Plan - \$100k.
- 5) Support short term coordination of homelessness services across Mount Alexander Shire - \$61k.

Service Performance Outcome Indicators

Service	Indicator	2020/21 Actual	2021/22 Actual	2022/23 Actual
Libraries*	Participation	23.10%	20.22%	17.85%
Animal management*	Health and safety	100.00%	100.00%	100.00%
Food safety*	Health and safety	100.00%	16.22%	61.54%
Maternal and child health*	Participation	86.50%	87.34%	84.31%
Maternal and child health*	Participation	77.78%	96.77%	87.88%

* refer to table at end of section 2.3 for information on the calculation of Service Performance Outcome Indicators

2.2 An environment for people and nature

Buildings | Sport and recreation facilities | Roads | Bridges | Footpaths | Drainage | Trails | Playgrounds | Gardens | Natural environment | Waste | Recycling | Climate

Services

Service area	Description of services provided		2022/23 Actual \$'000	2023/24 Forecast \$'000	2024/25 Budget \$'000
Active Communities	Provides advice on local recreational needs and facility use and planning, support for sports and recreation clubs, while running special projects and events to promote and develop healthy physical activity in the shire.	<i>Inc</i>	3	-	-
		<i>Exp</i>	(309)	(308)	(306)
		<i>Surplus/ (deficit)</i>	(306)	(308)	(306)
Community Buildings and Property Management	Prepares maintenance and management programs for our buildings, pavilions and other community assets to maximise value and use. The service also facilitates management and strategic planning for our building, land, commercial and community leases and licences.	<i>Inc</i>	279	184	304
		<i>Exp</i>	(895)	(1,147)	(1,352)
		<i>Surplus/ (deficit)</i>	(616)	(963)	(1,048)
Engineering	Designs, contract manages, and supervises our capital works program. Undertakes safety and condition inspections of roads, bridges, and footpaths, and maintains the asset management system while overseeing community infrastructure development.	<i>Inc</i>	828	1,300	1,375
		<i>Exp</i>	(833)	(997)	(1,035)
		<i>Surplus/ (deficit)</i>	(5)	303	340
Climate Change	Develops environmental policy, coordinates and implements environmental projects, and works with other services to improve our environmental performance, including climate change initiatives.	<i>Inc</i>	92	-	-
		<i>Exp</i>	(219)	(203)	(236)
		<i>Surplus/ (deficit)</i>	(127)	(203)	(236)

Service area	Description of services provided		2022/23	2023/24	2024/25
			Actual \$'000	Forecast \$'000	Budget \$'000
Parks and Gardens	Manages key parks and recreation areas including Castlemaine Botanical Gardens, Maldon Gardens, and Victory Park, as well as managing street trees, tree planting and removal, in addition to planning and strategies.	<i>Inc</i>	144	40	40
		<i>Exp</i>	(2,636)	(2,734)	(2,971)
		<i>Surplus/ (deficit)</i>	(2,492)	(2,694)	(2,931)
Recreation Facilities	Oversees the management, use and development of sports grounds and pavilions. Provides advice on recreational needs, facility use, and planning to provide access to well-maintained sporting and recreation facilities.	<i>Inc</i>	436	314	314
		<i>Exp</i>	(1,228)	(1,238)	(1,247)
		<i>Surplus/ (deficit)</i>	(792)	(924)	(933)
Operations	Undertakes maintenance and of our roads, bridges, paths and drainage. This includes maintenance grading, patrol patching, periodic gravel and bituminous resurfacing, road and intersection renewals, road markings, signage, drain clearance, and street sweeping.	<i>Inc</i>	5,741	1,367	3,441
		<i>Exp</i>	(6,225)	(5,259)	(4,782)
		<i>Surplus/ (deficit)</i>	(485)	(3,892)	(1,341)
Waste Management	Manages the waste management facilities at Castlemaine and Maldon. Provides kerbside waste and recycling collection, and develops and implements waste and resource recovery strategies.	<i>Inc</i>	1,469	480	463
		<i>Exp</i>	(3,286)	(4,345)	(4,926)
		<i>Surplus/ (deficit)</i>	(1,817)	(3,865)	(4,463)

Major Initiatives

- 1) Continuing the multi-year project to construct levees in Castlemaine and Campbells Creek - \$2.17 million.
- 2) Continuing the multi-year project to upgrade Diamond Gully Road and associated intersection - \$701k.
- 3) Investigation works for installation, or renovation, of public toilets facilities across three sites (Norwood Hill, Stanley Park, and Newstead)- \$66k.
- 4) Annual replacement of a playground and open space assets - \$403k.
- 5) Subject to grant funding, commencement of multi-year upgrade works to the Campbells Creek Recreation Reserve pavilion - \$806k.
- 6) Annual programs to reseal local roads and resheet gravel roads - \$1.91 million.
- 7) Continue improvement works at the former Wesleyan Church in Chewton - \$322k.
- 8) Investigation and design works for sport and recreation facilities, subject to grant funding - \$81k.
- 9) Accessibility upgrades to community buildings - \$275k.
- 10) Renewal of community buildings - \$281k.

Other Initiatives

- 11) In accordance with our Building Asset Management Plan, increasing the allocation for building maintenance - \$50k.
- 12) Risk management of trees within the Shire, including Camp Reserve and Gingell Street Castlemaine - \$200k.
- 13) Purchasing Australian carbon credits to offset the organisation's emissions - \$53k.
- 14) Removal of asbestos from community buildings - \$74k.
- 15) Digital mapping of natural environment assets - \$47k.

Service Performance Outcome Indicators

Service	Indicator	2020/21	2021/22	2022/23
		Actual	Actual	Actual
Roads*	Satisfaction	50	56	51
Waste collection*	Waste diversion	36.30%	34.08%	34.09%
Aquatic facilities*	Utilisation	0.90	0.78	1.03

* refer to table at end of section 2.3 for information on the calculation of Service Performance Outcome Indicators

2.3 A resilient and growing local economy

Business | Economy | Jobs | Education | Creativity | Innovation | Tourism | Culture | Heritage | Development | Corporate

Services

Service area	Description of services provided		2022/23 Actual \$'000	2023/24 Forecast \$'000	2024/25 Budget \$'000
Building Services	Provides building compliance services including emergency management responsibilities, fire safety inspections, swimming pool barrier audits, and investigation of complaints and illegal works.	<i>Inc</i>	118	171	178
		<i>Exp</i>	(456)	(374)	(363)
		<i>Surplus/ (deficit)</i>	(339)	(203)	(185)
Cultural Development	Provides advocacy and support to help develop arts, cultural, and creative activities across the shire.	<i>Inc</i>	-	-	-
		<i>Exp</i>	(192)	(237)	(309)
		<i>Surplus/ (deficit)</i>	(192)	(237)	(309)
Economic Development	Undertakes initiatives to build the local economy including support for the growth of local businesses and industry networks along with reducing barriers for business development. Works towards creating and maintaining an environment that ensures the shire is a desirable location for people to visit, work, live and invest.	<i>Inc</i>	1	20	-
		<i>Exp</i>	(503)	(627)	(532)
		<i>Surplus/ (deficit)</i>	(503)	(607)	(532)
Financial Services	Manages finances through the preparation and monitoring of the budget, payment of accounts, procurement of services, raising and collection of rates and charges, and valuation of properties.	<i>Inc</i>	1,201	1,547	1,095
		<i>Exp</i>	(1,608)	(1,648)	(1,883)
		<i>Surplus/ (deficit)</i>	(407)	(100)	(788)
Governance	Coordinates Council meetings, Councillor related activities, and provides support and oversight of compliance with the Local Government Act.	<i>Inc</i>	34	-	-
		<i>Exp</i>	(1,658)	(1,831)	(2,126)
		<i>Surplus/ (deficit)</i>	(1,624)	(1,831)	(2,126)
Information Technology Services	Provides, supports, and maintains cost effective communications and IT systems enabling Council to deliver services in a productive and efficient way.	<i>Inc</i>	-	-	-
		<i>Exp</i>	(1,589)	(1,465)	(1,725)
		<i>Surplus/ (deficit)</i>	(1,589)	(1,465)	(1,725)
Planning Services	Manages land use and development in the municipality in accordance with the Mount Alexander Planning Scheme. The service provides planning information and advice, assesses planning permit applications, and undertakes compliance activities. Develops and implements urban and rural planning strategy and maintains an effective planning scheme through regular reviews and planning scheme amendments, while ensuring appropriate support for our heritage.	<i>Inc</i>	1,222	487	474
		<i>Exp</i>	(1,831)	(1,720)	(1,619)
		<i>Surplus/ (deficit)</i>	(609)	(1,233)	(1,145)

Service area	Description of services provided		2022/23	2023/24	2024/25
			Actual	Forecast	Budget
			\$'000	\$'000	\$'000
Tourism Services	Provides visitor information, marketing and industry development for the shire. Supports economic and social benefits of tourism through operation of Visitor Information Centres in Castlemaine and Maldon. Provides accommodation and tour booking services.	<i>Inc</i>	126	74	74
		<i>Exp</i>	(390)	(379)	(389)
		<i>Surplus/ (deficit)</i>	(264)	(305)	(316)

Other Initiatives

- 1) Implementation of strategic planning projects, plus the Castlemaine Heritage Study - \$105k.
- 2) Creating a Rural Land Strategy - \$20k.
- 3) Support for the Castlemaine-Maryborough Rail Trail to further progress its development - \$40,000
- 4) One-off increase of \$69,250 to the contribution to the Castlemaine Art Museum for 2024/25 and 2025/26 to bring the annual contribution to \$100,000 p.a.

Service Performance Outcome Indicators

Service	Indicator	2020/21	2021/22	2022/23
		Actual	Actual	Actual
Governance*	Satisfaction	49	55	50
Statutory Planning*	Decision making	33.33%	75.00%	66.67%

* refer to table at end of section 2.3 for information on the calculation of Service Performance Outcome Indicators

Service Performance Outcome Indicators

Service	Indicator	Performance Measure	Computation
Governance	Consultation and engagement	Satisfaction with community consultation and engagement. (Community satisfaction rating out of 100 with the consultation and engagement efforts of Council)	Community satisfaction rating out of 100 with how Council has performed on community consultation and engagement
Statutory planning	Decision making	Council planning decisions upheld at VCAT	[Number of VCAT decisions that did not set aside council's decision in relation to a planning application / Number of VCAT decisions in relation to planning applications] x100
Roads	Satisfaction	Satisfaction with sealed local roads	[Community satisfaction rating out of 100 with how council has performed on the condition of sealed local roads]
Libraries	Participation	Active library borrowers in municipality	Number of active library borrowers in the last three years / The sum of the population for the last three years] x100
Waste management	Waste diversion	Kerbside collection waste diverted from landfill. (Percentage of recyclables and green organics collected from kerbside bins that is diverted from landfill)	[Weight of recyclables and green organics collected from kerbside bins / Weight of garbage, recyclables and green organics collected from kerbside bins] x100

Service	Indicator	Performance Measure	Computation
Aquatic Facilities	Utilisation	Utilisation of aquatic facilities. (Number of visits to aquatic facilities per head of population)	Number of visits to aquatic facilities / Population
Animal Management	Health and safety	Animal management prosecutions. (Percentage of animal management prosecutions which are successful)	Number of successful animal management prosecutions / Total number of animal management prosecutions
Food safety	Health and safety	Critical and major non-compliance outcome notifications. (Percentage of critical and major non-compliance outcome notifications that are followed up by Council)	[Number of critical non-compliance outcome notifications and major non-compliance outcome notifications about a food premises followed up / Number of critical non-compliance outcome notifications and major non-compliance outcome notifications about food premises] x100
Maternal and Child Health Participation		Participation in the MCH service. (Percentage of children enrolled who participate in the MCH service)	[Number of children who attend the MCH service at least once (in the financial year) / Number of children enrolled in the MCH service] x100
		Participation in the MCH service by Aboriginal children. (Percentage of Aboriginal children enrolled who participate in the MCH service)	[Number of Aboriginal children who attend the MCH service at least once (in the financial year) / Number of Aboriginal children enrolled in the MCH service] x100

2.4 Reconciliation with budgeted operating result

	Surplus/ (Deficit)	Expenditure	Income / Revenue
	\$'000	\$'000	\$'000
A healthy, connected, and inclusive community	(8,103)	(13,112)	5,009
An environment for people and nature	(10,918)	(16,855)	5,937
A resilient and growing local economy	(7,125)	(8,946)	1,820
Total	(26,146)	(38,912)	12,766

Expenses added in:

Depreciation	9,991
Finance costs	82
Net gain/(loss) on disposal of assets	1,160
Surplus/(Deficit) before funding sources	(37,379)

Funding sources added in:

Rates and charges revenue	28,541
Rates interest	200
Capital works income	3,835
Unallocated Federal Financial Assistance Grant	4,515
Total funding sources	37,091
Operating surplus/(deficit) for the year	(288)

3. Financial Statements

This section presents information in regard to the Financial Statements and Statement of Human Resources. The budget information for the year 2024/25 has been supplemented with projections to 2027/28

This section includes the following financial statements prepared in accordance with the *Local Government Act 2020* and the *Local Government (Planning and Reporting) Regulations 2020*.

Comprehensive Income Statement
Balance Sheet
Statement of Changes in Equity
Statement of Cash Flows
Statement of Capital Works
Statement of Human Resources

Comprehensive Income Statement
For the four years ending 30 June 2028

		Forecast Actual 2023/24 \$'000	Budget 2024/25 \$'000	2025/26 \$'000	Projections 2026/27 \$'000	2027/28 \$'000
	NOTES					
Income / Revenue						
Rates and charges	4.1.1	27,598	28,541	29,360	30,202	31,108
Statutory fees and fines	4.1.2	1,324	1,358	1,385	1,413	1,441
User fees	4.1.3	1,466	2,545	2,621	2,700	2,781
Grants - operating	4.1.4	5,355	9,492	9,712	9,937	10,168
Grants - capital	4.1.4	4,778	3,835	5,738	5,291	5,605
Contributions - monetary	4.1.5	460	310	300	327	371
Contributions - non-monetary	4.1.5	765	1,000	1,020	1,040	1,061
Net gain (or loss) on disposal of property, infrastructure, plant and equipment		(695)	(1,160)	(1,004)	(1,020)	(1,035)
Share of net profits (or loss) of associates and joint ventures		5	5	5	5	5
Other income	4.1.6	1,893	1,741	1,518	1,455	1,408
Total income / revenue		42,949	47,667	50,655	51,350	52,913
Expenses						
Employee costs	4.1.7	19,996	21,526	22,089	23,191	24,349
Materials and services	4.1.8	14,785	14,063	13,441	13,979	14,538
Depreciation	4.1.9	9,523	9,699	10,086	10,511	10,857
Amortisation - intangible assets	4.1.10	204	174	250	250	210
Depreciation - right of use assets	4.1.11	136	118	101	94	66
Allowance for impairment losses		21	20	24	26	28
Borrowing costs		65	60	55	3	-
Finance costs - leases		11	22	15	9	3
Other expenses	4.1.12	1,618	2,273	1,773	1,791	1,809
Total expenses		46,359	47,955	47,834	49,853	51,859
Surplus/(deficit) for the year		(3,410)	(288)	2,821	1,497	1,054
Other comprehensive income						
Items that will not be reclassified to surplus or deficit in future periods						
Net asset revaluation gain / (loss)		232	4,104	4,116	4,160	4,203
Total other comprehensive income		232	4,104	4,116	4,160	4,203
Total comprehensive result		(3,178)	3,816	6,937	5,657	5,257

Balance Sheet

For the four years ending 30 June 2028

		Forecast Actual 2023/24 \$'000	Budget 2024/25 \$'000	2025/26 \$'000	Projections 2026/27 \$'000	2027/28 \$'000
	NOTES					
Assets						
Current assets						
Cash and cash equivalents		3,808	3,540	3,682	3,502	2,796
Trade and other receivables		3,000	4,658	4,931	5,010	5,157
Other financial assets		23,000	21,850	22,943	24,090	25,294
Inventories		120	124	117	127	120
Other assets		560	560	560	560	560
Total current assets	4.2.1	<u>30,488</u>	<u>30,732</u>	<u>32,233</u>	<u>33,289</u>	<u>33,928</u>
Non-current assets						
Investments in associates, joint arrangement and subsidiaries		660	1,008	1,368	1,741	2,127
Property, infrastructure, plant & equipment		416,711	420,578	424,925	429,284	433,746
Right-of-use assets	4.2.4	379	261	160	66	-
Intangible assets		664	824	574	324	114
Total non-current assets	4.2.1	<u>418,414</u>	<u>422,671</u>	<u>427,027</u>	<u>431,415</u>	<u>435,987</u>
Total assets		<u>448,902</u>	<u>453,403</u>	<u>459,261</u>	<u>464,704</u>	<u>469,916</u>
Liabilities						
Current liabilities						
Trade and other payables		1,617	1,958	1,846	1,917	1,985
Trust funds and deposits		1,845	1,642	1,461	1,345	1,237
Contract and other liabilities		3,584	4,301	4,946	5,045	5,095
Provisions		3,423	3,471	3,520	3,569	3,619
Interest-bearing liabilities	4.2.3	131	1,336	141	-	-
Lease liabilities	4.2.4	99	142	128	77	-
Total current liabilities	4.2.2	<u>10,699</u>	<u>12,850</u>	<u>12,042</u>	<u>11,952</u>	<u>11,936</u>
Non-current liabilities						
Provisions		1,928	1,898	1,868	1,838	1,808
Interest-bearing liabilities	4.2.3	1,476	141	-	-	-
Lease liabilities	4.2.4	295	194	94	-	-
Total non-current liabilities	4.2.2	<u>3,699</u>	<u>2,233</u>	<u>1,962</u>	<u>1,838</u>	<u>1,808</u>
Total liabilities		<u>14,398</u>	<u>15,083</u>	<u>14,004</u>	<u>13,790</u>	<u>13,744</u>
Net assets		<u>434,504</u>	<u>438,320</u>	<u>445,257</u>	<u>450,914</u>	<u>456,171</u>
Equity						
Accumulated surplus		108,626	109,806	113,323	115,589	117,485
Reserves		325,878	328,514	331,934	335,325	338,686
Total equity		<u>434,504</u>	<u>438,320</u>	<u>445,257</u>	<u>450,914</u>	<u>456,171</u>

Statement of Changes in Equity
For the four years ending 30 June 2028

	NOTES	Total \$'000	Accumulated Surplus \$'000	Revaluation Reserve \$'000	Other Reserves \$'000
2024 Forecast Actual					
Balance at beginning of the financial year		437,784	112,036	299,760	25,988
Surplus/(deficit) for the year		(3,410)	(3,410)	-	-
Net asset revaluation gain / (loss)		232	-	232	-
Transfers to other reserves		16,499	-	-	16,499
Transfers from other reserves		(16,601)	-	-	(16,601)
Balance at end of the financial year		434,504	108,626	299,992	25,886
2025 Budget					
Balance at beginning of the financial year		434,504	108,626	299,992	25,886
Surplus/(deficit) for the year		(288)	(288)	-	-
Net asset revaluation gain / (loss)		4,104	-	4,104	-
Transfers to other reserves	4.3.1	-	(11,644)	-	11,644
Transfers from other reserves	4.3.1		13,112		(13,112)
Balance at end of the financial year	4.3.2	438,320	109,806	304,096	24,418
2026					
Balance at beginning of the financial year		438,320	109,806	304,096	24,418
Surplus/(deficit) for the year		2,821	2,821	-	-
Net asset revaluation gain / (loss)		4,116	-	4,116	-
Transfers to other reserves		-	(11,844)	-	11,844
Transfers from other reserves			12,540		(12,540)
Balance at end of the financial year		445,257	113,323	308,212	23,722
2027					
Balance at beginning of the financial year		445,257	113,323	308,212	23,722
Surplus/(deficit) for the year		1,497	1,497	-	-
Net asset revaluation gain / (loss)		4,160	-	4,160	-
Transfers to other reserves		-	(10,989)	-	10,989
Transfers from other reserves			11,758		(11,758)
Balance at end of the financial year		450,914	115,589	312,372	22,953
2028					
Balance at beginning of the financial year		450,914	115,589	312,372	22,953
Surplus/(deficit) for the year		1,054	1,054	-	-
Net asset revaluation gain / (loss)		4,203	-	4,203	-
Transfers to other reserves		(0)	(10,134)	-	10,134
Transfers from other reserves			10,976		(10,976)
Balance at end of the financial year		456,171	117,485	316,575	22,111

Statement of Cash Flows
For the four years ending 30 June 2028

	NOTES	Forecast	Budget	Projections		
		Actual		2025/26	2026/27	2027/28
		2023/24	2024/25	\$'000	\$'000	\$'000
		Inflows (Outflows)	Inflows (Outflows)	Inflows (Outflows)	Inflows (Outflows)	Inflows (Outflows)
Cash flows from operating activities						
Rates and charges		25,040	28,064	29,650	30,166	31,044
Statutory fees and fines		1,298	1,469	1,540	1,554	1,583
User fees		1,416	2,753	2,912	2,966	3,053
Grants - operating		5,355	9,333	9,813	9,930	10,153
Grants - capital		4,778	3,771	5,626	5,341	5,579
Contributions - monetary		460	310	300	327	371
Interest received		1,527	1,286	1,183	1,112	1,057
Trust funds and deposits taken		1,952	-	-	-	-
Other receipts		(97)	520	419	407	419
Net GST refund / payment		(2,226)	1,952	2,091	2,161	2,242
Employee costs		(17,345)	(21,427)	(22,024)	(23,120)	(24,276)
Materials and services		(13,295)	(15,214)	(14,845)	(15,329)	(15,930)
Trust funds and deposits repaid		-	(203)	(181)	(117)	(108)
Other payments		(1,526)	(2,499)	(2,043)	(2,008)	(2,028)
Net cash provided by/(used in) operating activities	4.4.1	7,337	10,113	14,441	13,391	13,159
Cash flows from investing activities						
Payments for property, infrastructure, plant and equipment		(11,802)	(11,265)	(11,332)	(11,758)	(12,199)
Proceeds from sale of property, infrastructure, plant and equipment		463	347	-	-	-
Payments for investments		(250)	-	(1,448)	(1,515)	(1,585)
Proceeds from sale of investments		-	807	-	-	-
Net cash provided by/ (used in) investing activities	4.4.2	(11,589)	(10,111)	(12,780)	(13,273)	(13,784)
Cash flows from financing activities						
Finance costs		(65)	(60)	(55)	(3)	-
Proceeds from borrowings		-	-	-	-	-
Repayment of borrowings		(125)	(130)	(1,336)	(141)	-
Interest paid - lease liability		(11)	(22)	(15)	(9)	(3)
Repayment of lease liabilities		(136)	(58)	(114)	(145)	(77)
Net cash provided by/(used in) financing activities	4.4.3	(337)	(270)	(1,520)	(298)	(80)
Net increase/(decrease) in cash and cash equivalents		(4,589)	(268)	142	(180)	(706)
Cash and cash equivalents at the beginning of the financial year		8,397	3,808	3,540	3,682	3,502
Cash and cash equivalents at the end of the financial year		3,808	3,540	3,682	3,502	2,796

Statement of Capital Works

For the four years ending 30 June 2028

	NOTES	Forecast	Budget	Projections		
		Actual 2023/24 \$'000	2024/25 \$'000	2025/26 \$'000	2026/27 \$'000	2027/28 \$'000
Property						
Land improvements		1,594	2,201	500	500	500
Total land		1,594	2,201	500	500	500
Buildings		1,102	865	1,598	1,696	1,763
Total buildings		1,102	865	1,598	1,696	1,763
Total property		2,696	3,066	2,098	2,196	2,263
Plant and equipment						
Plant, machinery and equipment		1,582	1,236	1,040	1,110	1,040
Computers and telecommunications		490	201	200	205	210
Total plant and equipment		2,072	1,437	1,240	1,315	1,250
Infrastructure						
Roads		2,071	3,008	4,400	4,450	4,800
Bridges		1,800	136	822	834	808
Footpaths and cycleways		538	363	500	550	600
Drainage		483	306	418	400	477
Recreational, leisure and community facilities		2,570	1,621	824	944	892
Total infrastructure		7,462	5,434	6,964	7,178	7,577
Total capital works expenditure	4.5.1	12,230	9,937	10,302	10,689	11,090
Represented by:						
New asset expenditure		3,319	2,344	230	219	255
Asset renewal expenditure		7,529	6,388	8,596	8,096	9,053
Asset expansion expenditure		-	161	-	-	-
Asset upgrade expenditure		1,382	1,044	1,476	2,374	1,782
Total capital works expenditure	4.5.1	12,230	9,937	10,302	10,689	11,090
Funding sources represented by:						
Grants		4,778	3,835	5,738	5,291	5,605
Contributions		-	5	-	-	-
Council cash		7,452	6,097	4,564	5,398	5,485
Borrowings		-	-	-	-	-
Total capital works expenditure	4.5.1	12,230	9,937	10,302	10,689	11,090

Statement of Human Resources

For the four years ending 30 June 2028

	Forecast	Budget	Projections		
	Actual				
	2023/24	2024/25	2025/26	2026/27	2027/28
	\$'000	\$'000	\$'000	\$'000	\$'000
Staff expenditure					
Employee costs - operating	19,996	21,526	22,089	23,191	24,349
Employee costs - capital	1,100	986	875	764	653
Total staff expenditure	21,096	22,512	22,964	23,955	25,001
	FTE	FTE	FTE	FTE	FTE
Staff numbers					
Employees	204.5	210.8	203.5	203.5	203.5
Total staff numbers	204.5	210.8	203.5	203.5	203.5

A summary of human resources expenditure categorised according to the organisational structure of Council is included below:

Department	Budget	Comprises			
		Permanent		Casual	Temporary
		Full Time	Part time		
2024/25	\$'000	\$'000	\$'000	\$'000	\$'000
Communications and Customer Services	1,743	362	1,322	59	
Community Partnerships	1,360	523	807	24	6
Community Wellbeing	2,880	1,000	1,860	19	
Corporate Services	1,893	1,743	150		
Development Services	2,662	1,930	712	20	
Economy and Culture	506	275	231		1
Engineering	689	641	48		
Executive	1,430	1,249	181		
Governance and Risk	743	592	151		
Operations	3,581	3,430	135		17
Parks, Recreation and Community Facilities	2,199	2,014	186		
People and Culture	739	417	321		1
Total permanent staff expenditure	20,425	14,176	6,102	122	25
Other employee related expenditure	1,101				
Capitalised labour costs	986				
Total expenditure	22,512				

A summary of the number of full time equivalent (FTE) Council staff in relation to the above expenditure is included below:

Department	Budget	Comprises			
		Permanent		Casual	Temporary
		Full Time	Part time		
2024/25					
Communications and Customer Services	18.5	3.0	14.9	0.6	
Community Partnerships	11.8	4.0	7.7	0.2	
Community Wellbeing	33.9	9.6	24.0	0.2	
Corporate Services	17.5	16.0	1.5		
Development Services	25.9	18.0	7.7	0.2	
Economy and Culture	4.4	2.0	2.4		
Engineering	6.1	5.5	0.6		
Executive	8.7	7.0	1.7		
Governance and Risk	6.8	5.0	1.8		
Operations	38.6	36.9	1.6		0.1
Parks, Recreation and Community Facilities	23.0	21.0	2.0		
People and Culture	6.2	3.0	3.2		
Total staff	201.4	131.0	69.1	1.2	0.1
Capitalised labour costs	9.4				
Total staff	210.8				

**Summary of Planned Human Resources Expenditure
For the four years ending 30 June 2028**

	2024/25 \$'000	2025/26 \$'000	2026/27 \$'000	2027/28 \$'000
Communications and Customer Services				
Permanent - Full time	362	373	384	396
Women	212	219	225	232
Men	150	154	159	163
Persons of self-described gender / not specified	-	-	-	-
Permanent - Part time	1,322	1,336	1,377	1,418
Women	776	787	810	835
Men	440	441	454	468
Persons of self-described gender / not specified	106	109	112	115
Total Communications and Customer Services	1,684	1,709	1,761	1,813
Community Partnerships				
Permanent - Full time	523	539	555	572
Women	418	431	443	457
Men	105	109	112	115
Persons of self-described gender / not specified	-	-	-	-
Permanent - Part time	807	760	783	807
Women	585	543	560	576
Men	222	217	224	231
Persons of self-described gender / not specified	-	-	-	-
Total Community Partnerships	1,330	1,300	1,339	1,379
Community Wellbeing				
Permanent - Full time	1,000	1,030	1,061	1,093
Women	591	609	627	646
Men	155	160	165	170
Persons of self-described gender / not specified	254	262	269	277
Permanent - Part time	1,860	1,916	1,973	2,033
Women	1,250	1,287	1,326	1,366
Men	369	381	392	404
Persons of self-described gender / not specified	241	248	255	263
Total Community Wellbeing	2,861	2,946	3,035	3,126
Corporate Services				
Permanent - Full time	1,743	1,726	1,679	1,729
Women	1,018	1,049	981	1,011
Men	514	460	474	488
Persons of self-described gender / not specified	211	217	224	231
Permanent - Part time	150	154	159	164
Women	150	154	159	164
Men	-	-	-	-
Persons of self-described gender / not specified	-	-	-	-
Total Corporate Services	1,893	1,880	1,837	1,892
Development Services				
Permanent - Full time	1,930	1,960	1,943	2,002
Women	1,196	1,232	1,194	1,230
Men	622	613	631	650
Persons of self-described gender / not specified	112	115	118	122
Permanent - Part time	712	734	756	778
Women	396	408	421	433
Men	272	280	289	297
Persons of self-described gender / not specified	44	45	47	48
Total Development Services	2,642	2,694	2,699	2,780
Economy and Culture				
Permanent - Full time	275	283	291	300
Women	275	283	291	300
Men	-	-	-	-
Persons of self-described gender / not specified	-	-	-	-
Permanent - Part time	231	237	245	252
Women	126	130	134	138
Men	42	43	44	46
Persons of self-described gender / not specified	63	65	67	69
Total Economy and Culture	505	520	536	552

	2024/25 \$'000	2025/26 \$'000	2026/27 \$'000	2027/28 \$'000
Engineering				
Permanent - Full time	641	661	680	701
Women	-	-	-	-
Men	630	649	669	689
Persons of self-described gender / not specified	11	12	12	12
Permanent - Part time	48	49	51	52
Women	48	49	51	52
Men	-	-	-	-
Persons of self-described gender / not specified	-	-	-	-
Total Engineering	689	710	731	753
Executive				
Permanent - Full time	1,249	1,209	1,245	1,282
Women	679	621	640	659
Men	570	587	605	623
Persons of self-described gender / not specified	-	-	-	-
Permanent - Part time	181	123	127	131
Women	120	123	127	131
Men	-	-	-	-
Persons of self-described gender / not specified	61	-	-	-
Total Executive	1,430	1,332	1,372	1,413
Governance and Risk				
Permanent - Full time	592	610	628	647
Women	481	495	510	525
Men	-	-	-	-
Persons of self-described gender / not specified	112	115	118	122
Permanent - Part time	151	156	160	165
Women	-	-	-	-
Men	88	91	93	96
Persons of self-described gender / not specified	63	65	67	69
Total Governance and Risk	743	766	789	812
Operations				
Permanent - Full time	3,430	3,453	3,557	3,663
Women	328	258	266	274
Men	2,990	3,080	3,172	3,268
Persons of self-described gender / not specified	112	115	118	122
Permanent - Part time	135	139	143	147
Women	71	73	76	78
Men	63	65	67	69
Persons of self-described gender / not specified	-	-	-	-
Total Operations	3,564	3,592	3,700	3,811
Parks, Recreation and Community Facilities				
Permanent - Full time	2,012	1,972	2,031	2,092
Women	536	552	568	586
Men	1,476	1,520	1,566	1,613
Persons of self-described gender / not specified	-	(100)	(103)	(106)
Permanent - Part time	186	191	197	203
Women	105	109	112	115
Men	63	65	67	69
Persons of self-described gender / not specified	17	17	18	19
Total Parks, Recreation and Community Facilities	2,197	2,163	2,228	2,295
People and Culture				
Permanent - Full time	417	429	442	455
Women	179	185	190	196
Men	238	245	252	260
Persons of self-described gender / not specified	-	-	-	-
Permanent - Part time	321	319	329	339
Women	247	248	256	263
Men	74	71	73	75
Persons of self-described gender / not specified	-	-	-	-
Total People and Culture	738	748	771	794
Casuals, temporary and other expenditure	148	153	158	162
Indirect costs	1,101	1,134	1,168	1,203
Capitalised labour costs	986	1,015	1,046	1,077
Total staff expenditure	22,512	22,662	23,168	23,863

	2024/25	2025/26	2026/27	2027/28
	FTE	FTE	FTE	FTE
Communications and Customer Services				
Permanent - Full time	3.0	3.0	3.0	3.0
Women	2.0	2.0	2.0	2.0
Men	1.0	1.0	1.0	1.0
Persons of self-described gender / not specified	-	-	-	-
Permanent - Part time	14.9	14.9	14.9	14.9
Women	8.2	8.2	8.2	8.2
Men	5.3	5.3	5.3	5.3
Persons of self-described gender / not specified	1.4	1.4	1.4	1.4
Total Communications and Customer Services	17.9	17.9	17.9	17.9
Community Partnerships				
Permanent - Full time	4.0	4.0	4.0	4.0
Women	3.0	3.0	3.0	3.0
Men	1.0	1.0	1.0	1.0
Persons of self-described gender / not specified	-	-	-	-
Permanent - Part time	7.7	7.3	7.3	7.3
Women	5.9	5.6	5.6	5.6
Men	1.8	1.7	1.7	1.7
Persons of self-described gender / not specified	-	-	-	-
Total Community Partnerships	11.7	11.3	11.3	11.3
Community Wellbeing				
Permanent - Full time	9.6	9.6	9.6	9.6
Women	5.0	5.0	5.0	5.0
Men	1.6	1.6	1.6	1.6
Persons of self-described gender / not specified	3.0	3.0	3.0	3.0
Permanent - Part time	24.0	21.4	21.4	21.4
Women	16.3	13.9	13.9	13.9
Men	4.5	4.3	4.3	4.3
Persons of self-described gender / not specified	3.2	3.2	3.2	3.2
Total Community Wellbeing	33.7	31.1	31.1	31.1
Corporate Services				
Permanent - Full time	16.0	16.0	16.0	16.0
Women	9.0	9.0	9.0	9.0
Men	5.0	5.0	5.0	5.0
Persons of self-described gender / not specified	2.0	2.0	2.0	2.0
Permanent - Part time	1.5	1.5	1.5	1.5
Women	1.5	1.5	1.5	1.5
Men	-	-	-	-
Persons of self-described gender / not specified	-	-	-	-
Total Corporate Services	17.5	17.5	17.5	17.5
Development Services				
Permanent - Full time	18.0	17.0	17.0	17.0
Women	11.0	10.0	10.0	10.0
Men	6.0	6.0	6.0	6.0
Persons of self-described gender / not specified	1.0	1.0	1.0	1.0
Permanent - Part time	7.7	7.7	7.7	7.7
Women	4.3	4.3	4.3	4.3
Men	2.9	2.9	2.9	2.9
Persons of self-described gender / not specified	0.6	0.6	0.6	0.6
Total Development Services	25.7	24.7	24.7	24.7
Economy and Culture				
Permanent - Full time	2.0	2.0	2.0	2.0
Women	2.0	2.0	2.0	2.0
Men	-	-	-	-
Persons of self-described gender / not specified	-	-	-	-
Permanent - Part time	2.4	2.4	2.4	2.4
Women	1.2	1.2	1.2	1.2
Men	0.4	0.4	0.4	0.4
Persons of self-described gender / not specified	0.8	0.8	0.8	0.8
Total Economy and Culture	4.4	4.4	4.4	4.4

	2024/25	2025/26	2026/27	2027/28
	FTE	FTE	FTE	FTE
Engineering				
Permanent - Full time	5.5	5.5	5.5	5.5
Women	-	-	-	-
Men	5.4	5.4	5.4	5.4
Persons of self-described gender / not specified	0.1	0.1	0.1	0.1
Permanent - Part time	0.6	0.6	0.6	0.6
Women	0.6	0.6	0.6	0.6
Men	-	-	-	-
Persons of self-described gender / not specified	-	-	-	-
Total Engineering	6.1	6.1	6.1	6.1
Executive				
Permanent - Full time	7.0	7.0	7.0	7.0
Women	5.0	5.0	5.0	5.0
Men	2.0	2.0	2.0	2.0
Persons of self-described gender / not specified	-	-	-	-
Permanent - Part time	1.7	0.8	0.8	0.8
Women	1.1	0.8	0.8	0.8
Men	-	-	-	-
Persons of self-described gender / not specified	0.6	-	-	-
Total Executive	8.7	7.8	7.8	7.8
Governance and Risk				
Permanent - Full time	5.0	5.0	5.0	5.0
Women	4.0	4.0	4.0	4.0
Men	-	-	-	-
Persons of self-described gender / not specified	1.0	1.0	1.0	1.0
Permanent - Part time	1.8	1.8	1.8	1.8
Women	-	-	-	-
Men	1.0	1.0	1.0	1.0
Persons of self-described gender / not specified	0.8	0.8	0.8	0.8
Total Governance and Risk	6.8	6.8	6.8	6.8
Operations				
Permanent - Full time	36.9	36.9	36.9	36.9
Women	4.0	4.0	4.0	4.0
Men	31.9	31.9	31.9	31.9
Persons of self-described gender / not specified	1.0	1.0	1.0	1.0
Permanent - Part time	1.6	1.6	1.6	1.6
Women	0.9	0.9	0.9	0.9
Men	0.7	0.7	0.7	0.7
Persons of self-described gender / not specified	-	-	-	-
Total Operations	38.5	38.5	38.5	38.5
Parks, Recreation and Community Facilities				
Permanent - Full time	21.0	21.0	21.0	21.0
Women	5.0	5.0	5.0	5.0
Men	16.0	16.0	16.0	16.0
Persons of self-described gender / not specified	-	-	-	-
Permanent - Part time	2.0	1.6	1.6	1.6
Women	1.0	1.0	1.0	1.0
Men	0.6	0.6	0.6	0.6
Persons of self-described gender / not specified	0.4	-	-	-
Total Parks, Recreation and Community Facilities	23.0	22.6	22.6	22.6
People and Culture				
Permanent - Full time	3.0	3.0	3.0	3.0
Women	1.0	1.0	1.0	1.0
Men	2.0	2.0	2.0	2.0
Persons of self-described gender / not specified	-	-	-	-
Permanent - Part time	3.2	3.1	3.1	3.1
Women	2.4	2.4	2.4	2.4
Men	0.8	0.7	0.7	0.7
Persons of self-described gender / not specified	-	-	-	-
Total People and Culture	6.2	6.1	6.1	6.1
Casuals and temporary staff	1.2	1.2	1.2	1.2
Capitalised labour	9.4	7.6	7.6	7.6
Total staff numbers	210.7	203.5	203.5	203.5

4. Notes to the financial statements

This section presents detailed information on material components of the financial statements. Council needs to assess which components are material, considering the dollar amounts and nature of these components.

4.1 Comprehensive Income Statement

4.1.1 Rates and charges

Rates and charges are required by the Act and the Regulations to be disclosed in Council's budget.

As per the Local Government Act 2020, Council is required to have a Revenue and Rating Plan which is a four-year plan for how Council will generate income to deliver the Council Plan, program and services and capital works commitments over a four-year period.

In developing the Budget, rates and charges were identified as an important source of revenue. Planning for future rate increases has therefore been an important component of the financial planning process. The Fair Go Rates System (FGRS) sets out the maximum amount councils may increase rates in a year. For 2024/25 the FGRS cap has been set at 2.75%. The cap applies to both general rates and municipal charges and is calculated on the basis of council's average rates and charges.

The level of required rates and charges has been considered in this context, with reference to Council's other sources of income and the planned expenditure on services and works to be undertaken for the community.

To achieve these objectives, while maintaining service levels and a strong capital expenditure program, the average general rate will increase by 2.75% in line with the rate cap.

This will raise total rates and charges for 2024/25 of \$28,541,125.

4.1.1(a) The reconciliation of the total rates and charges to the Comprehensive Income Statement is as follows:

	2023/24	2024/25	Change	
	Forecast Actual \$'000	Budget \$'000	\$'000	%
General rates*	22,603	23,514	911	4.03%
Waste management charge	4,865	4,997	132	2.72%
Supplementary rates and rate adjustments	105	30	(75)	-71.41%
Interest on rates and charges	200	200	-	0.00%
Total rates and charges	27,773	28,741	969	3.49%

*This item is subject to the rate cap established under the FGRS

4.1.1(b) The rate in the dollar to be levied as general rates under section 158 of the Act for each type or class of land compared with the previous financial year.

Type or class of land	2023/24 cents/\$CIV	2024/25 cents/\$CIV	Change
General rate for rateable residential properties	0.23980	0.25030	4.38%
General rate for rateable commercial properties	0.31174	0.32539	4.38%
General rate for rateable farm properties	0.19184	0.20024	4.38%
General rate for rateable vacant land properties	0.47960	0.50060	4.38%

Rates in the dollar will be subject to minor amendment when the general revaluation is completed by the Valuer General Victoria. Final rates will be adopted by Council at its meeting in June 2024.

4.1.1 Rates and charges continued

4.1.1(c) The estimated total amount to be raised by general rates in relation to each type or class of land, and the estimated total amount to be raised by general rates, compared with the previous financial year

Type or class of land	2023/24	2024/25	Change	
	\$'000	\$'000	\$'000	%
Residential	15,749	16,353	604	3.83%
Farm	2,882	3,124	242	8.41%
Commercial	1,806	1,880	74	4.07%
Vacant land	2,166	2,158	(8)	-0.39%
Total amount to be raised by general rates	22,603	23,514	911	4.03%

4.1.1(d) The number of assessments in relation to each type or class of land, and the total number of assessments, compared with the previous financial year

Type or class of land	2023/24	2024/25	Change	
	Number	Number	Number	%
Residential	9,466	9,616	150	1.58%
Farm	995	1,001	6	0.60%
Commercial	696	688	(8)	-1.15%
Vacant land	1,212	1,210	(2)	-0.17%
Total number of assessments	12,369	12,515	146	1.18%

4.1.1(e) The basis of valuation to be used is the Capital Improved Value (CIV).

4.1.1(f) The estimated total value of each type or class of land, and the estimated total value of land, compared with the previous financial year

Type or class of land	2023/24	2024/25	Change	
	\$'000	\$'000	\$'000	%
Residential	6,567,356	6,533,161	- 34,195	-0.52%
Farm	1,502,233	1,560,371	58,138	3.87%
Commercial	579,411	577,616	- 1,795	-0.31%
Vacant land	451,653	431,009	- 20,644	-4.57%
Total value of land	9,100,653	9,102,157	1,504	0.02%

4.1.1(g) The rate or unit amount to be levied for each type of service rate or charge under Section 162 of the Act compared with the previous financial year

Type of charge	Per Rateable Property	Per Rateable Property	Change	
	2023/24	2024/25	\$	%
Kerbside collection and recycling 80 litre bin	450	462	12	2.67%
Kerbside collection and recycling 140 litre bin	653	671	18	2.76%
Total	1,103	1,133	30	2.72%

4.1.1(h) The estimated total amount to be raised by each type of service rate or charge, and the estimated total amount to be raised by service rates and charges, compared with the previous financial year

Type of charge	2023/24	2024/25	Change	
	\$'000	\$'000	\$'000	%
Kerbside collection and recycling 80 litre bin	1,534	1,623	89	5.80%
Kerbside collection and recycling 140 litre bin	3,306	3,374	68	2.06%
Total	4,840	4,997	157	3.24%

4.1.1 Rates and charges continued

4.1.1(i) The estimated total amount to be raised by all rates and charges compared with the previous financial year

Total rates and charges	2023/24	2024/25	Change	
	\$'000	\$'000	\$'000	%
Residential	15,749	16,353	604	3.83%
Farm	2,882	3,124	242	8.41%
Commercial	1,806	1,880	74	4.07%
Vacant land	2,166	2,158	(8)	-0.39%
Kerbside collection and recycling 80 litre bin	1,534	1,623	89	5.80%
Kerbside collection and recycling 140 litre bin	3,306	3,374	68	2.06%
Total Rates and charges	27,443	28,511	1,068	3.89%

4.1.1(j) Fair Go Rates System Compliance

Mount Alexander Shire Council is required to comply with the State Government's Fair Go Rates System (FGRS). The table below details the budget assumptions consistent with the requirements of the Fair Go Rates System.

	2023/24 Budget	2024/25 Budget
Total Rates at 30 June	\$ 21,848,614	\$ 22,872,168
Number of rateable properties at 30 June	12,369	12,503
Base Average Rate	\$ 1,766	\$ 1,829
Maximum Rate Increase (set by the State Government)	3.50%	2.75%
Capped Average Rate	\$ 1,828	\$ 1,880
Number of rateable properties at 1 July	12,369	12,515
Maximum General Rates Revenue	\$ 22,613,315	\$ 23,523,708
Budgeted General Rates Revenue	\$ 22,602,788	\$ 23,514,125
Budgeted Supplementary Rates and Rates Adjustments	\$ 30,000	\$ 30,000
Budgeted Total Rates Revenue	\$ 22,632,788	\$ 23,544,125

4.1.1(k) Any significant changes that may affect the estimated amounts to be raised by rates and charges are detailed below.

There are no known significant changes which may affect the estimated amounts to be raised by rates and charges. However, the total amount to be raised by rates and charges may be affected by:

- The making of supplementary valuations (2024/25: estimated \$100,000 and 2023/24: \$100,000)
- The variation of returned levels of value (e.g. valuation appeals)
- Changes of use of land such that rateable land becomes non-rateable land and vice versa
- Changes of use of land such that residential land becomes commercial land and so on.

4.1.1(l) Differential rates

General rate (base rate)

Applies to residential properties and home based businesses that are conducted at residential premises. Vacant land that is not farm land and cannot be developed for residential purposes is also classified as general.

Farm rate

The farm rate is set at 80% of the general rate. Farm land means any rateable land that is :

- Not less than 2 hectares in area; and
- Used primarily for grazing (including agistment), dairying, pig-farming, poultry-farming, fish-farming, tree-farming, bee-keeping, viticulture, horticulture, fruit-growing, or the growing of crops of any kind or for any combination of those activities; and
- Used by a business -
 - That has a significant and substantial commercial purpose or character; and
 - That seeks to make a profit on a continuous or repetitive basis from its activities on the land; and
 - That is making a profit from its activities on the land, or that has a reasonable prospect of making a profit from its activities on the land if it continues to operate in the way it is operating.

Commercial rate

Set at 130% of the general rate and applies to:

- Any land which is occupied for the principal purpose of carrying out the manufacture or production of, or trade in, goods or services; or
- Residential properties that are predominately used for the purposes of short-term rental accommodation.

Vacant land rate

Applies to rateable residential land that does not have a dwelling, or to vacant commercial or industrial land, and is set at 200% of the general rate.

4.1.1(m) Trust For Nature Covenants (TFNC)

Trust For Nature Covenant (TFNC) properties receive a 100% rebate for that portion of the land covered by a TFNC.

4.1.2 Statutory fees and fines

	Forecast	Budget	Change	
	Actual	2024/25		
	2023/24	2024/25	\$'000	%
	\$'000	\$'000	\$'000	%
Animal control	253	260	7	2.71%
Planning permits and fees	476	462	(14)	-2.92%
Building permits and fees	170	177	7	3.86%
Health registrations	173	176	3	1.70%
Local laws	39	38	(0)	-0.84%
Parking fines	172	175	4	2.09%
Other statutory fees and fines	41	69	28	67.30%
Total statutory fees and fines	1,324	1,358	34	2.54%

Statutory fees and fines are levied in accordance with legislation and include animal registrations, planning and building permits, public health registrations, and parking fines. Increases in the unit rate of statutory fees are made in accordance with legislative requirements. Revenue from statutory fees and fines is budgeted to increase by \$8,000 compared to the 2023/2024 budget.

4.1.3 User fees

	Forecast	Budget	Change	
	Actual	2024/25		
	2023/24	2024/25	\$'000	%
	\$'000	\$'000	\$'000	%
Home and community care	633	1,535	902	142.43%
Tourism services	55	55	0	0.00%
Facility hire	26	26	0	1.28%
Engineering services	169	233	64	37.95%
Waste management services	470	463	(7)	-1.59%
Other user fees	114	234	120	105.75%
Total user fees	1,466	2,545	1,079	73.58%

User fees relate to the recovery of service delivery costs by charging fees to the users of Council's services. These include the use of recreation and community facilities, and the provision of home and community care services. In setting the budget, the key principle for determining the level of user fees has been to ensure that, generally, increases do not exceed the rate cap increase. Where increases are greater, this is due to increases in the cost of service provision which is sometimes influenced by external factors. User fees are budgeted to increase by \$1.09 million compared to the 2023/2024 budget. This is largely due to the equalisation of fees for Community Wellbeing services, and the introduction of new services in Community Wellbeing.

4.1.4 Grants

Grants are required by the Act and the Regulations to be disclosed in Council's budget.

	Forecast Actual 2023/24 \$'000	Budget 2024/25 \$'000	Change \$'000	%
Grants were received in respect of the following:				
Commonwealth funded grants	6,990	10,326	3,336	48%
State funded grants	7,612	3,001	(4,611)	-61%
Total grants received	14,602	13,327	(1,275)	-9%
(a) Operating Grants				
Recurrent - Commonwealth Government				
Financial Assistance Grant	286	6,931	6,645	2320%
Aged care	1,771	1,686	(85)	-5%
Other	4	4	0	0%
Recurrent - State Government				
Aged care	202	196	(7)	-3%
School crossing supervisors	62	76	14	23%
Families and children	338	331	(7)	-2%
Emergency management	120	120	0	0%
Environment	40	40	0	0%
Youth	96	96	0	0%
Other	23	12	(11)	-48%
Total recurrent grants	2,942	9,492	6,549	223%
Non-recurrent - State Government				
Emergency management	2,248	-	(2,248)	-100%
Environment	24	-	(24)	-100%
Road safety	140	-	(140)	-100%
Total non-recurrent grants	2,412	-	(2,412)	-100%
Total operating grants	5,355	9,492	4,137	77%
(b) Capital Grants				
Recurrent - Commonwealth Government				
Roads to Recovery	1,213	1,080	(133)	-11%
Road upgrades (Fogartys Gap Road and Spring Street)	519	-	(519)	-100%
Total recurrent grants	1,732	1,080	(652)	-38%
Non-recurrent - Commonwealth Government				
Bridges	501	-	(501)	-100%
Drainage	267	-	(267)	-100%
Emergency management	88	-	(88)	-100%
Roads	-	624	624	#DIV/0!
Recreation	252	-	(252)	-100%
Non-recurrent - State Government				
Buildings	103	-	(103)	-100%
Levees	-	1,500	1,500	100%
Drainage	-	25	25	200%
Roads and streetscapes	808	-	(808)	-100%
Recreation	943	606	(336)	-36%
Other	84	-	(84)	-100%
Total non-recurrent grants	3,046	2,755	(290)	-10%
Total capital grants	4,778	3,835	(943)	-20%
Total grants	10,133	13,327	3,194	32%

4.1.4 Grants continued

Operating grants include all monies received from state and federal sources for the purposes of funding the delivery of Council's services to ratepayers. Overall, the level of operating grants will increase by \$682,000 (8%) compared to the budget adopted in 2023/2024.

Capital grants include all monies received from state and federal sources for the purposes of funding the capital works program. Overall capital grants will decrease by \$3.08 million compared to the budget adopted in 2023/2024.

4.1.5 Contributions

	Forecast	Budget	Change	
	Actual 2023/24 \$'000	2024/25 \$'000	\$'000	%
Monetary	460	310	(150)	-32.64%
Non-monetary	765	1,000	235	0.00%
Total contributions	1,225	1,310	85	6.93%

Monetary contributions include open space contributions from developers, and are expected to be similar to the 2023/2024 budget. Non-monetary contributions include capital assets, such as roads and footpaths, transferred to Council from developers.

4.1.6 Other income

	Forecast	Budget	Change	
	Actual 2023/24 \$'000	2024/25 \$'000	\$'000	%
Interest	1,527	1,286	(241)	-15.78%
Rent	179	299	120	67.16%
Other	188	157	(31)	-16.35%
Total other income	1,893	1,741	(152)	-8.01%

Council received greater than budgeted income from investment interest that contributed to the forecast result in 2023/2024, while income from the Maldon Caravan Park is expected to increase.

4.1.7 Employee costs

	Forecast	Budget	Change	
	Actual 2023/24 \$'000	2024/25 \$'000	\$'000	%
Wages and salaries	17,345	18,642	1,297	7.48%
WorkCover	370	400	30	8.09%
Superannuation	1,853	2,031	178	9.59%
Fringe Benefits Tax	44	48	4	9.32%
Other	384	404	21	5.35%
Total employee costs	19,996	21,526	1,529	7.65%

Employee costs include all labour related expenditure such as wages and salaries, and oncosts such as allowances, leave entitlements, employer superannuation, workers compensation insurance, and rostered days off. Employee costs are budgeted to increase by 7%, or \$1.50 million, compared to the 2023/2024 budget.

A summary of human resources expenditure and full-time equivalent (FTE) categorised according to the organisational structure of Council is included at Section 3.

4.1.8 Materials and services

	Forecast	Budget	Change	
	Actual			
	2023/24	2024/25	\$'000	%
	\$'000	\$'000	\$'000	%
Service providers	10,638	9,739	(899)	-8.45%
Materials	1,061	1,153	92	8.64%
Plant costs	777	747	(30)	-3.92%
Utilities	545	554	9	1.58%
Office administration	418	383	(35)	-8.30%
Information technology	853	981	128	14.97%
Insurance	493	507	14	2.90%
Total materials and services	14,785	14,063	(722)	-4.88%

Materials and services includes the purchase of consumables, payments to contractors for the provision of services, utility costs, software licencing, insurances, fleet, and elections etc. The 2023/2024 forecast includes costs for flood recovery works following a storm event in October 2022. These works will be finalised in 2023/2024, and will mostly be reimbursed by the State and Federal Governments.

4.1.9 Depreciation

	Forecast	Budget	Change	
	Actual			
	2023/24	2024/25	\$'000	%
	\$'000	\$'000	\$'000	%
Property	2,291	2,335	45	1.94%
Plant and equipment	905	963	58	6.42%
Infrastructure	6,327	6,400	73	1.16%
Total depreciation	9,523	9,699	176	1.85%

Depreciation is an accounting measure and is a non-cash item which attempts to allocate the depreciable value of an asset over its useful life for Council's property, plant and equipment, and infrastructure assets such as roads and drains.

4.1.10 Amortisation - Intangible assets

	Forecast	Budget	Change	
	Actual			
	2023/24	2024/25	\$'000	%
	\$'000	\$'000	\$'000	%
Intangible assets	204	174	(30)	-14.90%
Total amortisation - intangible assets	204	174	(30)	-14.90%

4.1.11 Depreciation - Right of use assets

	Forecast	Budget	Change	
	Actual			
	2023/24	2024/25	\$'000	%
	\$'000	\$'000	\$'000	%
Right of use assets	136	118	(18)	-13.30%
Total depreciation - right of use assets	136	118	(18)	-13.30%

4.1.12 Other expenses

	Forecast	Budget	Change	
	Actual 2023/24 \$'000	2024/25 \$'000	\$'000	%
Audit fees	90	98	8	8.58%
Councillors' allowances	270	316	46	16.91%
Regional library contribution	569	586	17	3.00%
Contributions - fee waivers	47	47	0	0.00%
Contributions - community grants	520	558	38	7.24%
Contribution - Mount Alexander Affordable Housing Trust	-	500	500	0.00%
Government levies payable	40	49	10	23.87%
Other	81	119	38	46.26%
Total other expenses	1,618	2,273	655	40.50%

Other expenses relate to a range of unclassified items including contributions to community groups and the North Central Goldfields Regional Library Corporation, councillor allowances (with an additional councillor being added in 2024/25 as directed by the State Government), audit fees, and other miscellaneous expenditure items.

4.2 Balance Sheet

4.2.1 Assets

Current assets of cash and cash equivalents, such as petty cash or at-call bank accounts, and investments in deposits or other highly liquid investments with short term maturities are expected to decrease from the 2022/23 budget by \$142,000.

Trade and other receivables are monies owed to Council by ratepayers and others. Short-term debtors are expected to have a minor decrease during 2024/2025 due to rising interest rates and inflation causing cash flow challenges for households.

Non-current assets comprise property, infrastructure, plant and equipment, and is the largest component of Council's net worth and represents the value of all the land, buildings, roads, vehicles, equipment etc. which has been built up by Council over many years. The increase in this balance is attributable to the capital works program being undertaken, as well as asset revaluations as required by accounting standards.

4.2.2 Liabilities

Trade and other payables are those to whom Council owes money as at 30 June. These liabilities are expected to increase due to unperformed contractual obligations for capital grant funded projects. Grant income is set aside and only recognised once contractual obligations are discharged

Provisions include accrued employee entitlements for long service leave and annual leave, as well as costs of landfill rehabilitation works, and these provisions are expected to decrease by \$2.04 million from the 2023/24 budget due to the completion of landfill rehabilitation works in mid-2023.

4.2.3 Borrowings

The table below shows information on borrowings specifically required by the Regulations.

	Forecast	Budget	Projections		
	Actual 2023/24 \$'000	2024/25 \$'000	2025/26 \$'000	2026/27 \$'000	2027/28 \$'000
Amount borrowed as at 30 June of the prior year	1,732	1,607	1,477	141	-
Amount proposed to be borrowed	-	-	-	-	-
Amount projected to be redeemed	(125)	(130)	(1,336)	(141)	0
Amount of borrowings as at 30 June	1,607	1,477	141	-	-

4.2.4 Leases by category

As a result of the introduction of *AASB 16 Leases*, right-of-use assets and lease liabilities have been recognised as outlined in the table below.

	Forecast Actual 2023/24 \$'000	Budget 2024/25 \$'000
Right-of-use assets		
Plant and equipment	379	261
Total right-of-use assets	379	261
Lease liabilities		
Current lease liabilities		
Plant and equipment	99	142
Total current lease liabilities	99	142
Non-current lease liabilities		
Plant and equipment	295	194
Total non-current lease liabilities	295	194
Total lease liabilities	394	336

Where the interest rate applicable to a lease is not expressed in the lease agreement, Council applies the average incremental borrowing rate in the calculation of lease liabilities. The current incremental borrowing rate is 3% or 6.1%.

4.3 Statement of changes in Equity

4.3.1 Reserves

Some cash and cash equivalents held by Council are restricted in part and are not fully available for Council's operations. The budgeted cash flow statement indicates Council estimates that at 30 June 2025 it will have cash and investments of \$25.39 million, and \$24.42 million of these funds are restricted by reserve funds held, as per below.

	Forecast Actual 2023/24 \$'000	Budget 2024/25 \$'000
Campbells Creek South Development	83	83
Diamond Gully Development Contribution	539	539
Energy/Water Saving	267	347
Gravel Pit Rehabilitation	39	39
Parkland/Open Space	914	726
Swimming Pool	3,061	3,061
Developer Tree Planting	93	93
Uncompleted Works	9,000	7,760
Unspent Grants	3,584	3,610
Waste	8,078	7,932
Developer Tree Contributions	145	145
Developer Contribution Reserve	83	83
Total reserves	25,886	24,418

4.3.2 Equity

Total equity always equals net assets and is made up of the following components:

- The asset revaluation reserve which represents the difference between the previously recorded value of assets and their current valuations.
- Other reserves representing funds that Council wishes to separately identify as being set aside to meet a specific purpose in the future and to which there is no existing liability. These amounts are transferred from the accumulated surplus of the Council to be separately disclosed.
- Accumulated surplus which is the value of all net assets less reserves that have accumulated over time. The increase in accumulated surplus results directly from the operating surplus for the year, and net result of reserve transfers.

4.4 Statement of Cash Flows

4.4.1 Net cash flows provided by/used in operating activities

The net cash flows from operating activities does not equal the surplus / (deficit) for the year as the surplus / (deficit) for the year includes non-cash items which have been excluded from the Cash Flow Statement e.g. depreciation.

4.4.2 Net cash flows provided by/used in investing activities

The payments for investing activities represents the capital works expenditure as disclosed in section 4.5 of this budget report.

4.4.3 Net cash flows provided by/used in financing activities

For 2024/25 no new borrowings are proposed.

4.5 Capital works program

This section presents a listing of the capital works projects that will be undertaken for the 2024/25 year, classified by expenditure type and funding source. Works are also disclosed as current budget or carried forward from prior year.

4.5.1 Summary

	Forecast Actual 2023/24 \$'000	Budget 2024/25 \$'000	Change \$'000	%
Property	2,696	3,066	370	13.74%
Plant and equipment	2,072	1,437	(635)	-30.65%
Infrastructure	7,462	5,435	(2,027)	-27.17%
Total	12,230	9,938	(2,292)	-18.74%

	Project Cost \$'000	Asset expenditure types				Summary of Funding Sources			
		New	Renewal	Upgrade	Expansion	Grants	Contrib.	Council cash	Borrowings
		\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Property	3,066	2,151	592	323	-	1,500	-	1,566	-
Plant and equipment	1,437	-	1,437	-	-	-	-	1,437	-
Infrastructure	5,435	299	3,814	1,322	-	2,335	5	3,095	-
Total	9,939	2,450	5,843	1,646	-	3,835	5	6,099	-

4.5.2 Current Budget

Capital Works Area	Project Cost \$'000	Asset expenditure types				Summary of Funding Sources			
		New \$'000	Renewal \$'000	Upgrade \$'000	Expansion \$'000	Grants \$'000	Contrib. \$'000	Council cash \$'000	Borrowings \$'000
PROPERTY									
Land Improvements									
<i>Castlemaine and Campbells Creek levees</i>	2,151	2,151	-	-	-	1,500	-	651	-
<i>Environmental remediation at Castlemaine depot</i>	51	-	-	51	-	-	-	51	-
Buildings and Improvements									
<i>Building accessibility upgrades</i>	273	-	-	273	-	-	-	273	-
<i>Community building renewals</i>	278	-	278	-	-	-	-	278	-
<i>Former Chewton Wesleyan Church</i>	314	-	314	-	-	-	-	314	-
TOTAL PROPERTY	3,066	2,151	592	323	-	1,500	-	1,566	-
PLANT AND EQUIPMENT									
Plant, Machinery and Equipment									
<i>Plant and machinery</i>	826	-	826	-	-	-	-	826	-
<i>Vehicles</i>	410	-	410	-	-	-	-	410	-
Computers and Telecommunications									
<i>Workstation and server equipment</i>	201	-	201	-	-	-	-	201	-
TOTAL PLANT AND EQUIPMENT	1,437	-	1,437	-	-	-	-	1,437	-

Capital Works Area	Project Cost \$'000	Asset expenditure types				Summary of Funding Sources			
		New	Renewal	Upgrade	Expansion	Grants	Contrib.	Council cash	Borrowings
		\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
INFRASTRUCTURE									
Roads									
<i>Gravel roads resheeting</i>	694	-	694	-	-	-	-	694	-
<i>Local roads resealing</i>	1,201	-	1,201	-	-	1,080	-	121	-
<i>Diamond Gully Road and intersection</i>	694	-	-	694	-	624	-	70	-
<i>Smaller towns streetscapes</i>	85	-	-	85	-	-	-	85	-
<i>Major patching</i>	334	-	334	-	-	-	-	334	-
Recreational, leisure and community facilities									
<i>Designs for public toilets and recreation facilities</i>	147	60	87	-	-	56	5	86	-
<i>Public art</i>	127	127	-	-	-	-	-	127	-
<i>Campbells Creek Recreation Reserve pavilion</i>	806	-	403	403	-	500	-	306	-
<i>Playground replacement</i>	218	-	218	-	-	50	-	168	-
<i>Open space renewals</i>	183	-	183	-	-	-	-	183	-
<i>Swimming pools renewal</i>	140	-	140	-	-	-	-	140	-
Bridges									
<i>Bridge renewal program</i>	136	-	136	-	-	-	-	136	-
Footpaths and Cycleways									
<i>Botanical Gardens path renewal</i>	30	-	30	-	-	-	-	30	-
<i>Footpath design and renewals</i>	333	112	221	-	-	-	-	333	-
Drainage									
<i>Drainage improvements</i>	168	-	168	-	-	25	-	143	-
<i>Campbell Street drainage</i>	140	-	-	140	-	-	-	140	-
TOTAL INFRASTRUCTURE	5,435	299	3,814	1,322	-	2,335	5	3,095	-
TOTAL NEW CAPITAL WORKS	9,939	2,450	5,843	1,646	-	3,835	5	6,099	-

**Summary of Planned Capital Works Expenditure
For the years ending 30 June 2026, 2027 & 2028**

2025/26	Asset Expenditure Types					Funding Sources				
	Total \$'000	New \$'000	Renewal \$'000	Upgrade \$'000	Expansion \$'000	Total \$'000	Grants \$'000	Contributions \$'000	Council Cash \$'000	Borrowings \$'000
Property										
Land improvements	500	0	500	0	0	500	0	0	500	0
Buildings	1,598	0	1,598	0	0	1,598	591	0	1,007	0
Total Property	2,098	0	2,098	0	0	2,098	591	0	1,507	0
Plant and Equipment										
Plant, machinery and equipment	1,040	0	1,040	0	0	1,040	0	0	1,040	0
Computers and telecommunications	200	0	200	0	0	200	0	0	200	0
Total Plant and Equipment	1,240	0	1,240	0	0	1,240	0	0	1,240	0
Infrastructure										
Roads	4,400	0	3,960	440	0	3,400	1,644	0	1,756	0
Bridges	822	0	822	0	0	822	400	0	422	0
Footpaths and cycleways	500	75	350	75	0	500	0	0	500	0
Drainage	418	155	108	155	0	418	0	0	418	0
Recreational, leisure and community facilities	824	0	18	806	0	824	403	0	421	0
Total Infrastructure	6,964	230	5,258	1,476	0	5,964	2,447	0	3,517	0
Total Capital Works Expenditure	10,302	230	8,596	1,476	0	9,302	3,038	0	6,264	0

2026/27	Asset Expenditure Types					Funding Sources				
	Total \$'000	New \$'000	Renewal \$'000	Expansion \$'000	Upgrade \$'000	Total \$'000	Grants \$'000	Contributions \$'000	Council Cash \$'000	Borrowings \$'000
Property										
Land improvements	500	0	500	0	0	500	0	0	500	0
Buildings	1,696	0	1,472	224	0	1,696	442	0	1,254	0
Total Property	2,196	0	1,972	224	0	2,196	442	0	1,754	0
Plant and Equipment										
Plant, machinery and equipment	1,110	0	1,110	0	0	1,110	0	0	1,110	0
Computers and telecommunications	205	0	205	0	0	205	0	0	205	0
Total Plant and Equipment	1,315	0	1,315	0	0	1,315	0	0	1,315	0
Infrastructure										
Roads	4,450	0	3,370	1,080	0	3,400	1,644	0	1,756	0
Bridges	834	0	834	0	0	834	400	0	434	0
Footpaths and cycleways	550	75	400	75	0	550	0	0	550	0
Drainage	400	144	112	144	0	400	0	0	400	0
Recreational, leisure and community facilities	944	0	93	851	0	944	255	0	689	0
Total Infrastructure	7,178	219	4,809	2,150	0	6,128	2,299	0	3,829	0
Total Capital Works Expenditure	10,689	219	8,096	2,374	0	9,639	2,741	0	6,898	0

**Summary of Planned Capital Works Expenditure continued
For the years ending 30 June 2026, 2027 & 2028**

2027/28	Asset Expenditure Types					Funding Sources				
	Total \$'000	New \$'000	Renewal \$'000	Expansion \$'000	Upgrade \$'000	Total \$'000	Grants \$'000	Contributions \$'000	Council Cash \$'000	Borrowings \$'000
Property										
Land improvements	500	0	500	0	0	500	0	0	500	0
Buildings	1,763	0	1,523	240	0	1,763	609	0	1,154	0
Total Property	2,263	0	2,023	240	0	2,263	609	0	1,654	0
Plant and Equipment										
Plant, machinery and equipment	1,040	0	1,040	0	0	1,040	0	0	1,040	0
Computers and telecommunications	210	0	210	0	0	210	0	0	210	0
Total Plant and Equipment	1,250	0	1,250	0	0	1,250	0	0	1,250	0
Infrastructure										
Roads	4,800	0	4,380	420	0	3,600	1,650	0	1,950	0
Bridges	808	0	808	0	0	808	400	0	408	0
Footpaths and cycleways	600	75	450	75	0	600	0	0	600	0
Drainage	477	180	117	180	0	477	0	0	477	0
Recreational, leisure and community facilities	892	0	25	867	0	892	260	0	632	0
Total Infrastructure	7,577	255	5,780	1,542	0	6,377	2,310	0	4,067	0
Total Capital Works Expenditure	11,090	255	9,053	1,782	0	9,890	2,919	0	6,971	0

5a. Targeted performance indicators

The following tables highlight Council's current and projected performance across a selection of targeted service and financial performance indicators. These indicators provide a useful analysis of Council's intentions and performance and should be interpreted in the context of the organisation's objectives.

The targeted performance indicators below are the prescribed performance indicators contained in Schedule 4 of the Local Government (Planning and Reporting) Regulations 2020. Results against these indicators and targets will be reported in Council's Performance Statement included in the Annual Report.

Targeted performance indicators - Service

Indicator	Measure	Notes	Actual	Forecast	Target	Target Projections			Trend
			2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	+ / o / -
Governance									
Consultation and engagement	Satisfaction with community consultation and engagement								
(Council decisions made and implemented with community input)	Community satisfaction rating out of 100 with the consultation and engagement efforts of Council	1	51	49	52	51	52	53	+
Roads									
Condition	Sealed local roads below the intervention level								
(sealed local roads are maintained at the adopted condition standard)	Number of kms of sealed local roads below the renewal intervention level set by Council / Kms of sealed local roads	2	97%	97%	96%	95%	94%	95%	o
Statutory planning									
Service standard	Planning applications decided within the relevant required time								
(planning application processing and decisions are in accordance with legislative requirements)	Number of planning application decisions made within the relevant required time / Number of decisions made	3	26%	40%	42%	44%	46%	48%	+
Waste management									
Waste diversion	Kerbside collection waste diverted from landfill								
(amount of waste diverted from landfill is maximised)	Weight of recyclables and green organics collected from kerbside bins / Weight of garbage, recyclables and green organics collected from kerbside bins	4	35%	35%	36%	40%	45%	50%	+

Notes to indicators

1. Satisfaction with community consultation and engagement

Target has been set as a minimum, with a view to revisit in future. The 2021/2022 average for all councils was 55.15.

2. Sealed local roads below the intervention level

Target has been set as a minimum, with a view to revisit in future.

3. Planning applications decided within the relevant required time

Target has been set as a minimum, with a view to revisit in future.

4. Kerbside collection waste diverted from landfill

Target has been set as a minimum, with a view to revisit in future.

5a. Targeted performance indicators continued

Targeted performance indicators - Financial

Indicator	Measure	Notes	Actual	Forecast	Target	Target Projections			Trend
			2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	+/-
Liquidity									
Working capital	Current assets compared to current liabilities								
(sufficient working capital is available to pay bills as and when they fall due)	Current assets / current liabilities	5	186%	285%	239%	268%	279%	284%	+
Obligations									
Asset renewal	Asset renewal compared to depreciation								
(assets are renewed as planned)	Asset renewal and upgrade expense / Asset depreciation	6	82%	94%	77%	100%	100%	100%	+
Stability									
Rates concentration	Rates compared to adjusted underlying revenue								
(revenue is generated from a range of sources)	Rate revenue / adjusted underlying revenue	7	62%	71%	67%	64%	64%	65%	-
Efficiency									
Expenditure level	Expenses per property assessment								
(resources are used efficiently in the delivery of services)	Total expenses / no. of property assessments		\$3,711	\$3,748	\$3,832	\$3,747	\$3,905	\$4,063	+

Notes to indicators

5. Working Capital

The proportion of current assets allocated to the repayment of current liabilities. A healthy working capital ratio is anticipated in future years.

6. Asset renewal

This measure indicates the extent of Council's renewals against its depreciation charge (an indication of the decline in the value of its existing capital assets). A percentage greater than 100 indicates that Council is maintaining and upgrading its existing assets, while a percentage less than 100 means that assets are deteriorating faster than they are being renewed, and additional future capital expenditure will be required to renew them.

7. Rates concentration

This measure highlights Council reliance on rates as its main source of revenue.

5b. Financial performance indicators

The following table highlights Council's current and projected performance across a range of key financial performance indicators. These indicators provide a useful analysis of Council's financial position and performance and should be interpreted in the context of the organisation's objectives.

The financial performance indicators below are the prescribed financial performance indicators contained in Part 3 of Schedule 3 of the *Local Government (Planning and Reporting) Regulations 2020*. Results against these indicators will be reported in Council's Performance Statement included in the Annual Report.

Indicator	Measure	Notes	Actual	Forecast	Budget	Projections			Trend
			2022/23	2023/24	2023/24	2024/25	2025/26	2026/27	+o/-
Operating position									
Adjusted underlying result	Adjusted underlying surplus (or deficit)								
(an adjusted underlying surplus is generated in the ordinary course of business)	Adjusted underlying surplus (deficit) / Adjusted underlying revenue	8	-123%	-21%	-9%	-6%	-8%	-10%	+
Obligations									
Loans and borrowings									
(level of interest bearing loans and borrowings is appropriate to the size and nature of Council's activities)	Interest bearing loans and borrowings / rate revenue	10	9%	7%	6%	1%	0%	0%	+
Loans and borrowings									
(level of interest bearing loans and borrowings is appropriate to the size and nature of Council's activities)	Interest and principal repayments on interest bearing loans and borrowings / rate revenue		6%	1%	1%	6%	1%	0%	+
Indebtedness									
(level of long term liabilities is appropriate to the size and nature of a Council's activities)	Non-current liabilities / own source revenue		17%	13%	8%	7%	6%	6%	+
Stability									
Rates effort									
(rating level is set based on the community's capacity to pay)	Rate revenue / CIV of rateable properties in the municipality		0.32%	0.25%	0.25%	0.26%	0.26%	0.26%	o
Efficiency									
Revenue level									
(resources are used efficiently in the delivery of services)	Average rate per property assessment		\$1,711	\$1,827	\$1,879	\$1,912	\$1,978	\$2,049	+

Key to Forecast Trend:

- + Forecasts improvement in Council's financial performance/financial position indicator
- o Forecasts that Council's financial performance/financial position indicator will be steady
- Forecasts deterioration in Council's financial performance/financial position indicator

Notes to indicators**8. Adjusted underlying result**

An indicator of the sustainable operating result required to enable Council to continue to provide services and meet its objectives. Continued underlying deficits mean reliance on Council's cash reserves or increased debt to maintain services.

9. Obligations

These measures reflect the reduction in loan liabilities over time, with no new borrowings currently proposed.

10. Stability

This measure compare the portion of property valuations represented by rates income. The lower the percentage, it is assumed there is a greater capacity to pay.

11. Efficiency

Measures the spread of rates income over the number of properties in the municipality.

6. Schedule of Fees and Charges

This appendix presents the fees and charges of a statutory / non-statutory nature which will be charged in respect to various items during the 2024/2025 financial year.

Fees and charges are based on information available at the time of publishing and may vary during the financial year subject to any changes in Council's policy, legislation, or correction of errors.

Description of Fees and Charges	Unit of Measure	GST Status	2023/2024	2024/2025	Fee	Fee	Basis of Fee	Pricing Policy
			Fee incl GST \$	Fee incl GST \$	Increase / (Decrease) \$	Increase / (Decrease) %		
Communications and Customer Services								
<i>Venue Coordination</i>								
Castlemaine Senior Citizens Centre - Small venues community	Per Day	Taxable	30.00	30.85	0.85	2.83%	Discretionary	Accessible Pricing
Castlemaine Senior Citizens Centre - Small venues private/commercial	Per Day	Taxable	46.60	47.90	1.30	2.79%	Discretionary	Accessible Pricing
Chewton Senior Citizens Centre - Small venues community	Per Day	Taxable	30.00	30.85	0.85	2.83%	Discretionary	Accessible Pricing
Chewton Senior Citizens Centre - Small venues private/commercial	Per Day	Taxable	46.60	47.90	1.30	2.79%	Discretionary	Accessible Pricing
Cleaner	Per Hour	Taxable	76.30	78.40	2.10	2.75%	Discretionary	Market Pricing
Former Tea Room - Small venues community	Per Day	Taxable	30.00	30.85	0.85	2.83%	Discretionary	Accessible Pricing
Former Tea Room - Small venues private/commercial	Per Day	Taxable	46.60	47.90	1.30	2.79%	Discretionary	Accessible Pricing
Grand Piano	Per Day	Taxable	283.50	291.30	7.80	2.75%	Discretionary	Market Pricing
Market Building community day	Per Month	Taxable	21.10	21.70	0.60	2.84%	Discretionary	Accessible Pricing
Market Building community month	Per Week	Taxable	893.98	918.55	24.57	2.75%	Discretionary	Market Pricing
Market Building community week	Per Day	Taxable	337.90	347.20	9.30	2.75%	Discretionary	Market Pricing
Market Building private/commercial day	Per Day	Taxable	27.20	27.95	0.75	2.76%	Discretionary	Accessible Pricing
Market Building private/commercial month	Per Month	Taxable	1,123.00	1,153.90	30.90	2.75%	Discretionary	Market Pricing
Market Building private/commercial week	Per Week	Taxable	419.80	431.35	11.55	2.75%	Discretionary	Accessible Pricing
Outdoor space - event more than 50ppl	Per Hire	Taxable	239.90	246.50	6.60	2.75%	Discretionary	Market Pricing
Outdoor venue bond for event 100-500 people	Per Hire	Non-Taxable	1,035.00	1,063.45	28.45	2.75%	Discretionary	Disincentive Pricing
Outdoor venue bond for event 50-100 people	Per Hire	Non-Taxable	517.50	531.75	14.25	2.75%	Discretionary	Disincentive Pricing
Phee Broadway Theatre community base rate	Per Day	Taxable	32.20	33.10	0.90	2.80%	Discretionary	Accessible Pricing
Phee Broadway Theatre performance	Per Half Day	Taxable	147.20	151.25	4.05	2.75%	Discretionary	Accessible Pricing
Phee Broadway Theatre private/commercial base rate	Per Day	Taxable	64.90	66.70	1.80	2.77%	Discretionary	Accessible Pricing
Phee Broadway Theatre private/commercial casual additional charge	Per Hour	Taxable	32.70	33.60	0.90	2.75%	Discretionary	Accessible Pricing
Phee Broadway Theatre private/commercial verified booking rate	Per Hour	Taxable	64.90	66.70	1.80	2.77%	Discretionary	Market Pricing
Picket Fencing	Per Day	Taxable	142.20	146.10	3.90	2.74%	Discretionary	Full Cost Recovery
Portable PA	Per Day/Weekend	Taxable	6.70	6.90	0.20	2.99%	Discretionary	Market Pricing
Portable stage (all sections)	Per Day	Taxable	140.10	143.95	3.85	2.75%	Discretionary	Market Pricing

Description of Fees and Charges	Unit of Measure	GST Status	2023/2024	2024/2025	Fee	Fee	Basis of Fee	Pricing Policy
			Fee incl GST \$	Fee incl GST \$	Increase / (Decrease) \$	Increase / (Decrease) %		
Portable stage (per section)	Per Section/Day	Taxable	28.90	29.70	0.80	2.77%	Discretionary	Market Pricing
Ray Bradfield - Small venues community	Per Day	Taxable	30.00	30.85	0.85	2.83%	Discretionary	Accessible Pricing
Ray Bradfield - Small venues private/commercial	Per Day	Taxable	46.60	47.90	1.30	2.79%	Discretionary	Accessible Pricing
Supervising Technician	Per Hour	Taxable	57.80	59.40	1.60	2.77%	Discretionary	Market Pricing
Town Hall general use community	Per Half Day	Taxable	28.60	29.40	0.80	2.80%	Discretionary	Market Pricing
Town Hall general use private/commercial	Per Day	Taxable	93.40	96.00	2.60	2.78%	Discretionary	Market Pricing
Town Hall kitchen community	Per Day	Taxable	15.00	15.40	0.40	2.67%	Discretionary	Accessible Pricing
Town Hall kitchen private/commercial	Per Half Day	Taxable	21.75	22.35	0.60	2.76%	Discretionary	Accessible Pricing
Town Hall stage lighting extra charge	Per Day	Taxable	14.30	14.70	0.40	2.80%	Discretionary	Accessible Pricing
Town Hall, Phee Broadway Theatre or Market Building- alcohol bond - per hire	Per Hire	Non-Taxable	1,035.00	1,063.45	28.45	2.75%	Discretionary	Disincentive Pricing
Town Hall, Phee Broadway Theatre or Market Building- non alcohol bond - per hire	Per Hire	Non-Taxable	517.50	531.75	14.25	2.75%	Discretionary	Disincentive Pricing
<i>Visitor Information Centres</i>								
Tour Guide	Per booking	Taxable	70.00	70.00	0.00	0.00%	Discretionary	Market Pricing
Tour Guide booking fee	Per booking	Taxable	10.00	10.00	0.00	0.00%	Discretionary	Market pricing
Community Partnerships								
<i>Emergency Management</i>								
Administration and Reinspection Fee	Per client	Non-Taxable	194.50	199.85	5.35	2.75%	Discretionary	Full Cost Recovery
Permit to Burn - during fire danger period	Per client	Non-Taxable	179.60	184.55	4.95	2.76%	Discretionary	Full Cost Recovery
Property clearance charges (reimbursement)	Per client	Taxable	3,206.70	3,294.90	88.20	2.75%	Discretionary	Full Cost Recovery
Community Wellbeing								
<i>Community Services - Brokerage</i>								
Brokerage - Delivered meals (weekday 7.30 am to 7.30 pm) - per meal	Per Meal	Taxable	28.50	31.35	2.85	10.00%	Discretionary	Market Pricing
Brokerage - Foot care Program Podiatry Kit	Per Kit	Taxable	46.20	48.00	1.80	3.90%	Discretionary	Market Pricing
Brokerage - Home care (weekday 7.30 am to 7.30 pm) - per hr	Per Hour	Taxable	65.60	96.65	31.05	47.33%	Discretionary	Market Pricing
Brokerage - Home care (weekends / public holidays) - per hr	Per Hour	Taxable	110.20	127.60	17.40	15.79%	Discretionary	Market Pricing
Brokerage - Personal care (weekday 7.30 am to 7.30 pm) - per hr	Per Hour	Taxable	75.00	114.60	39.60	52.80%	Discretionary	Market Pricing
Brokerage - Personal care (weekends / public holidays) - per hr	Per Hour	Taxable	113.90	136.25	22.35	19.62%	Discretionary	Market Pricing
Brokerage - Planned activity group (weekday 7.30 am to 7.30 pm) - per week	Per Week	Taxable	27.70	31.35	3.65	13.18%	Discretionary	Market Pricing
Brokerage - Post Acute Care	Per Hour	Taxable	70.20	79.50	9.30	13.25%	Discretionary	Market Pricing
Brokerage - Property Maintenance (weekday 7.30 am to 7.30 pm) - per hr	Per Hour	Taxable	92.70	104.50	11.80	12.73%	Discretionary	Market Pricing
Brokerage - Respite care (weekday 7.30 am to 7.30 pm) - per hr	Per Hour	Taxable	75.00	88.00	13.00	17.33%	Discretionary	Market Pricing

Description of Fees and Charges	Unit of Measure	GST Status	2023/2024	2024/2025	Fee	Fee	Basis of Fee	Pricing Policy
			Fee incl GST \$	Fee incl GST \$	Increase / (Decrease) \$	Increase / (Decrease) %		
Brokerage - Respite care (weekends / public holidays) - per hr	Per Hour	Taxable	113.90	125.30	11.40	10.01%	Discretionary	Market Pricing
Brokerage - Travel - per km	Per km	Taxable	1.10	1.10	0.00	0.00%	Discretionary	Market Pricing
<i>Community Services - CHSP</i>								
Bus hire community transport - per trip	Per km	Taxable	3.70	4.00	0.30	8.11%	Discretionary	Accessible Pricing
Delivered meals - High income - per meal	Per Meal	Non-Taxable	27.60	28.50	0.90	3.26%	Discretionary	Accessible Pricing
Delivered meals - Low income - per meal	Per Meal	Non-Taxable	11.75	12.00	0.25	2.13%	Discretionary	Accessible Pricing
Delivered meals - Medium income - per meal	Per Meal	Non-Taxable	15.70	16.00	0.30	1.91%	Discretionary	Accessible Pricing
Flexible respite care - High income - per hr	Per Hour	Non-Taxable	67.20	80.00	12.80	19.05%	Discretionary	Accessible Pricing
Flexible respite care - Low income - per hr	Per Hour	Non-Taxable	4.20	5.00	0.80	19.05%	Discretionary	Accessible Pricing
Flexible respite care - Medium income - per hr	Per Hour	Non-Taxable	16.35	18.00	1.65	10.09%	Discretionary	Accessible Pricing
Foot care Program Podiatry Kit	Per Kit	Non-Taxable	45.90	48.00	2.10	4.58%	Discretionary	Accessible Pricing
Group social support - High income - per activity	Per Activity	Non-Taxable	27.60	28.00	0.40	1.45%	Discretionary	Accessible Pricing
Group social support - Low income - per activity	Per Activity	Non-Taxable	15.60	16.00	0.40	2.56%	Discretionary	Accessible Pricing
Group social support - Medium income - per activity	Per Activity	Non-Taxable	15.90	18.00	2.10	13.21%	Discretionary	Accessible Pricing
Home care - High income (M-F) - per hr	Per Hour	Non-Taxable	63.00	70.00	7.00	11.11%	Discretionary	Accessible Pricing
Home Care - Low Income - per hr	Per Hour	Non-Taxable	8.00	9.00	1.00	12.50%	Discretionary	Accessible Pricing
Home care - Medium income - per hr	Per Hour	Non-Taxable	20.15	21.00	0.85	4.22%	Discretionary	Accessible Pricing
Home maintenance - High income - per hr	Per Hour	Non-Taxable	84.05	84.05	0.00	0.00%	Discretionary	Accessible Pricing
Home Maintenance - Low income - per hr	Per Hour	Non-Taxable	15.05	15.05	0.00	0.00%	Discretionary	Accessible Pricing
Home maintenance - Medium income - per hr	Per Hour	Non-Taxable	26.45	26.45	0.00	0.00%	Discretionary	Accessible Pricing
Home Modifications - Low Income	per Job	Non-Taxable	Costed per job				Discretionary	Accessible Pricing
Individual social support - High income - per hr	Per Hour	Non-Taxable	63.00	64.90	1.90	3.02%	Discretionary	Accessible Pricing
Individual social support - Low income - per hr	Per Hour	Non-Taxable	8.00	8.20	0.20	2.50%	Discretionary	Accessible Pricing
Individual social support - Medium income - per hr	Per Hour	Non-Taxable	20.15	20.80	0.65	3.23%	Discretionary	Accessible Pricing
Personal care - High income (M-F) - per hr	Per Hour	Non-Taxable	67.20	80.00	12.80	19.05%	Discretionary	Accessible Pricing
Personal care - Low income - per hr	Per Hour	Non-Taxable	6.10	8.00	1.90	31.15%	Discretionary	Accessible Pricing
Personal care - Medium income - per hr	Per Hour	Non-Taxable	17.70	19.00	1.30	7.34%	Discretionary	Accessible Pricing
<i>Community Services - HACC</i>								
Bus hire community transport - per trip	Per Trip	Taxable	3.70	4.00	0.30	8.11%	Discretionary	Accessible Pricing
Delivered meals - High income - per meal	Per Meal	Non-Taxable	27.60	28.50	0.90	3.26%	Discretionary	Accessible Pricing
Delivered meals - Low income - per meal	Per Meal	Non-Taxable	11.75	12.00	0.25	2.13%	Discretionary	Accessible Pricing
Delivered meals - Medium income - per meal	Per Meal	Non-Taxable	15.70	16.00	0.30	1.91%	Discretionary	Accessible Pricing
Foot care Program Podiatry Kit	Per Kit	Non-Taxable	45.90	48.00	2.10	4.58%	Discretionary	Accessible Pricing

Description of Fees and Charges	Unit of Measure	GST Status	2023/2024	2024/2025	Fee	Fee	Basis of Fee	Pricing Policy
			Fee incl GST \$	Fee incl GST \$	Increase / (Decrease) \$	Increase / (Decrease) %		
Home care - High income (M-F) - per hr	Per Hour	Non-Taxable	63.00	70.00	7.00	11.11%	Discretionary	Accessible Pricing
Home care - Low income - per hr	Per Hour	Non-Taxable	8.00	9.00	1.00	12.50%	Discretionary	Accessible Pricing
Home care - Medium income - per hr	Per Hour	Non-Taxable	20.10	21.00	0.90	4.48%	Discretionary	Accessible Pricing
Personal care - High income (M-F) - per hr	Per Hour	Non-Taxable	67.20	80.00	12.80	19.05%	Discretionary	Accessible Pricing
Personal care - Low income - per hr	Per Hour	Non-Taxable	6.10	8.00	1.90	31.15%	Discretionary	Accessible Pricing
Personal care - Medium income - per hr	Per Hour	Non-Taxable	17.70	19.00	1.30	7.34%	Discretionary	Accessible Pricing
Planned Activity Group - High income - per activity	Per Activity	Non-Taxable	27.60	28.00	0.40	1.45%	Discretionary	Accessible Pricing
Planned Activity Group - Low income - per activity	Per Activity	Non-Taxable	15.60	16.00	0.40	2.56%	Discretionary	Accessible Pricing
Planned Activity Group - Medium income - per activity	Per Activity	Non-Taxable	15.90	18.00	2.10	13.21%	Discretionary	Accessible Pricing
Planned Activity Group - Transport - per hr	Per Hour	Taxable	3.70	4.00	0.30	8.11%	Discretionary	Accessible Pricing
Property maintenance - High income - per hr	Per Hour	Non-Taxable	84.00	84.05	0.05	0.06%	Discretionary	Accessible Pricing
Property maintenance - Low income - per hr	Per Hour	Non-Taxable	15.05	15.05	0.00	0.00%	Discretionary	Accessible Pricing
Property maintenance - Medium income - per hr	Per Hour	Non-Taxable	26.40	26.45	0.05	0.19%	Discretionary	Accessible Pricing
Respite care - High income (M-F) - per hr	Per Hour	Non-Taxable	67.20	80.00	12.80	19.05%	Discretionary	Accessible Pricing
Respite care - Low income - per hr	Per Hour	Non-Taxable	4.20	5.00	0.80	19.05%	Discretionary	Accessible Pricing
Respite care - Medium income - per hr	Per Hour	Non-Taxable	16.30	18.00	1.70	10.43%	Discretionary	Accessible Pricing
<i>Community Services - HCP</i>								
HCP - Delivered meals (Tuesdays and Fridays only)	Per Meal	Taxable	0.00	31.35	31.35		Discretionary	Market Pricing
HCP - Foot care Program Podiatry Kit	Per kit	Taxable	0.00	48.00	48.00		Discretionary	Market Pricing
HCP - Home care (weekday 7.30 am to 7.30 pm) - per hr	Per Hour	Taxable	0.00	77.00	77.00		Discretionary	Market Pricing
HCP - Home care (weekends / public holidays) - per hr	Per Hour	Taxable	0.00	127.60	127.60		Discretionary	Market Pricing
HCP - Personal care (weekday 7.30 am to 7.30 pm) - per hr	Per Hour	Taxable	0.00	88.00	88.00		Discretionary	Market Pricing
HCP - Personal care (weekends / public holidays) - per hr	Per Hour	Taxable	0.00	132.00	132.00		Discretionary	Market Pricing
HCP - Planned activity group (weekdays only)	Per Activity	Taxable	0.00	31.35	31.35		Discretionary	Market Pricing
HCP - Property Maintenance (weekday 7.30 am to 7.30 pm) - per hr	Per Hour	Taxable	0.00	104.50	104.50		Discretionary	Market Pricing
HCP - Respite care (weekday 7.30 am to 7.30 pm) - per hr	Per Hour	Taxable	0.00	88.00	88.00		Discretionary	Market Pricing
HCP - Respite care (weekends / public holidays) - per hr	Per Hour	Taxable	0.00	125.30	125.30		Discretionary	Market Pricing
HCP - Travel - per km	Per km	Taxable	0.00	1.10	1.10		Discretionary	Market Pricing
HCP - Gardening services	Service	Taxable	0.00	104.50	104.50		Discretionary	Market Pricing
<i>Community Services - Other</i>								
Bus hire community groups only	Per km	Taxable	1.10	1.10	0.00	0.00%	Discretionary	Accessible Pricing
<i>Community Services - Veterans</i>								
Veterans Home Care - per hr	Per Hour	Non-Taxable	5.00	5.00	0.00	0.00%	Statutory	Statutory

Description of Fees and Charges	Unit of Measure	GST Status	2023/2024	2024/2025	Fee	Fee	Basis of Fee	Pricing Policy	
			Fee incl GST \$	Fee incl GST \$	Increase / (Decrease) \$	Increase / (Decrease) %			
Veterans Personal Care - per hr	Per Hour	Non-Taxable	5.00	5.00	0.00	0.00%	Statutory	Statutory	
Veterans Property Maintenance - per hr	Per Hour	Non-Taxable	5.00	5.00	0.00	0.00%	Statutory	Statutory	
Veterans Respite Care	Per Hour	Non-Taxable	No charge to customer					Statutory	Statutory
Corporate Services									
<i>Financial Services</i>									
Dishonoured Cheque Administration fee	Per Fee	Non-Taxable	27.80	28.55	0.75	2.70%	Discretionary	Full Cost Recovery	
Dishonoured Direct Debit Administration fee	Per Fee	Non-Taxable	27.80	28.55	0.75	2.70%	Discretionary	Full Cost Recovery	
Land Information Certificate - statutory	Per Certificate	Non-Taxable	28.90	28.90	0.00	0.00%	Statutory	Statutory	
Rate Enquiries/ Rate Book Search	Per Search	Non-Taxable	64.10	65.85	1.75	2.73%	Discretionary	Full Cost Recovery	
Development Services									
<i>Building Services</i>									
Amendment to permit only	Per Amendment	Taxable	228.90	235.20	6.30	2.75%	Discretionary	Market Pricing	
Approval of temporary occupation of a building	Per Building	Taxable	394.70	405.55	10.85	2.75%	Discretionary	Market Pricing	
Building Commission Levy for building works > \$10000 = .128% or \$1.28 per \$1000	Per Levy	Non-Taxable	0.00	0.00			Statutory	Statutory	
Building information certificates - Building Regulation 52	Per Permit	Non-Taxable	50.70	50.70	0.00	0.00%	Statutory	Statutory	
Building permits - private lodgement - statutory	Per Permit	Non-Taxable	130.90	130.90	0.00	0.00%	Statutory	Statutory	
Change of use - class 10A to class 1A	Per Request	Taxable	1,055.30	1,084.30	29.00	2.75%	Discretionary	Market Pricing	
Change of use - class 1A to class 1B	Per Request	Taxable	994.50	1,021.85	27.35	2.75%	Discretionary	Market Pricing	
Change of use - class 2 to 9 buildings	Per Request	Taxable	1,758.70	1,807.05	48.35	2.75%	Discretionary	Market Pricing	
Class 1 - Alterations & additions (50k to 150k)	Per Request	Taxable	2,107.60	2,165.55	57.95	2.75%	Discretionary	Market Pricing	
Class 1 - Alterations & additions (up to 50k)	Per Permit	Taxable	1,874.20	1,925.75	51.55	2.75%	Discretionary	Market Pricing	
Class 1 - Dwellings, relocation of dwellings, and units (per individual unit), additions and alteration	Per Request	Taxable	2,456.50	2,524.05	67.55	2.75%	Discretionary	Market Pricing	
Class 1 - Restumping and underpinning	Per Permit	Taxable	948.50	974.60	26.10	2.75%	Discretionary	Market Pricing	
Class 10 - Fences, masts & miscellaneous structures	Per Permit	Taxable	738.20	758.50	20.30	2.75%	Discretionary	Market Pricing	
Class 10 - Outbuildings, garages, sheds	Per Permit	Taxable	994.50	1,021.85	27.35	2.75%	Discretionary	Market Pricing	
Class 10 - Swimming Pools	Per Permit	Taxable	811.20	833.50	22.30	2.75%	Discretionary	Market Pricing	
Commercial building works to \$50,000	Per Permit	Taxable	1,865.60	1,916.90	51.30	2.75%	Discretionary	Market Pricing	
Commercial building works > \$150,000	Per Permit	Taxable	2,444.40	2,511.60	67.20	2.75%	Discretionary	Market Pricing	
Commercial building works > \$50,000 to \$150,000	Per Permit	Taxable	2,097.70	2,155.40	57.70	2.75%	Discretionary	Market Pricing	
Demolition/removal permit - class 1 to 10	Per Permit	Taxable	743.60	764.05	20.45	2.75%	Discretionary	Market Pricing	
Demolition/removal permit - class 2 to 9 buildings	Per Permit	Taxable	1,109.00	1,139.50	30.50	2.75%	Discretionary	Market Pricing	
Extension of building permit 1 year maximum	Per Extension	Taxable	297.70	305.90	8.20	2.75%	Discretionary	Market Pricing	

Description of Fees and Charges	Unit of Measure	GST Status	2023/2024	2024/2025	Fee	Fee	Basis of Fee	Pricing Policy
			Fee incl GST \$	Fee incl GST \$	Increase / (Decrease) \$	Increase / (Decrease) %		
Hourly rate - Administration Staff	Per Hour	Taxable	113.40	116.50	3.10	2.73%	Discretionary	Market Pricing
Hourly rate - Building Inspector/Building Surveyor	Per Hour	Taxable	161.70	166.15	4.45	2.75%	Discretionary	Market Pricing
Hourly rate - Municipal Building Surveyor	Per Hour	Taxable	246.40	253.20	6.80	2.76%	Discretionary	Market Pricing
Inspection on works when building permit has lapsed or expired (incl additional or contract inspection)	Per Inspection	Taxable	228.90	235.20	6.30	2.75%	Discretionary	Market Pricing
Miscellaneous permits - occupation permits for places of public entertainment in a building	Per Permit	Non-Taxable	743.60	764.05	20.45	2.75%	Discretionary	Market Pricing
Miscellaneous permits - occupation permits for places of public entertainment in an open area	Per Permit	Non-Taxable	743.60	764.05	20.45	2.75%	Discretionary	Market Pricing
Miscellaneous permits - siting of temporary structures	Per Permit	Non-Taxable	394.70	405.55	10.85	2.75%	Discretionary	Market Pricing
Rectification of illegal works - as per new works fee schedule	Per Rectificati	Non-Taxable	0.00	0.00	0.00		Statutory	Statutory
Rectification of illegal works (as per new works fee structure	Per Application	Non-Taxable	0.00	0.00	0.00		Statutory	Statutory
Registration of a swimming pool and spa constructed or construction started prior to 1 November 2020	Per Pool/Spa	Non-Taxable	34.20	34.20	0.00	0.00%	Statutory	Statutory
Registration of a swimming pool and spa where a building permit was issued on or after 1 November or	Per Pool/Spa	Non-Taxable	34.20	34.20	0.00	0.00%	Statutory	Statutory
Relocation of dwellings - security deposit	Per application	Non-Taxable	10,000.00	10,000.00	0.00	0.00%	Discretionary	Market Pricing
Report & Consent - Consent under Part 5, 6, 10 of the Regulations - statutory	Per Application	Non-Taxable	311.80	311.80	0.00	0.00%	Statutory	Statutory
Report & Consent - Consent under Part 7 of the Regulations - statutory	Per Request	Non-Taxable	316.40	316.40	0.00	0.00%	Statutory	Statutory
Report & Consent - Consent under Section 29A of the Act (Demolition) - Form A - statutory	Per Application	Non-Taxable	91.40	91.40	0.00	0.00%	Statutory	Statutory
Request for copying of permits and plans	Per Copy	Non-Taxable	92.70	95.25	2.55	2.75%	Discretionary	Full Cost Recovery
Special services - assistance for applications to Building Appeals Board - per hour	Per Hour	Taxable	218.10	224.10	6.00	2.75%	Discretionary	Market Pricing
Special services - renewal of expired building permits	Per Renewal	Taxable	526.70	541.20	14.50	2.75%	Discretionary	Market Pricing
Swimming Pool / Spa - Information fee	Per Pool/Spa	Non-Taxable	50.70	50.70	0.00	0.00%	Statutory	Statutory
Swimming Pool / Spa - Registration - lodgement of cert Barrier Compliance	Per Pool/Spa	Non-Taxable	21.90	21.90	0.00	0.00%	Statutory	Statutory
Swimming Pool / Spa - Registration - lodgement of cert Barrier Non-Compliance	Per Pool/Spa	Non-Taxable	413.40	413.40	0.00	0.00%	Statutory	Statutory
Variation to approved documents - minor works under \$5,000	Per Variation	Taxable	228.90	235.20	6.30	2.75%	Discretionary	Market Pricing
Variation to approved documents - works over \$5,000	Per Variation	Taxable	400.20	411.20	11.00	2.75%	Discretionary	Market Pricing
Community Safety and Amenity								
Animal Registration - Cat - Full Fee	Per Animal	Non-Taxable	155.30	157.00	1.70	1.09%	Discretionary	Disincentive Pricing
Animal Registration - Cat - Full Fee (Pensioner)	Per Animal	Non-Taxable	77.60	79.75	2.15	2.77%	Discretionary	Accessible Pricing
Animal Registration - Cat - Reduced Fee	Per Animal	Non-Taxable	51.80	53.20	1.40	2.70%	Discretionary	Accessible Pricing
Animal Registration - Cat - Reduced Fee (Pensioner)	Per Animal	Non-Taxable	25.90	27.00	1.10	4.25%	Discretionary	Accessible Pricing

Description of Fees and Charges	Unit of Measure	GST Status	2023/2024	2024/2025	Fee	Fee	Basis of Fee	Pricing Policy
			Fee incl GST \$	Fee incl GST \$	Increase / (Decrease) \$	Increase / (Decrease) %		
Animal registration - Cats - foster care fee initial rego	per Animal	Non-Taxable	4.10	4.20	0.10	2.44%	Discretionary	Accessible Pricing
Animal Registration - Dog - Full Fee	Per Animal	Non-Taxable	155.30	157.00	1.70	1.09%	Discretionary	Disincentive Pricing
Animal Registration - Dog - Full Fee (Pensioner)	Per Animal	Non-Taxable	77.60	79.75	2.15	2.77%	Discretionary	Accessible Pricing
Animal Registration - Dog - Reduced Fee	Per Animal	Non-Taxable	51.80	53.20	1.40	2.70%	Discretionary	Accessible Pricing
Animal Registration - Dog - Reduced Fee (Pensioner)	Per Animal	Non-Taxable	25.90	27.00	1.10	4.25%	Discretionary	Accessible Pricing
Animal registration - Dogs - foster care fee initial rego	per Animal	Non-Taxable	4.10	4.20	0.10	2.44%	Discretionary	Accessible Pricing
Fee - Animal Business Registration Compliance Inspection	Per Inspection	Non-Taxable	106.60	109.55	2.95	2.77%	Discretionary	Full Cost Recovery
Fee - Failure to Comply with Notice to Comply Administrative Fee (Major Works)	Per Infringemen	Non-Taxable	106.60	109.55	2.95	2.77%	Discretionary	Disincentive Pricing
Fee - Failure to Comply with Notice to Comply Administrative Fee (Minor Works)	Per Infringemen	Non-Taxable	27.90	28.65	0.75	2.69%	Discretionary	Disincentive Pricing
Fee - Impounded Sundry Item Reclaim	Per Item	Non-Taxable	172.80	177.55	4.75	2.75%	Discretionary	Disincentive Pricing
Fee - Impounded Vehicle Reclaim	Per Vehicle	Non-Taxable	213.20	219.05	5.85	2.74%	Discretionary	Disincentive Pricing
Fee - Impounding - Sustenance (Large Animal)	Per Day	Non-Taxable	14.00	14.40	0.40	2.86%	Discretionary	Disincentive Pricing
Fee - Impounding - Transport Costs (Vehicle Only) per km	Per km	Non-Taxable	2.10	2.20	0.10	4.76%	Discretionary	Disincentive Pricing
Fee - Officer Inspection for Permit (Initial Permit)	Per Permit	Non-Taxable	84.90	87.25	2.35	2.77%	Discretionary	Full Cost Recovery
Fee - Officer Inspection for Permit (Permit Renewal)	Per Permit	Non-Taxable	42.40	43.55	1.15	2.71%	Discretionary	Full Cost Recovery
Fee - Officer Time to Attend and Impound Animals (After Hours)	Per Hour	Non-Taxable	91.10	93.60	2.50	2.74%	Discretionary	Disincentive Pricing
Fee - Officer Time to Attend and Impound Animals (Business Hours)	Per Hour	Non-Taxable	53.80	55.30	1.50	2.79%	Discretionary	Disincentive Pricing
Fee - Pound - Cat (Per animal)	Per Admission	Non-Taxable	25.00	25.00	0.00	0.00%	Discretionary	Disincentive Pricing
Fee - Pound - Dog (Per animal)	Per Admission	Non-Taxable	30.00	30.00	0.00	0.00%	Discretionary	Disincentive Pricing
Fee - Property Inspection for Dangerous and Restricted Breed Dogs	Per Inspection	Taxable	69.30	71.20	1.90	2.74%	Discretionary	Disincentive Pricing
Impounding - Sustenance fee small or medium animals (per day)	Animal/day	Non-Taxable	6.20	6.35	0.15	2.42%	Discretionary	Disincentive Pricing
Impounding - Transport costs (vehicle and float) per km	Per km	Non-Taxable	3.10	96.80	93.70	3022.58%	Discretionary	Disincentive Pricing
Impounding - Transport costs (vehicle and stock trailer) per km	Per km	Non-Taxable	3.10	3.20	0.10	3.23%	Discretionary	Disincentive Pricing
Impounding - transport costs by external provider (100% cost recovery)	per Impounding	Non-Taxable	0.00	0.00	0.00		Discretionary	Full Cost Recovery
Impounding fee large animals (per animal) (per day)	Animal/day	Non-Taxable	6.20	6.40	0.20	3.23%	Statutory	Disincentive Pricing
Impounding fee medium animals (per animal) (per day) sheep/goats	Animal/day	Non-Taxable	3.10	3.20	0.10	3.23%	Statutory	Disincentive Pricing
Impounding fee small animals (per animal) (per day) rabbits/poultry	Animal/day	Non-Taxable	1.00	1.00	0.00	0.00%	Statutory	Disincentive Pricing
Infringement - Animal - 1.5 Penalty Units Statutory	Per Infringemen	Non-Taxable	288.00	288.00	0.00	0.00%	Statutory	Statutory
Infringement - Animal - 2.0 Penalty Units Statutory	Per Infringemen	Non-Taxable	385.00	385.00	0.00	0.00%	Statutory	Statutory
Infringement - Parking - 0.6 Penalty Unit Statutory	Per Infringemen	Non-Taxable	115.00	115.00	0.00	0.00%	Statutory	Statutory
Infringement - Parking - 1.0 Penalty Unit statutory	Per Infringemen	Non-Taxable	192.00	192.00	0.00	0.00%	Statutory	Statutory
Infringement - Parking - RR168(1)(a) Stopped Contrary to a No Parking Sign - 0.5 Penalty Unit	Per Penalty	Non-Taxable	96.00	96.00	0.00	0.00%	Statutory	Statutory

Description of Fees and Charges	Unit of Measure	GST Status	2023/2024	2024/2025	Fee	Fee	Basis of Fee	Pricing Policy
			Fee incl GST \$	Fee incl GST \$	Increase / (Decrease) \$	Increase / (Decrease) %		
Infringement - Parking - RR205 Parked for Period Longer Than Indicated - 0.5 Penalty Unit	Per Penalty	Non-Taxable	96.00	96.00	0.00	0.00%	Statutory	Statutory
Infringement - Parking - RR209(2) Contrary to Requirements of Parking Area - 0.5 Penalty Unit	Per Penalty	Non-Taxable	96.00	96.00	0.00	0.00%	Statutory	Statutory
Infringement - Parking - RR211(2) Not Completely within a Parking Bay - 0.5 Penalty Unit	Per Penalty	Non-Taxable	96.00	96.00	0.00	0.00%	Statutory	Statutory
Infringement - Planning Compliance - 5 Penalty Units (Natural Person)	Per Infringemen	Non-Taxable	962.00	962.00	0.00	0.00%	Discretionary	Statutory
Infringement Court Lodgement	Per lodgement	Non-Taxable	90.60	90.60	0.00		Discretionary	Statutory
Infringement Summons charge	Per summons	Non-Taxable	90.60	90.60	0.00	0.00%	Discretionary	Statutory
Permit - Camping on Private Land Permit (Extension)	Per Application	Non-Taxable	42.40	43.70	1.30	3.07%	Discretionary	Full Cost Recovery
Permit - Camping on Private Land Permit (Initial - Up to Six Months)	Per application	Non-Taxable	84.90	87.40	2.50	2.94%	Discretionary	Full Cost Recovery
Permit - Advertising Sign / A-Frame (Annual)	Per Sign	Non-Taxable	68.30	70.20	1.90	2.78%	Discretionary	Disincentive Pricing
Permit - Busk	Per Application	Non-Taxable	0.00	0.00	0.00		Discretionary	Accessible Pricing
Permit - Camping on Public Place (Per Day)	Per Day	Non-Taxable	26.90	27.65	0.75	2.79%	Discretionary	Accessible Pricing
Permit - Camping on Public Place (Per Month)	Per Month	Non-Taxable	161.50	165.95	4.45	2.76%	Discretionary	Disincentive Pricing
Permit - Camping on Public Place (Per Week)	Per Week	Non-Taxable	80.70	82.90	2.20	2.73%	Discretionary	Disincentive Pricing
Permit - Conduct Activity in Public Place (Per Day)	Per Day	Non-Taxable	68.30	70.20	1.90	2.78%	Discretionary	Full Cost Recovery
Permit - Conduct Works in Public Place (Per Day)	Per Day	Non-Taxable	95.20	97.80	2.60	2.73%	Discretionary	Disincentive Pricing
Permit - Droving	Per Application	Non-Taxable	170.80	175.50	4.70	2.75%	Discretionary	Disincentive Pricing
Permit - Event Sign (Per Day)	Per Sign	Non-Taxable	32.10	33.00	0.90	2.80%	Discretionary	Disincentive Pricing
Permit - Footway Occupation - Goods	Per Application	Non-Taxable	68.30	70.00	1.70	2.49%	Discretionary	Disincentive Pricing
Permit - Footway Occupation - Street Furniture (Non-Dining)	Per Application	Non-Taxable	29.00	32.00	3.00	10.34%	Discretionary	Full Cost Recovery
Permit - Footway Occupation (Per Seat - Licensed Premises)	Per Seat	Non-Taxable	22.80	25.00	2.20	9.65%	Discretionary	Disincentive Pricing
Permit - Footway Occupation (Per Seat - Not a Licensed Premises)	Per Seat	Non-Taxable	6.20	6.50	0.30	4.84%	Discretionary	Full Cost Recovery
Permit - Footway Occupation (Per Table)	Per Table	Non-Taxable	3.10	3.20	0.10	3.23%	Discretionary	Disincentive Pricing
Permit - Footway occupation fee per other street furniture	per furniture	Non-Taxable	107.60	108.00	0.40	0.37%	Discretionary	Disincentive Pricing
Permit - Gate or Opening in a Fence on the Boundary of a Public Place.	Per Application	Non-Taxable	94.20	96.80	2.60	2.76%	Discretionary	Full Cost Recovery
Permit - Hoarding (Per Month)	Per Month	Non-Taxable	362.30	372.25	9.95	2.75%	Discretionary	Disincentive Pricing
Permit - Hoarding (Per Two Weeks)	Per Fortnight	Non-Taxable	217.40	223.40	6.00	2.76%	Discretionary	Disincentive Pricing
Permit - Hoarding (Per Week)	Per Week	Non-Taxable	129.40	132.95	3.55	2.74%	Discretionary	Disincentive Pricing
Permit - Itinerant Trading (Annual)	Per Year	Non-Taxable	538.20	553.00	14.80	2.75%	Discretionary	Disincentive Pricing
Permit - Itinerant Trading (Per Day)	Per Day	Non-Taxable	68.30	70.20	1.90	2.78%	Discretionary	Disincentive Pricing
Permit - Keep More Than the Permitted Number of Animals	Per Excess Anim	Non-Taxable	52.80	54.25	1.45	2.75%	Discretionary	Disincentive Pricing
Permit - Occupy All or Part of a Public Place (Per Day)	Per Application	Non-Taxable	284.60	292.45	7.85	2.76%	Discretionary	Disincentive Pricing
Permit - Parking - Works / Trade (Per Bay Per Month)	Parking Bay/mth	Non-Taxable	310.50	319.05	8.55	2.75%	Discretionary	Disincentive Pricing

Description of Fees and Charges	Unit of Measure	GST Status	2023/2024	2024/2025	Fee	Fee	Basis of Fee	Pricing Policy
			Fee incl GST \$	Fee incl GST \$	Increase / (Decrease) \$	Increase / (Decrease) %		
Permit - Parking - Works / Trade (Per Bay Per Day)	Parking Bay/day	Non-Taxable	33.10	34.00	0.90	2.72%	Discretionary	Disincentive Pricing
Permit - Parking - Works / Trade (Per Bay Per Week)	Parking Bay/wk	Non-Taxable	151.10	155.25	4.15	2.75%	Discretionary	Disincentive Pricing
Permit - Place Obstruction in Public Place (Per Day)	Per Receptacle	Non-Taxable	85.00	87.35	2.35	2.76%	Discretionary	Disincentive Pricing
Permit - Real Estate Agency Directional Sign (Per Franchise)	Per Year	Non-Taxable	232.90	239.30	6.40	2.75%	Discretionary	Disincentive Pricing
Permit - Remove Tree, Vegetation or Timber	Per Application	Non-Taxable	229.80	236.10	6.30	2.74%	Discretionary	Disincentive Pricing
Permit - Resident Parking	Per Permit	Non-Taxable	53.50	54.95	1.45	2.71%	Discretionary	Disincentive Pricing
Permit - Roadside Grazing	Per Application	Non-Taxable	172.80	177.55	4.75	2.75%	Discretionary	Disincentive Pricing
Permit - Skip Bin / Bulk Rubbish Container (7 Days)	Per 7 Day Perio	Non-Taxable	49.70	51.05	1.35	2.72%	Discretionary	Disincentive Pricing
Permit - Skip Bin / Bulk Rubbish Container (Annual)	Per Year	Non-Taxable	424.40	436.05	11.65	2.75%	Discretionary	Disincentive Pricing
Permit - Store Building Goods on Council Land	Per Application	Non-Taxable	94.20	97.00	2.80	2.97%	Discretionary	Full Cost Recovery
Registration - Domestic Animal Business	Per Business	Non-Taxable	262.90	270.15	7.25	2.76%	Discretionary	Full Cost Recovery
Seized Animals - Pound Accommodation	Per Animal/Day	Non-Taxable	54.60	56.10	1.50	2.75%	Discretionary	Disincentive Pricing
State Government Levy - Domestic Animal Business Registration (Per Business)	Per Application	Non-Taxable	20.00	20.00	0.00	0.00%	Statutory	Statutory
<i>Development Services</i>								
Planning Compliance Fines - 10 Penalty Units (Body Corporate)	Per Infringement	Non-Taxable	1,923.00	1,923.00	0.00	0.00%	Statutory	Statutory
<i>Environmental Health</i>								
Accommodation registration transfer fee - per premises	Per Transfer	Non-Taxable	189.20	194.40	5.20		Discretionary	Full Cost Recovery
Second inspection required after 1 follow up - Non compliance	Per instance	Non-Taxable	0.00	267.30	267.30		Discretionary	Full Cost Recovery
Third and subsequent inspection required after 1 follow up inspection - Non-compliance	Per instance	Non-Taxable	0.00	165.20	165.20		Discretionary	Full Cost Recovery
Class 1 aquatic facilities	Per Application	Non-Taxable	126.40	129.90	3.50	2.77%	Discretionary	Full Cost Recovery
Class 1 food premises - Late payment of registration (>30 days)	Per instance	Non-Taxable	0.00	299.30	299.30		Discretionary	Full Cost Recovery
Class 1 food registration - per premises	Per Premises	Non-Taxable	598.60	615.05	16.45	2.75%	Discretionary	Full Cost Recovery
Class 2A food registration - per premises	Per Premises	Non-Taxable	919.30	944.60	25.30	2.75%	Discretionary	Full Cost Recovery
Class 2B food registration - per premises	Per Premises	Non-Taxable	534.50	549.20	14.70	2.75%	Discretionary	Full Cost Recovery
Class 2C food registration - per premises	Per Premises	Non-Taxable	245.90	252.65	6.75	2.75%	Discretionary	Full Cost Recovery
Class 2D food registration - per premises	Per Premises	Non-Taxable	112.20	115.30	3.10	2.76%	Discretionary	Full Cost Recovery
Class 3A food registration - per premises	Per Premises	Non-Taxable	320.70	329.50	8.80	2.74%	Discretionary	Full Cost Recovery
Class 3B food registration - per premises	Per Premises	Non-Taxable	235.20	241.65	6.45	2.74%	Discretionary	Full Cost Recovery
Class 3C food registration - per premises	Per Premises	Non-Taxable	112.20	115.30	3.10	2.76%	Discretionary	Full Cost Recovery
Food registration transfer fee - per premises	Per Premises	Non-Taxable	192.40	197.70	5.30	2.75%	Discretionary	Full Cost Recovery
Food stalls registration (Class 2 or 3) per event (not-for-profit organisations only)	Per Event	Non-Taxable	55.60	57.15	1.55	2.79%	Discretionary	Accessible Pricing
General accommodation registration - per premises	Per Premises	Non-Taxable	219.20	225.25	6.05	2.76%	Discretionary	Full Cost Recovery

Description of Fees and Charges	Unit of Measure	GST Status	2023/2024	2024/2025	Fee	Fee	Basis of Fee	Pricing Policy
			Fee incl GST \$	Fee incl GST \$	Increase / (Decrease) \$	Increase / (Decrease) %		
Hairdressing and temporary makeup - one-off registration	Per Registratio	Non-Taxable	219.20	225.25	6.05	2.76%	Discretionary	Full Cost Recovery
Health registration transfer fee - per premises	Per Premises	Non-Taxable	189.20	194.40	5.20	2.75%	Discretionary	Full Cost Recovery
Immunisation request for records - per request	Per Request	Non-Taxable	37.40	38.45	1.05	2.81%	Discretionary	Full Cost Recovery
Late payment of registration (>30 days) - General Accommodation Registration	Per instance	Non-Taxable	0.00	112.90	112.90		Discretionary	Full Cost Recovery
Late payment of registration (>30 days) - Prescribed accommodation (Rooming House)	Per instance	Non-Taxable	0.00	112.90	112.90		Discretionary	Full Cost Recovery
Late payment of registration (>30 days) - Public Health and Wellbeing Premises (1 activity)	Per instance	Non-Taxable	0.00	123.85	123.85		Discretionary	Full Cost Recovery
Late payment of registration (>30 days) - Public Health and Wellbeing Premises -multiple activities	Per instance	Non-Taxable	0.00	137.65	137.65		Discretionary	Full Cost Recovery
Late payment of registration (>30 days) - Class 2A food premises	Per instance	Non-Taxable	0.00	459.65	459.65		Discretionary	Full Cost Recovery
Late payment of registration (>30 days) - Class 2B food premises	Per instance	Non-Taxable	0.00	267.25	267.25		Discretionary	Full Cost Recovery
Late payment of registration (>30 days) - Class 2C food premises	Per instance	Non-Taxable	0.00	122.95	122.95		Discretionary	Full Cost Recovery
Late payment of registration (>30 days) - Class 3A food premises	Per instance	Non-Taxable	0.00	160.35	160.35		Discretionary	Full Cost Recovery
Late payment of registration (>30 days) - Class 3B food premises	Per instance	Non-Taxable	0.00	117.60	117.60		Discretionary	Full Cost Recovery
Late payment of registration (>30 days) - Class 3C food premises	Per instance	Non-Taxable	0.00	56.10	56.10		Discretionary	Full Cost Recovery
New accommodation premises application fee	Per Premises	Non-Taxable	179.60	184.55	4.95	2.76%	Discretionary	Full Cost Recovery
New food premises application fee (in addition to initial registration fee)	Per Application	Non-Taxable	293.90	302.00	8.10	2.76%	Discretionary	Full Cost Recovery
New health premises application fee (in addition to initial registration fee - not for ongoing)	Per Premises	Non-Taxable	179.60	184.55	4.95	2.76%	Discretionary	Full Cost Recovery
Prescribed accommodation (rooming house) registration - per premises	Per Premises	Non-Taxable	219.20	225.25	6.05	2.76%	Discretionary	Full Cost Recovery
Public health & wellbeing - skin penetration, tattooing colonic irrigation ,(multiple activities)	Per Application	Non-Taxable	267.30	274.65	7.35	2.75%	Discretionary	Full Cost Recovery
Public health & wellbeing - skin penetration, tattooing, colonic irrigation (1 activity)	Per Application	Non-Taxable	240.50	247.10	6.60	2.74%	Discretionary	Full Cost Recovery
Septic - variable application (reduced fee)	Per Application	Non-Taxable	243.50	250.20	6.70	2.75%	Discretionary	Full Cost Recovery
Septic tank application - alteration minor - per alteration	Per application	Non-Taxable	569.55	569.55	0.00	0.00%	Statutory	Full Cost Recovery
Septic tank application - new or major alteration - per application	Per Application	Non-Taxable	747.37	747.37	0.00	0.00%	Statutory	Full Cost Recovery
Septic tank permit - amendment to permit	Per Application	Non-Taxable	192.40	197.70	5.30	2.75%	Discretionary	Full Cost Recovery
Septic tank permit - renew expired permit	Per Application	Non-Taxable	129.60	133.15	3.55	2.74%	Discretionary	Full Cost Recovery
Septic tank permit - transfer permit	Per Application	Non-Taxable	154.90	159.15	4.25	2.74%	Discretionary	Full Cost Recovery
Septic tank request for records - per request	Per Request	Non-Taxable	64.10	65.85	1.75	2.73%	Discretionary	Full Cost Recovery
Special request for inspection - food premises - per inspection	Per Inspection	Non-Taxable	267.30	274.65	7.35	2.75%	Discretionary	Full Cost Recovery
Special request for inspection health registration - per inspection	Per Inspection	Non-Taxable	160.40	164.80	4.40	2.74%	Discretionary	Full Cost Recovery
<i>Statutory Planning</i>								

Description of Fees and Charges	Unit of Measure	GST Status	2023/2024	2024/2025	Fee	Fee	Basis of Fee	Pricing Policy
			Fee incl GST \$	Fee incl GST \$	Increase / (Decrease) \$	Increase / (Decrease) %		
Advertising for planning permit application - public notification - administration fee	Per Advertising	Non-Taxable	22.40	23.00	0.60	2.68%	Discretionary	Full Cost Recovery
Advertising for planning permit application - public notification - per letter	Per Letter	Non-Taxable	3.20	3.30	0.10	3.12%	Discretionary	Full Cost Recovery
Advertising for planning permit application - site notice	Per Advertising	Non-Taxable	109.00	112.00	3.00	2.75%	Discretionary	Full Cost Recovery
Alteration of a certified plan of subdivision	Per Application	Non-Taxable	119.30	119.30	0.00	0.00%	Statutory	Statutory
Amend or end a Section 173 agreement	Per Application	Non-Taxable	707.60	707.60	0.00	0.00%	Statutory	Statutory
Amendment of a certified plan of subdivision	Per Application	Non-Taxable	151.10	151.10	0.00	0.00%	Statutory	Statutory
Application to change or allow a new use of the land (amendment)	Per Application	Non-Taxable	1,415.10	1,415.10	0.00	0.00%	Statutory	Statutory
Certificate of compliance	Per Application	Non-Taxable	349.80	349.80	0.00	0.00%	Statutory	Statutory
Certify a plan of subdivision including issuing a statement of compliance	Per Application	Non-Taxable	187.60	187.60	0.00	0.00%	Statutory	Statutory
Class 1 application for new use of land only (permit/amendment)	Per Application	Non-Taxable	1,415.10	1,415.10	0.00	0.00%	Statutory	Statutory
Class 10 - VicSmart application other than a class 7, 8 or 9 (permit/amendment)	Per Application	Non-Taxable	214.70	214.70	0.00	0.00%	Statutory	Statutory
Class 11 - all other developments - up to \$100,000 (permit/amendment)	Per Application	Non-Taxable	1,232.30	1,232.30	0.00	0.00%	Statutory	Statutory
Class 12 - all other developments - \$100,001 to \$1 million (permit/amendment)	Per Application	Non-Taxable	1,661.60	1,661.60	0.00	0.00%	Statutory	Statutory
Class 13 - all other developments - \$1 million to \$5 million (permit/amendment)	Per Application	Non-Taxable	3,665.00	3,665.00	0.00	0.00%	Statutory	Statutory
Class 14 - all other developments - \$5 million to \$15 million (amendment)	Per Application	Non-Taxable	3,665.00	3,665.00	0.00	0.00%	Statutory	Statutory
Class 14 - all other developments - \$5 million to \$15 million (permit)	Per Application	Non-Taxable	9,341.30	9,341.30	0.00	0.00%	Statutory	Statutory
Class 15 - all other developments - \$15 million to \$50 million (amendment)	Per Application	Non-Taxable	3,665.00	3,665.00	0.00	0.00%	Statutory	Statutory
Class 15 - all other developments - \$15 million to \$50 million (permit)	Per Application	Non-Taxable	27,546.80	27,546.80	0.00	0.00%	Statutory	Statutory
Class 16 - all other developments - more than \$50 million (amendment)	Per Application	Non-Taxable	3,665.00	3,665.00	0.00	0.00%	Statutory	Statutory
Class 16 - all other developments - more than \$50 million (permit)	Per Application	Non-Taxable	61,914.60	61,914.60	0.00	0.00%	Statutory	Statutory
Class 17 - Subdivision of an existing building (permit/amendment)	Per Application	Non-Taxable	1,415.10	1,415.10	0.00	0.00%	Statutory	Statutory
Class 18 - Subdivide land into 2 lots (permit/amendment)	Per Application	Non-Taxable	1,415.10	1,415.10	0.00	0.00%	Statutory	Statutory
Class 19 - Realignment of common boundary or consolidate 2 or more lots (permit/amendment)	Per Application	Non-Taxable	1,415.10	1,415.10	0.00	0.00%	Statutory	Statutory
Class 2 - single dwelling permit applications - up to \$10,000 (permit/amendment)	Per Application	Non-Taxable	214.70	214.70	0.00	0.00%	Statutory	Statutory
Class 20 - To subdivide land (\$1,360.80 for each 100 lots created) (permit/amendment)	Per Application	Non-Taxable	1,415.10	1,415.10	0.00	0.00%	Statutory	Statutory
Class 21 - create, vary or remove restriction, right of way, easement etc (permit/amendment)	Per Application	Non-Taxable	1,415.10	1,415.10	0.00	0.00%	Statutory	Statutory
Class 22 - permit not otherwise provided listed (permit/amendment)	Per Application	Non-Taxable	1,415.10	1,415.10	0.00	0.00%	Statutory	Statutory

Description of Fees and Charges	Unit of Measure	GST Status	2023/2024	2024/2025	Fee	Fee	Basis of Fee	Pricing Policy
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Class 3 - single dwelling permit applications - \$10,001 to \$100,000 (permit/amendment)	Per Application	Non-Taxable	675.80	675.80	0.00	0.00%	Statutory	Statutory
Class 4 - single dwelling permit applications - \$100,001 to \$500,000 (permit/amendment)	Per Application	Non-Taxable	1,383.30	1,383.30	0.00	0.00%	Statutory	Statutory
Class 5 - single dwelling permit applications - \$500,001 to \$1 million (permit/amendment)	Per Application	Non-Taxable	1,494.60	1,494.60	0.00	0.00%	Statutory	Statutory
Class 6 - single dwelling permit applications - \$1 million to \$2 million (permit/amendment)	Per Application	Non-Taxable	1,605.90	1,605.90	0.00	0.00%	Statutory	Statutory
Class 7 - VicSmart permit applications - up to \$10,000 (permit/amendment)	Per Application	Non-Taxable	214.70	214.70	0.00	0.00%	Statutory	Statutory
Class 8 - VicSmart permit applications - more than \$10,000 (permit/amendment)	Per Application	Non-Taxable	461.10	461.10	0.00	0.00%	Statutory	Statutory
Class 9 - VicSmart application to subdivide or consolidate land (permit/amendment)	Per Application	Non-Taxable	214.70	214.70	0.00	0.00%	Statutory	Statutory
Development Plan lodgement fee (for approval)	Per Amendment	Non-Taxable	587.90	587.90	0.00	0.00%	Discretionary	Full Cost Recovery
Planning - Amendment of endorsed plans (secondary consent)	Per Plan	Non-Taxable	151.70	155.85	4.15	2.74%	Discretionary	Full Cost Recovery
Planning - Application for property information	Per Plan	Non-Taxable	89.80	92.25	2.45	2.73%	Discretionary	Full Cost Recovery
Planning - Determination of existing use rights	Per Plan	Non-Taxable	336.70	345.95	9.25	2.75%	Discretionary	Full Cost Recovery
Planning - Extension of time - first request	Per Extension	Non-Taxable	399.80	410.80	11.00	2.75%	Discretionary	Full Cost Recovery
Planning - Extension of time - second request	Per Extension	Non-Taxable	487.40	500.80	13.40	2.75%	Discretionary	Full Cost Recovery
Planning - Extension of time - third and subsequent requests	Per Extension	Non-Taxable	585.80	601.90	16.10	2.75%	Discretionary	Full Cost Recovery
Planning - Request for written planning advice (multiple property requests, per property)	Per Plan	Non-Taxable	111.20	114.25	3.05	2.74%	Discretionary	Full Cost Recovery
Planning - Request for written planning advice (single property)	Per Plan	Non-Taxable	91.90	94.45	2.55	2.77%	Discretionary	Full Cost Recovery
Request for archive search for planning and building permits and plans (permit less than 7 years old)	Per Plan	Non-Taxable	93.00	95.55	2.55	2.74%	Discretionary	Full Cost Recovery
Request for archive search for planning and building permits and plans (permit older than 7 years)	Per Request	Non-Taxable	132.60	136.25	3.65	2.75%	Discretionary	Full Cost Recovery
Satisfaction matters - Where a planning scheme specifies that a matter must be done to the satisfaction	Per Application	Non-Taxable	349.80	349.80	0.00	0.00%	Statutory	Statutory
Strategic Planning								
Administration fee to prepare hard copy(ies) and Council website for exhibition of private proponent	Per Application	Non-Taxable	152.80	157.00	4.20	2.75%	Discretionary	Full Cost Recovery
Amendment Tracking System (ATS) authoring fee (technical)	Per Amendment	Non-Taxable	213.80	219.70	5.90	2.76%	Discretionary	Full Cost Recovery
Heritage advice - site meeting or inspection	Per Amendment	Taxable	176.40	181.25	4.85	2.75%	Discretionary	Full Cost Recovery
Private Proponent amendment - Fee per notice in Government Gazette	Per Amendment	Non-Taxable	106.90	110.10	3.20	2.99%	Discretionary	Full Cost Recovery
Private Proponent amendment - Fee per notice in Newspaper	Per Amendment	Non-Taxable	219.20	225.80	6.60	3.01%	Discretionary	Full Cost Recovery
Private Proponent amendment - Notice letter by mail (to all parties)	Per Amendment	Non-Taxable	3.20	3.30	0.10	3.12%	Discretionary	Full Cost Recovery
Regulation 7 - requesting Minister for planning scheme amendment	Per Amendment	Non-Taxable	4,293.00	4,293.00	0.00	0.00%	Statutory	Statutory

Description of Fees and Charges	Unit of Measure	GST Status	2023/2024	2024/2025	Fee	Fee	Basis of Fee	Pricing Policy
			Fee incl GST \$	Fee incl GST \$	Increase / (Decrease) \$	Increase / (Decrease) %		
Regulation 8 - requesting Minister for planning scheme amendment	Per Amendment	Non-Taxable	1,033.50	1,033.50	0.00	0.00%	Statutory	Statutory
Stage 1 - Planning Scheme Amendments	Per Amendment	Non-Taxable	3,275.40	3,275.40	0.00	0.00%	Statutory	Statutory
Stage 2 - Planning Scheme Amendments (1 to 10 submissions)	Per Amendment	Non-Taxable	16,233.90	16,233.90	0.00	0.00%	Statutory	Statutory
Stage 2 - Planning Scheme Amendments (11 to 20 submissions)	Per Amendment	Non-Taxable	32,436.00	32,436.00	0.00	0.00%	Statutory	Statutory
Stage 2 - Planning Scheme Amendments (more than 20 submissions)	Per Amendment	Non-Taxable	43,359.30	43,359.30	0.00	0.00%	Statutory	Statutory
Stage 3 - Planning Scheme Amendments	Per Amendment	Non-Taxable	516.75	516.75	0.00	0.00%	Statutory	Statutory
Stage 4 - Planning Scheme Amendments	Per Amendment	Non-Taxable	516.75	516.75	0.00	0.00%	Statutory	Statutory
Engineering								
Engineering Services								
Asset Protection Permit	Per Permit	Non-Taxable	206.30	211.95	5.65	2.74%	Discretionary	Full Cost Recovery
Bond - Asset Protection Permit	Per Permit	Non-Taxable	1,035.00	1,035.00	0.00	0.00%	Discretionary	Disincentive Pricing
Infrastructure - Request for written information	Per Request	Non-Taxable	274.70	282.25	7.55	2.75%	Discretionary	Full Cost Recovery
Infringement - 1.0 Penalty Unit Statutory (formerly LL)	Per unit	Non-Taxable	100.00	100.00	0.00	0.00%	Statutory	Statutory
Infringement Penalty Unit - Road Management 2.0 penalty units	Per unit	Non-Taxable	385.00	385.00	0.00	0.00%	Statutory	Statutory
Infringement Penalty Unit - Road Management 3.0 penalty units	Per unit	Non-Taxable	577.00	577.00	0.00	0.00%	Statutory	Statutory
Infringement Penalty Unit - Road Management 5.0 penalty units	Per unit	Non-Taxable	962.00	962.00	0.00	0.00%	Statutory	Statutory
Metcalfe Water Supply Syndicate	Per assessment	Non-Taxable	221.90	228.00	6.10	2.75%	Discretionary	Full Cost Recovery
Road Licencing - Basic	Per Request	Non-Taxable	57.70	59.30	1.60	2.77%	Discretionary	Full Cost Recovery
Road Licencing - Complex	Per Request	Non-Taxable	115.40	118.55	3.15	2.73%	Discretionary	Full Cost Recovery
Road Licencing - Transfer	Per Request	Non-Taxable	115.40	118.55	3.15	2.73%	Discretionary	Full Cost Recovery
Storm Water Legal Point of Discharge issued under the Building Act 1993 Building Regulations 2006	Per Request	Non-Taxable	155.34	155.34	0.00	0.00%	Statutory	Statutory
Subdivision Plan checking and supervision fees (% of construction)	Per Request	Non-Taxable	0.00	0.00			Statutory	Statutory
Water - Avdata key	Per Request	Non-Taxable	37.40	38.45	1.05	2.81%	Discretionary	Full Cost Recovery
Water cost - Avdata key (replacement)	Per Request	Non-Taxable	28.90	29.70	0.80	2.77%	Discretionary	Disincentive Pricing
Water cost - per kilolitre	Per Kilolitre	Non-Taxable	3.60	3.70	0.10	2.78%	Discretionary	Full Cost Recovery
Works Within a Road Reserve - Other Works - Not more than 50Kph - Conducted on, or on any part of, the roadway, pathway or shoulder	Per Statutory charging unit	Non-Taxable	373.65	373.65	0.00	0.00%	Statutory	Statutory
Works Within a Road Reserve - Other Works - Not more than 50Kph - NOT Conducted on, or on any part of, the roadway, pathway or shoulder	Per Statutory charging unit	Non-Taxable	95.40	95.40	0.00	0.00%	Statutory	Statutory
Works Within a Road Reserve - Minor Works - Not more than 50Kph - Conducted on, or on any part of, the roadway, pathway or shoulder	Per Statutory charging unit	Non-Taxable	147.87	147.87	0.00	0.00%	Statutory	Statutory
Works Within a Road Reserve - Minor Works - Not more than 50Kph - NOT Conducted on, or on any part of, the roadway, pathway or shoulder	Per Statutory charging unit	Non-Taxable	95.40	95.40	0.00	0.00%	Statutory	Statutory
Works Within a Road Reserve - Other Works - Above 50Kph - Conducted on, or on any part of, the roadway, pathway or shoulder	Per Statutory charging unit	Non-Taxable	685.29	685.29	0.00	0.00%	Statutory	Statutory

Description of Fees and Charges	Unit of Measure	GST Status	2023/2024	2024/2025	Fee	Fee	Basis of Fee	Pricing Policy
			Fee incl GST \$	Fee incl GST \$	Increase / (Decrease) \$	Increase / (Decrease) %		
Works Within a Road Reserve - Other Works - Above 50Kph - NOT Conducted on, or on any part of, the roadway, pathway or shoulder	Per Statutory charging unit	Non-Taxable	373.65	373.65	0.00	0.00%	Statutory	Statutory
Works Within a Road Reserve - Minor Works - Above 50Kph - Conducted on, or on any part of, the roadway, pathway or shoulder	Per Statutory charging unit	Non-Taxable	147.87	147.87	0.00	0.00%	Statutory	Statutory
Works Within a Road Reserve - Minor Works - Above 50Kph - NOT Conducted on, or on any part of, the roadway, pathway or shoulder	Per Statutory charging unit	Non-Taxable	95.40	95.40	0.00	0.00%	Statutory	Statutory
Governance and Risk								
<i>Governance and Risk</i>								
Freedom of Information (FOI) request	Per request	Non-Taxable	31.80	31.80	0.00	0.00%	Statutory	Statutory
Operations								
<i>Waste and Recycling</i>								
Asbestos (packaged domestic) - per tonne	Per Cubic Tonne	Taxable	263.30	270.55	7.25	2.75%	Discretionary	Full Cost Recovery
Cardboard - Commercial loads cubic metre	Per Load	Taxable	21.40	22.00	0.60	2.80%	Discretionary	Full Cost Recovery
Cardboard - Trailer (6' x 4') equivalent to 0.7m3	Per Trailer	Taxable	16.00	16.45	0.45	2.81%	Discretionary	Full Cost Recovery
E-waste - Category 1 (per item) Extra Large/kg (solar panels, printer, large TV, fridge)	Per Item	Taxable	21.90	22.50	0.60	2.74%	Discretionary	Full Cost Recovery
E-waste - Category 2 (per item) Large e.g. (fridge, air con, plasma)	Per Item	Taxable	11.30	11.60	0.30	2.65%	Discretionary	Full Cost Recovery
E-waste - Category 3 (per item) Medium e.g. (computer, small TV)	Per Item	Taxable	5.40	5.55	0.15	2.78%	Discretionary	Full Cost Recovery
E-waste - Category 4 (per item) Small e.g. (mobile phone, mouse, electric cords, small computers)	Per Item	Taxable	1.10	1.10	0.00	0.00%	Discretionary	Full Cost Recovery
Gas bottle (any size) - per item	Per Item	Taxable	12.30	11.60	-0.70	(5.69%)	Discretionary	Full Cost Recovery
General waste - commercial/industrial - per tonne	Per Tonne	Taxable	231.70	238.05	6.35	2.74%	Discretionary	Full Cost Recovery
General waste - trailer (8' x 5') heaped equivalent to 2.4 cubic metres	Per Trailer	Taxable	174.80	179.60	4.80	2.75%	Discretionary	Full Cost Recovery
General waste- trailer (6' x 4') heaped equivalent to 1.5 cubic metres	Per Trailer	Taxable	110.60	113.65	3.05	2.76%	Discretionary	Full Cost Recovery
General waste - trailer (8' x 5') equivalent to 1.2 cubic metres	Per Trailer	Taxable	87.40	89.80	2.40	2.75%	Discretionary	Full Cost Recovery
General waste per cubic metre	Per Cubic Tonne	Taxable	72.70	74.70	2.00	2.75%	Discretionary	Full Cost Recovery
General waste per tonne	Per Tonne	Taxable	206.40	212.10	5.70	2.76%	Discretionary	Full Cost Recovery
General waste trailer (6' x 4') equivalent to 0.7 cubic metres	Per Trailer	Taxable	50.20	51.60	1.40	2.79%	Discretionary	Full Cost Recovery
Green waste - per cubic metre	Per Cubic Metre	Taxable	24.00	24.65	0.65	2.71%	Discretionary	Full Cost Recovery
Green waste - Trailer (6' x 4') equivalent to) 0.7 cubic metres	Per Trailer	Taxable	16.50	16.95	0.45	2.73%	Discretionary	Full Cost Recovery
Green waste - Trailer (6' x 4') heaped equivalent to 1.5 cubic metres	Per Trailer	Taxable	35.30	36.25	0.95	2.69%	Discretionary	Full Cost Recovery
Green waste (per tonne)	Per Tonne	Taxable	45.90	47.15	1.25	2.72%	Discretionary	Full Cost Recovery
Mattresses or bed bases (any size) - per item	Per Item	Taxable	28.30	29.10	0.80	2.83%	Discretionary	Full Cost Recovery
Motor bike and car tyres (includes 4x4 and small truck) - per tyre	Per Tyre	Taxable	11.30	11.60	0.30	2.65%	Discretionary	Full Cost Recovery
Motor bike and car tyres on rims - per tyre	Per Tyre	Taxable	32.10	33.00	0.90	2.80%	Discretionary	Full Cost Recovery

Description of Fees and Charges	Unit of Measure	GST Status	2023/2024	2024/2025	Fee	Fee	Basis of Fee	Pricing Policy
			Fee incl GST \$	Fee incl GST \$	Increase / (Decrease) \$	Increase / (Decrease) %		
Oil for recycling - per litre	per Litre	Taxable	0.50	0.50	0.00	0.00%	Discretionary	Full Cost Recovery
Tractor tyres - per tyre	Per Tyre	Taxable	80.20	82.40	2.20	2.74%	Discretionary	Full Cost Recovery
Truck tyre (large) on rim - per tyre	Per Unit	Taxable	46.90	48.20	1.30	2.77%	Discretionary	Full cost recovery
Truck tyres (large) - per tyre	Per Tyre	Taxable	38.50	39.55	1.05	2.73%	Discretionary	Full Cost Recovery
Parks, Recreation & Community Facilities								
<i>Active Communities - Facilities</i>								
Harcourt Recreation Reserve - Community - Hall/Kitchen - 1 bay	Per Use	Taxable	64.10	65.85	1.75	2.73%	Discretionary	Accessible Pricing
Harcourt Recreation Reserve - Community - Hall/Kitchen - 2 bays	Per Use	Taxable	74.90	76.95	2.05	2.74%	Discretionary	Accessible Pricing
Harcourt Recreation Reserve - Community - Hall/Kitchen - 3 bays	Per Use	Taxable	96.30	98.95	2.65	2.75%	Discretionary	Accessible Pricing
Harcourt Recreation Reserve - Community - Hall/Kitchen - Whole	Per Use	Taxable	133.60	137.25	3.65	2.73%	Discretionary	Accessible Pricing
Harcourt Recreation Reserve - Community - Main Hall - 1 bay	Per Use	Taxable	42.70	43.85	1.15	2.69%	Discretionary	Accessible Pricing
Harcourt Recreation Reserve - Community - Main Hall - 2 bays	Per Use	Taxable	53.50	54.95	1.45	2.71%	Discretionary	Accessible Pricing
Harcourt Recreation Reserve - Community - Main Hall - 3 bays	Per Use	Taxable	69.50	71.40	1.90	2.73%	Discretionary	Accessible Pricing
Harcourt Recreation Reserve - Community - Main Hall - Whole	Per Use	Taxable	106.90	109.85	2.95	2.76%	Discretionary	Accessible Pricing
Harcourt Recreation Reserve - Community - Meeting room < 2 hrs	Per Use	Taxable	16.00	16.45	0.45	2.81%	Discretionary	Accessible Pricing
Harcourt Recreation Reserve - Private - Hall/Kitchen - 1 bay	Per Use	Taxable	80.20	82.40	2.20	2.74%	Discretionary	Accessible Pricing
Harcourt Recreation Reserve - Private - Hall/Kitchen - 2 bays	Per Use	Taxable	90.90	93.40	2.50	2.75%	Discretionary	Market Pricing
Harcourt Recreation Reserve - Private - Hall/Kitchen - 3 bays	Per Use	Taxable	112.20	115.30	3.10	2.76%	Discretionary	Market Pricing
Harcourt Recreation Reserve - Private - Hall/Kitchen - Whole	Per Use	Taxable	187.00	192.15	5.15	2.75%	Discretionary	Market Pricing
Harcourt Recreation Reserve - Private - Main Hall - 1 bay	Per Use	Taxable	53.50	54.95	1.45	2.71%	Discretionary	Market Pricing
Harcourt Recreation Reserve - Private - Main Hall - 2 bays	Per Use	Taxable	64.10	65.85	1.75	2.73%	Discretionary	Market Pricing
Harcourt Recreation Reserve - Private - Main Hall - 3 bays	Per Use	Taxable	80.20	82.40	2.20	2.74%	Discretionary	Market Pricing
Harcourt Recreation Reserve - Private - Main Hall - Whole	Per Use	Taxable	160.40	164.80	4.40	2.74%	Discretionary	Market Pricing
Harcourt Recreation Reserve - Private - Meeting room/kitchen for parties	Per Use	Taxable	42.70	43.85	1.15	2.69%	Discretionary	Market Pricing
Harcourt Recreation Reserve user charges	Per Use	Taxable	1.10	1.10	0.00	0.00%	Discretionary	Market Pricing
Swimming Pool - Adult	Per Adult	Taxable	5.30	5.45			Statutory	Statutory
Swimming Pool - Adult - concession card holder	Per Adult	Taxable	4.20	4.30	0.10	2.38%	Discretionary	Accessible Pricing
Swimming Pool - Child Season Ticket (Child < 2 free when accompanied by a paying adult)	Per Ticket	Taxable	51.10	52.50	1.40	2.74%	Discretionary	Accessible Pricing
Swimming Pool - Child Ticket (Child < 2 free when accompanied by a paying adult)	Per Child	Taxable	3.70	3.80	0.10	2.70%	Discretionary	Accessible Pricing
Swimming Pool - Family season ticket - concession card (2 adults and dependent children < 16 years o	Per Ticket	Taxable	140.60	144.45	3.85	2.74%	Discretionary	Accessible Pricing
Swimming Pool - Family season ticket (2 adults and dependent children < 16 years of age)	Per Ticket	Taxable	166.90	171.50	4.60	2.76%	Discretionary	Accessible Pricing

Description of Fees and Charges	Unit of Measure	GST Status	2023/2024	2024/2025	Fee	Fee	Basis of Fee	Pricing Policy
			Fee incl GST \$	Fee incl GST \$	Increase / (Decrease) \$	Increase / (Decrease) %		
Swimming Pool - Family Ticket (2 adults and dependent children < 16 years of age)	Per Day	Taxable	14.00	14.40	0.40	2.86%	Discretionary	Accessible Pricing
Swimming Pool - School Entry per Child	Per Child	Taxable	2.10	2.20	0.10	4.76%	Discretionary	Accessible Pricing
Swimming Pool - Single season ticket	Per Ticket	Taxable	75.50	77.60	2.10	2.78%	Discretionary	Accessible Pricing
Swimming Pool - Single season ticket - concession card	Per Ticket	Taxable	61.60	63.30	1.70	2.76%	Discretionary	Accessible Pricing
Building and Property - Facilities								
Property Rentals - Not for Profit; Volunteer and Community Service Groups (p.a.)	Per Year	Taxable	162.20	166.65	4.45	2.74%	Discretionary	Accessible Pricing
People and Culture								
Occupational Health and Safety								
Permit insurance - Public Liability Insurance - (per permit)	Per Permit	Non-Taxable	26.30	27.00	0.70	2.66%	Discretionary	Market Pricing
Venue hire - Public Liability Insurance - per annum, per venue, max 52 visits (per venue)	Per Annum, Per	Taxable	22.10	22.70	0.60	2.71%	Discretionary	Market Pricing

6a. Approved Community Organisations

Following the adoption of Council's General Local Law 2020, clause 26(3) states that an Approved Community Organisation (ACO) does not need a permit under clause 26(1) being conducting any activity, works, or placing an obstruction in a public place. An ACO is defined under the Local Law as an organisation, registered charity, or not-for-profit organisation recognised by Council to provide community benefit and is included on Council's Approved Community Organisation Register.

Anglican Church Castlemaine and Friends of Anglicare	Guildford Grumpies Car Club Inc.
Australian Red Cross	Harcourt Applefest
Bendigo TAFE	Harcourt Preschool
Big Morning Tea - Fundraiser	Maldon BSA Rally (Lions Club)
Buda Traditional Fair	Maldon Easter Fair (Lions Club)
Campbells Creek Antique and Collectables	Maldon Folk Festival Inc.
Campbells Creek Football and Netball Club	Maldon Lions Club
Campbells Creek Primary School	Maldon Neighbourhood Centre Inc.
Castlemaine and District Agricultural Society Inc.	Maldon RSL
Castlemaine Access Chaplaincy Support Group	Mount Alexander Vintage Engine Club
Castlemaine Angling Club	Metcalfe Tractor Pull and Woodchop
Castlemaine Billy Cart Challenge	Mt Alexander Seniors Expo
Castlemaine Fire Brigade	Mt Tarrengower Hill Climb
Castlemaine Fringe Festival	Muckleford Cricket Club
Castlemaine Girl Guides	Newstead Live
Castlemaine Jazz Festival	Royal Children's Good Friday Appeal
Castlemaine Kindergarten	Run The Maine
Castlemaine Legacy Group	Small Business Victoria
Castlemaine Lions Club Swap Meet	South Castlemaine Kindergarten
Castlemaine Pride	Sports Events Projects
Castlemaine Primary School	Taradale Mineral Springs Festival
Castlemaine Rotary Club	The Cancer Council
Castlemaine RSL	The Main Game
Castlemaine RSL - Woman's Auxiliary	The Maldon Classic
Castlemaine Salvation Army	The Xtreme Inc.
Castlemaine State Festival Ltd	Three's a Crowd Musical Theatre Inc.
Castlemaine Uniting Church	Very Special Kids
Castlemaine Evening View Club	Victorian Seekers Club Inc.
Elphinstone Primary School	Wide Open Road Art
Friends of Castlemaine Art Museum	
Guildford Banjo Jamboree	

Plaques and Memorials Policy



Document Type:	Council Policy	TRIM reference:	DOC/24/9831
Document Status:	Draft		
Policy Owner (position):	Chief Executive Officer		
Internal endorsement required:	Not Applicable		
Final Approval by:	Council		
Date approved:	Click here to enter a date.		
Evidence of approval:	Select approver of type a position title – Refer to Notes in TRIM		
Version Number:	1	Frequency of Review:	4 years
Review Date:	Click here to enter a date.		
Date rescinded:	Click here to enter a date. OR <input type="checkbox"/> Not applicable		
Related legislation:	Local Government Act 2020 Planning and Environment Act 1987 Aboriginal Heritage Act 2006 Building Act 1993 Catchment and Land Protection Act 1994 Crown Land Reserves Act 1978 Cultural and Recreational Lands Act 1963 Heritage Act 2017 Road Management Act 2004		
Related strategic documents, policies, or procedures:	Various management plans for Council facilities and sites		

Date	Version Number	Details of Version	Modified by
20/02/2024	1	Inaugural Policy	Chief Executive Officer

1. Purpose

The purpose of this policy is to:

- Establish criteria for the assessment of applications from individuals and groups, wishing to formally recognise significant local people, groups, places and events in the form of plaques and memorials within the municipality of Mount Alexander Shire.
- Ensure that the installation and ongoing management of plaques and memorials on Council owned and/or managed land and buildings, is undertaken in an agreed manner and to the satisfaction of Council officers.

2. Scope

This policy relates to requests for plaques and/or memorials on land and buildings that is/are owned and/or managed by Mount Alexander Shire Council within the municipality.

The policy applies to applicants, Council officers and Councillors involved in the application, assessment and approval process for plaques and memorials.

3. Policy

Applicants wishing to install a plaque or memorial must develop their proposal in consultation with Council officers and in accordance with the following requirements:

3.1. Location

- The plaque or memorial must be sited such that it preserves, contributes to or enhances (and does not detract from) the amenity, purpose or function of a location.
- The plaque or memorial must have direct historic, cultural, social or geographic relevance to the site where the installation is proposed.
- In addition, a memorial must be sited in a location that is appropriate to its function; that is, in a place that enables it to be reflected on, or for communities to gather.

3.2. Significance, Accuracy and Community Support

- Plaques and memorials must not relate to subjects that are already similarly recognised elsewhere in the Shire.
- Plaques and memorials must relate to unique, significant contributions made to Mount Alexander Shire's heritage, civic, cultural or political history and must be of enduring interest to the community across generations.

Such contributions must not have been directly enabled by any special advantage of paid employment, allowance while in office, other financial reimbursement, or similar payment.

- Plaques may relate to significant contributions made in a particular community within the Shire. Whereas, memorials must relate to contributions that had at least Shire-wide impacts and desirably State or National relevance.
- Memorials must have strong community support and their advocates must be able to demonstrate this support.
- Factual information associated with a plaque or memorial must be thoroughly researched by the applicant, broadly accepted by the community and endorsed by Council officers.
- Plaques or memorials solely for personal or family related purposes are not permitted.

3.3. Businesses

- For a plaque to be linked to a business, either through its content or location, that business must be shown to have had an enduring social impact on Mount Alexander Shire, whether it is currently trading or not.
- Logos and branding are not permitted on plaques or memorials.

3.4. Artistic Merit and Form

- To ensure that a high level of creativity, artistic integrity and durability is integrated into proposed plaques and memorials, applicants must work collaboratively with Council staff on their concept. This includes collaborating on artist selection, design, durability, environmental sustainability and maintenance aspects.
- In the case of memorials, the strength of the artistic concept will be central to the storytelling.
- In the case of plaques, words will be central to the storytelling.
- Design considerations will also include:
 - Ensuring that the installation supports access for people of all abilities and inclusion of all people.

- A potential contribution to renewing or restoring an existing place, so that it continues to be relevant for future generations.
- The magnitude of ongoing maintenance and operating costs.

3.5. Policy and Legislation

- Plaques and memorials must comply with relevant Council policies, plans, strategies and State and Federal legislation.

3.6. Removal and Relocation

- If Council requires that a plaque or memorial be temporarily or permanently removed, Council officers will make all reasonable efforts to notify the applicant and Council will fund its removal.
- Where the removal is temporary or involves relocation to another site owned or managed by Council, then Council will pay the cost of relocation or re-installation.
- Where the removal is required by Council to be permanent from all Council sites, then Council officers will make all reasonable efforts to return the plaque or memorial to the applicant, or their representative, in good condition.
- Where a plaque or memorial has been damaged through vandalism, misuse or poor workmanship and requires more than minor maintenance, Council officers will notify the applicant to discuss possible funding arrangements. Where agreement cannot be reached, Council may determine to permanently remove the plaque or memorial.

3.7. Funding

- All costs associated with the design, creation and installation of plaques and memorials must be funded by the individuals or groups making the application for the plaque or memorial.
- The ongoing cost of minor maintenance for approved plaques and memorials will be covered by Council.
- Funding of works required beyond minor maintenance will be as agreed between Council officers and the applicant, and as provided by Clause 3.6.

3.8. Approval

All applications for the installation of plaques are subject to the approval of Manager – Parks, Recreation and Community Facilities. Where this officer does not support such an application, the matter shall be referred to Council for a decision.

All applications for the installation of memorials are subject to the approval of Council.

The proposed removal and/or relocation of installed plaques or monuments by Council officers is subject to the approval of Council.

4. Definitions of Abbreviations Used

A table of terms and their definitions as they relate to the policy

Term	Definition
Council	The Municipal Council comprising a majority of the elected Councillors
Plaque	A flat piece of metal, stone or other durable material with a two-dimensional face that can be fixed to an object, pavement or building. A plaque includes text and/or images to recognise a person, group, place or event, or to interpret the history of a public place
Memorial	A two or three-dimensional object or feature designed to recognise a person, group or event. It could be a sculptural or artistic work, or a water, horticultural or landscape element, and includes busts and statues.
Approval of Council	A resolution of approval in response to considering the application at a Council meeting.
Minor Maintenance	Works of a repetitive nature that keeps the plaque or monument in good order but does not include major repairs due to vandalism, misuse or poor workmanship.

5. Human Rights Statement

It is considered that this policy does not impact negatively on any rights identified in the Charter of Human Rights and Responsibilities Act (2006). Moreover, a specific design requirement is to ensure *that the installation supports access for people of all abilities and inclusion of all people.*

6. Gender Equity

It is considered that this policy goes towards promoting gender equity principles as outlined in the *Gender Equality Act 2020* by enabling the recognition of suitably significant contributions from *any* past and present community members. It does not contribute in the promotion of inequalities. Mount Alexander Shire Council is committed to meeting its obligations as stated in the Act and to further promote the right to equality as set out in the Charter of Human Rights.

7. Child Safety

Mount Alexander Shire Council is committed to being a child safe organisation and has zero tolerance for child abuse. We recognise our legal and moral responsibilities in keeping children and young people safe from harm and promoting their best interests. All children who come in contact with Councillors, employees, contractors and volunteers from the organisation have a right to be and feel safe. We have specific policies, procedures and training in place to support employees, volunteers and contractors to achieve these commitments. We create environments where all children have a voice and are listened to, their views are respected and they contribute to how we plan for, design and develop our services and activities.

PLACE OF WORSHIP Planning Permit Application PA330/2021

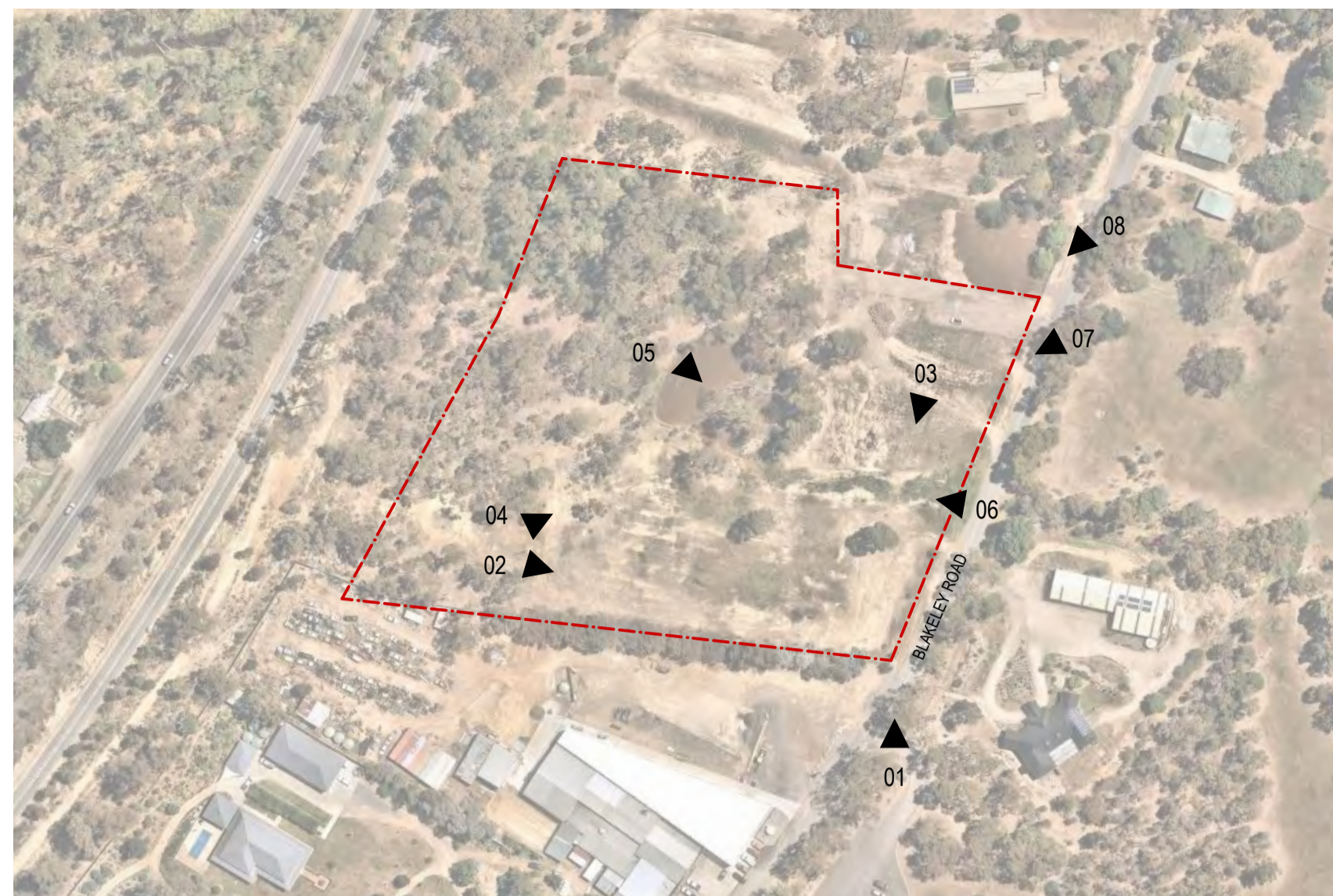
PART 83 BLAKELEY RD - CASTLEMAINE VIC 3450

SCHEDULE DRAWING LIST [TP]					
	DRAWING No:	DESCRIPTION	SCALE	SIZE	REV ...
CONTENT					
	TP0001	COVERSHEET		@A1	A
SITE					
	TP1001	SITE PHOTOS	1:2000	@A1	A
	TP1002	LOCATION PLAN	1:1000	@A1	A
	TP1003	SITE ANALYSIS	1:1000	@A1	A
	TP1004	DESIGN RESPONSE	1:500	@A1	A
PLAN - GENERAL ARRANGEMENT					
	TP2001	SITE PLAN EXISTING	1:500	@A1	A
	TP2002	DEMOLITION & TPZ	1:500, 1:100	@A1	A
	TP2003	SITE PLAN PROPOSED	1:500	@A1	A
	TP2004	GROUND FLOOR PLAN	1:100	@A1	A
	TP2005	ROOF PLAN	1:250	@A1	A
ELEVATIONS					
	TP3001	ELEVATIONS	1:100	@A1	A
SECTIONS & STREETScape					
	TP4001	SITE SECTIONS	1:250, 1:500	@A1	A
SHADOW DIAGRAMS					
	TP5001	SHADOW DIAGRAMS & PLANS	1:500, 1:1000	@A1	A
SURVEY					
	TP6001	EXISTING SURVEY	1:1	@A1	A

DEVELOPMENT SUMMARY	
SITE AREA: 25 781.3 m ²	
PROPOSED LOT 1: 2 006.6 m ² (approx.)	
PROPOSED LOT 2: 23 774.7 m ² (approx.)	
AREA OF PLACE OF WORSHIP PLANNING UNIT: 14 400.5 m ² (approx.)	
CULTURAL HERITAGE AREA: 9 312.2 m ² (approx.)	
DRIVEWAY AND CARPARKING AREA: 4 868 m ²	
MAIN CARPARK: 4 163.7 m ²	
OVERFLOW CARPARK: 704.3 m ² (SEMI-PERMEABLE)	
BUILDING FOOTPRINT: 797 m ²	
PAVED AREA: 336 m ²	
PATHWAYS: 162 m ² (SEMI-PERMEABLE)	
PERMEABLE AREA: 17 598.7 m ²	
SEMI-PERMEABLE: 866.3 m ²	
TOTAL NUMBER OF CARPARKS: 139	
MAIN CARPARK: 111	
OVERFLOW CARPARK: 28 (INCLUDING 4 MINIBUS CARPARKS)	

NOTE:

Proposed Lot 1 and Lot 2 are the subject of separate Planning Permit Application PA331/2021. The land area contained within proposed Lot 1 does not form part of place of worship Planning Permit Application PA330/2021.



VIEW PLAN



VIEW 01



VIEW 02



VIEW 03



VIEW 04



VIEW 05



VIEW 06



VIEW 07



VIEW 08



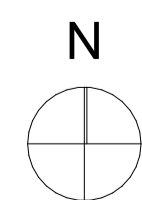
1

LOCATION PLAN

1:1000



Rev	Date	Amendment
-	01/09/2021	VCAT
A	10/02/2022	PLANNING SUBMISSION



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Project:
PLACE OF WORSHIP PA330/2021
At:
**83 BLAKELEY RD
CASTLEMAINE VIC 3450**
For:
**CASTLEMAINE GOSPEL
TRUST**

Drawing Name: **LOCATION PLAN** SCALE: 1:1000 @ A1, 1:2000 @ A3
Drawing Type: **SITE**
Issue Date: 10/02/2022 Architect: CG Drawn: HD Size: A1
Drawing No.: **TP1002** Issue: **A**
Job No: **A21002**

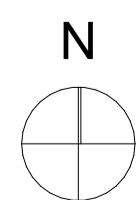


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SITE ANALYSIS

1:1000

Rev	Date	Amendment
-	01/09/2021	VCAT
A	10/02/2022	PLANNING SUBMISSION

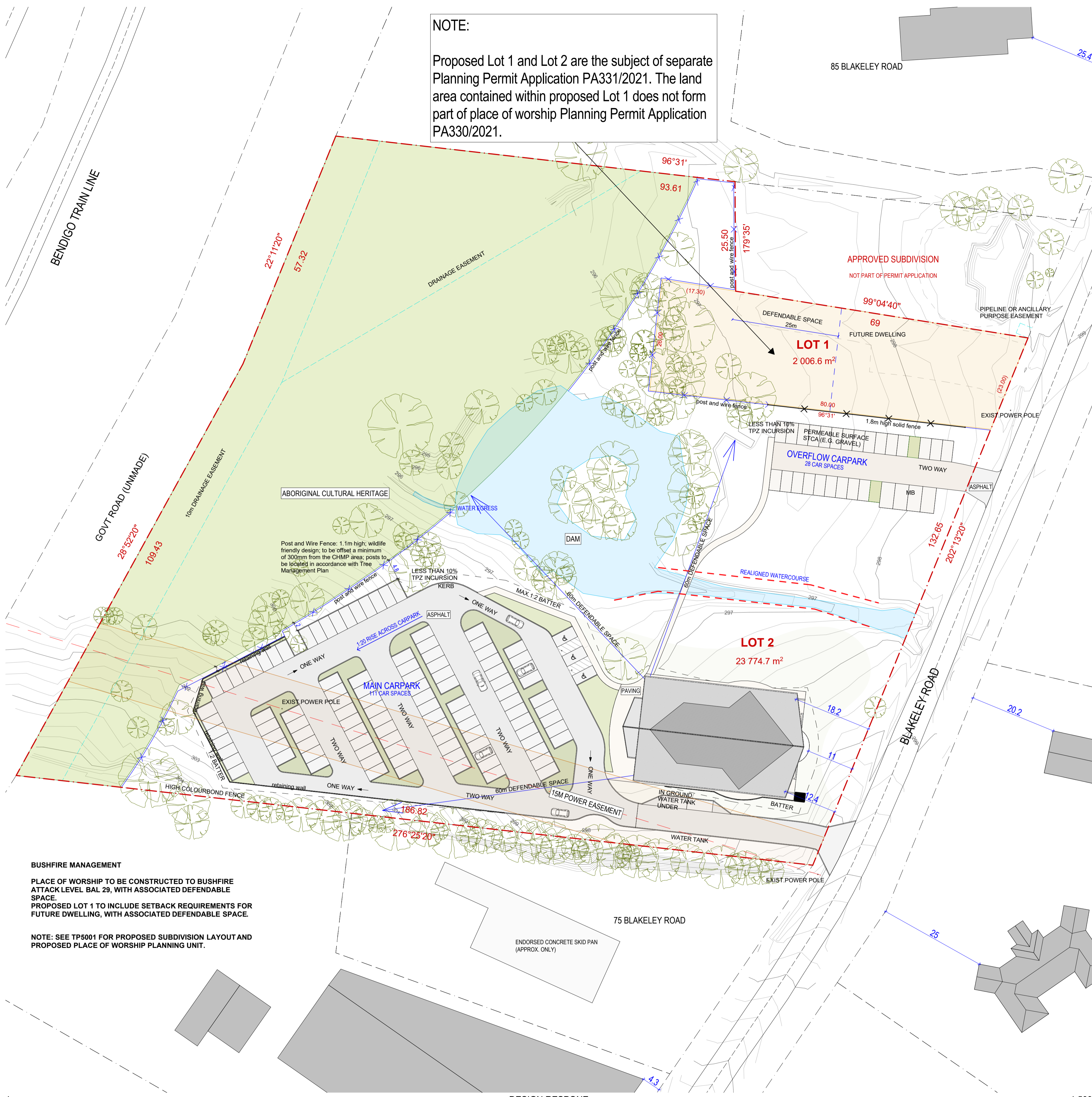


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Job No:
A21002

NOTE:
Proposed Lot 1 and Lot 2 are the subject of separate Planning Permit Application PA331/2021. The land area contained within proposed Lot 1 does not form part of place of worship Planning Permit Application PA330/2021.



DESIGN RESPONSE -Architectural Statement

PLACE
83 Blakeley Road, Castlemaine is the address of the subject site.

PEOPLE
The architectural brief called for a new, community structure for a place of worship that sits harmoniously within its natural environs and seeks to convey the essence of humility in its every detail.

PROJECT
The Place of Worship is a collection of community functions that include areas for:
 • Worship
 • Congregating before and after Worship
 • Kitchen and service spaces
 • Amenities

The overarching architectural theme responds to a hierarchy of engagement. This is expressed as a union between the main form of the building and the siting in the natural rejuvenated landscape setting. The articulated frontage is recessed from the Blakeley Road frontage presenting as a discreetly identifiable ecclesiastic form in keeping with the nearby place of worship across Blakeley Road to the southeast and for this typology in the broader Australian context.

The landscaped frontage to Blakeley Road restores and extends the northern experience of Blakeley Road. Beyond this the building has been located at one of the lowest contour levels providing a recessive siting solution. This siting strategy also provides the benefit of occluding views to the car parking area provided to the rear. The car parking and building do not extend beyond the top of the rising topography, staying below the ridge line. Minimal cut and fill is required due to the orientation with the natural contours. The visually recessive result is realised and enhanced by the low retaining walls that allow the upper car spaces to be pressed further into the sites embrace.

The general communal area engages with the external environment with the congregational entry oriented to the site centre. The western orientation of the congregational entry provides easy and safe access to the car parking, ensures that all traffic and pedestrian movement and resulting amenity impacts are contained well within the site. Privacy is maintained for occupants of neighbouring dwellings as it is for the congregation. This orientation also affords for optimal safety, locating younger members of the congregation away from Blakeley Road.

Through subtle references to established architectural order, overlaid with a delicately wrought balance of finishes and materials this building sits comfortably with other local, national and international examples remaining recognisably ecclesiastical and universally utilisable.

The balance between presenting a public building oriented to the main road while remaining submissive is something that works well for a place of worship of this type. Much care and thought has gone into creating an interface that is a welcoming response. The transom screen detailing provides a modest veil avoiding ostentatious decoration and overly busy articulation that would not suit a place dedicated to contemplative pursuits. The screens create a dappled façade as the light and shadow interplay. There is no large written signage demarcating the use of the building.

On the quieter western side of the site, away from the more public interface, sits the welcoming form of the sheltered vestibule entry. Grounded on Dja Dja Wurrung Country the congregational entry is oriented toward the Aboriginal Cultural Heritage area of the site. The design of the proposed works has been resolved so as not to disturb this sensitive area. This aspect of the site also provides high natural amenity to be enjoyed as well as preserved.

ARCHITECTURAL LANGUAGE
The façade treatment of the building utilizes a clear language of a strong base and floating roof forms. The pediment is grounded into the existing site topography. The architectural language is contemporary and restrained; focusing on attention to detail with refined combinations of materials. Each application of form and material relates to the prevailing condition that the building envelope is responding to. Factors taken into consideration include aspect, solar orientation, acoustic privacy, visual privacy, accessibility, sustainability and the compositional considerations for a harmonious aesthetic response.

RESPONSE TO THE BRIEF
A building such as this will be crafted to ensure that it is fitting and appropriate for dedication. The design is based on a strong design ethos that "Architecture", like any art, is an expression of a philosophy of life and a continuity of culture. If architecture is religious in purpose, it represents the vitality of religious values that a people hold dear to life and a synthesis of those values for the ultimate purpose of life. Being an expression of the interpretation of the users faith and beliefs this site responsive application of the foundational architectural is seen as an assertion of that faith."

The community has built places of worship in many locations in Victoria as well as nationally and internationally. The characteristics and qualities that have been imbibed in each new structure demonstrate contemporary applications that resonate their own philosophy and contribute to the general sense of place through customised site responses for the external expression.

SITE PLANNING
The design team has collaborated closely to evolve a harmonious design that integrates the landscape architecture and built form architecture, creating a site responsive design. The location of circulation routes that closely trace existing site levels where possible allow safe access for all regardless of impediment or age there are options that allow easy equitable entry and egress. A subtle skewing of forms is driven from a rigorous geometric analysis of the immediate site and its series of overlays, easements and natural features. It is this interpretation of the inter-play of the constraints and opportunities that forms such an important driver for the resulting design.

ARRIVAL
Arrival at the site will be via vehicle. Parking and/or drop off zone is provided via access to the rear of the site, or across the landscaped and rehabilitated area from an overflow carparking area to the northern part of the site.

Thresholds are very strong points of reference with the overall order of the building and the geometric driver for the spatial program of the design. This is evidenced in the positioning of entry and egress points to provide for safety and equitable design. This works very well for this particular site as there are opportunities to access the northern areas of the site for pedestrians and to the south for connections to the vehicular zones. Provision has been made to allow access from the footpath directly for those who are impaired and require a grade access.

BUILDING HEIGHT
Due to the sloping nature of the site the building presents as a relatively low-level incursion into the site. Given the context of the site the proposed building height is not considered as being tall. To the south of the site the large industrial sheds dominate.

To the east the building on the other side of Blakeley Road is a residential dwelling and associated large shed that sits higher than the proposed place of worship.

To the southeast is another Place of Worship, this has the expanse of carparking adjacent to the road. That building form sits significantly higher than Blakeley Road.

The western, "inboard" interface of the building presents the highest part of the building as measured to the natural ground level. The stepped roof form takes this transition into consideration by stepping down to the lower of the ridgelines at this end.

The most sensitive interface is to the eastern side of the site. At this interface the building has been set down below the natural ground line. The street façade is articulated through a series of forms. The variance in the material treatment and the protruding elements articulate the building height of the various functions of the building in a site responsive manner. Further to these architectural treatments there is opportunity for substantial landscape works for this interface to assist in the amelioration of any perceived height issues.

PRIVACY AND OVERLOOKING
The redesigned proposal ensures that overlooking and privacy of surrounding dwellings is considered and dealt with by a consistent strategy that forms part of the architectural language.

Acoustic privacy has been an important consideration both externally and for the place of worship. These elements also provide an opportunity to articulate the form and present apparent apertures to passers-by who would be moving along Blakeley Road.

ESD PRINCIPLES
INDOOR ENVIRONMENT QUALITY
In summer thermal comfort is addressed through shading to the external walls minimizing solar gain, thermal mass is provided in the masonry components of the building allowing heat loads to be lagged. Cross ventilation is provided by way of the atrium space.

In winter thermal comfort is addressed through the thermal mass, insulation, rationalised glazing and controlled air movement.

ENERGY EFFICIENCY
Efficient heating and cooling systems will be utilized to manage variations in temperature and actively assist environmental control when passive systems are lagging.

WATER EFFICIENCY & MANAGEMENT
To ensure the efficient use of water the following measures will be considered:
 Efficient fixtures and fittings will be utilized. Rainwater harvesting will be undertaken and utilised in the water features and irrigation where appropriate. To reduce the impact of stormwater run-off hardstand landscape areas have been minimised and expanses of permeable surfaces maximised. Where roofed areas are collecting water it will be re-utilised so effectively detained to avoid expulsion at peak periods.

LIGHTING
Exterior lighting subject to detailed design and Council approval. Carpark and associated vehicle accessway lighting to incorporate a combination of low level bollard luminaires and pole mounted lighting designed to reduce the visual and illuminated impacts of site lighting. Selective switching system to be provided to restrict activation of car park lighting to selected active areas.

TRANSPORT
Car parking is provided and is established with consideration of the family oriented nature of the congregation. Vehicles arriving with full passenger numbers mean that there is generally a reduced requirement for total car numbers.

WASTE MANAGEMENT
To ensure that there is an avoidance of waste and reuse and recycling during construction and operation stages of the development will adopt a waste management plan in accordance with statutory obligations.

URBAN ECOLOGY
The arrangement of the overall vertical organization of the building has balanced the building footprint with the area remaining for the landscape. The aim has been to protect and provide opportunity to enhance biodiversity and to plant indigenous vegetation. Design decision have maintained and enhanced the sites ecological value, created high quality amenity for the community and encouraged some bio-diversity through a diverse selection of plant types and landscape elements.

INNOVATION
The design of this place of worship adopts design principles that extend the traditional typology and look to create a worlds-best practice approach to the development. The introduction of new technology in the establishment of the buildings systems, both passive and active, is an innovation that can demonstrate how innovation can produce sustainable high performance environments that generate positive progress at social and environmental levels.

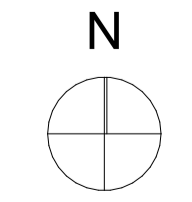
CIRCULATION
The circulation strategy serves to establish both a social and a physical program. As a primary principle there has been an effort to provide an articulated street frontage to the building. The aim is to promote the core idea of connection between the day to day activity of the place of worship to the wider community who move around the site as they walk, ride or drive around the area. Organizing the circulation in this way allows the serving of primary spaces without impacting on the functions that would be undertaken within them. External circulation has been arranged to allow direct access from both the road frontage and parking areas located in the two distinct areas.

BUSHFIRE MANAGEMENT
PLACE OF WORSHIP TO BE CONSTRUCTED TO BUSHFIRE ATTACK LEVEL BAL 29, WITH ASSOCIATED DEFENDABLE SPACE.
PROPOSED LOT 1 TO INCLUDE SETBACK REQUIREMENTS FOR FUTURE DWELLING, WITH ASSOCIATED DEFENDABLE SPACE.

NOTE: SEE TP5001 FOR PROPOSED SUBDIVISION LAYOUT AND PROPOSED PLACE OF WORSHIP PLANNING UNIT.



Rev	Date	Amendment
-	01/09/2021	VCAT
A	10/02/2022	PLANNING SUBMISSION



Project:	PLACE OF WORSHIP PA330/2021		
At:	83 BLAKELEY RD CASTLEMAINE VIC 3450		
For:	CASTLEMAINE GOSPEL TRUST		
Job No:	A21002	Drawing No:	TP1004
Issue:	A	Scale:	1:500 @ A1 1:1000 @ A3

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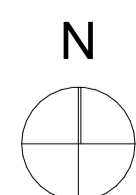
SITE PLAN EXISTING

1

1:500



Rev	Date	Amendment
-	01/09/2021	VCAT
A	10/02/2022	PLANNING SUBMISSION



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Project:
PLACE OF WORSHIP PA330/2021
At:
83 BLAKELEY RD
CASTLEMAINE VIC 3450
For:
CASTLEMAINE GOSPEL TRUST

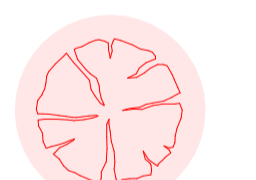
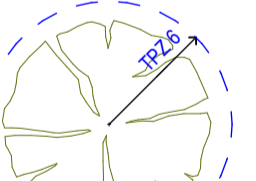



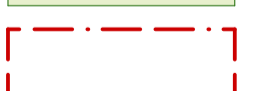
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SCALE: 1:500 @ A1, 1:1000 @ A3
Drawing Type: PLAN - GENERAL ARRANGEMENT
Issue Date: 10/02/2022
Architect: CG
Drawn: HD
Size: A1
Drawing No.: TP2001
Issue: A

Job No: A21002

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LEGEND

-  EXISTING TREE TO BE REMOVED
-  TREE PROTECTION ZONE IN METERS
-  EXISTING TREE TO BE RETAINED
-  15m ELECTRICAL POWER EASEMENT
-  ABORIGINAL CULTURAL HERITAGE AREA
-  SITE BOUNDARY LAND WITHIN PROPOSED SUBDIVISION - PART OF LOT 2 ON PS 8131450

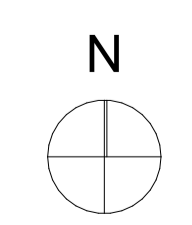
DEMOLITION PLAN / TREE PROTECTION

1

1:500



Rev	Date	Amendment
-	01/09/2021	VCAT
A	10/02/2022	PLANNING SUBMISSION



Project: **PLACE OF WORSHIP PA330/2021**
 At: **83 BLAKELEY RD
 CASTLEMAINE VIC 3450**
 For: **CASTLEMAINE GOSPEL TRUST**

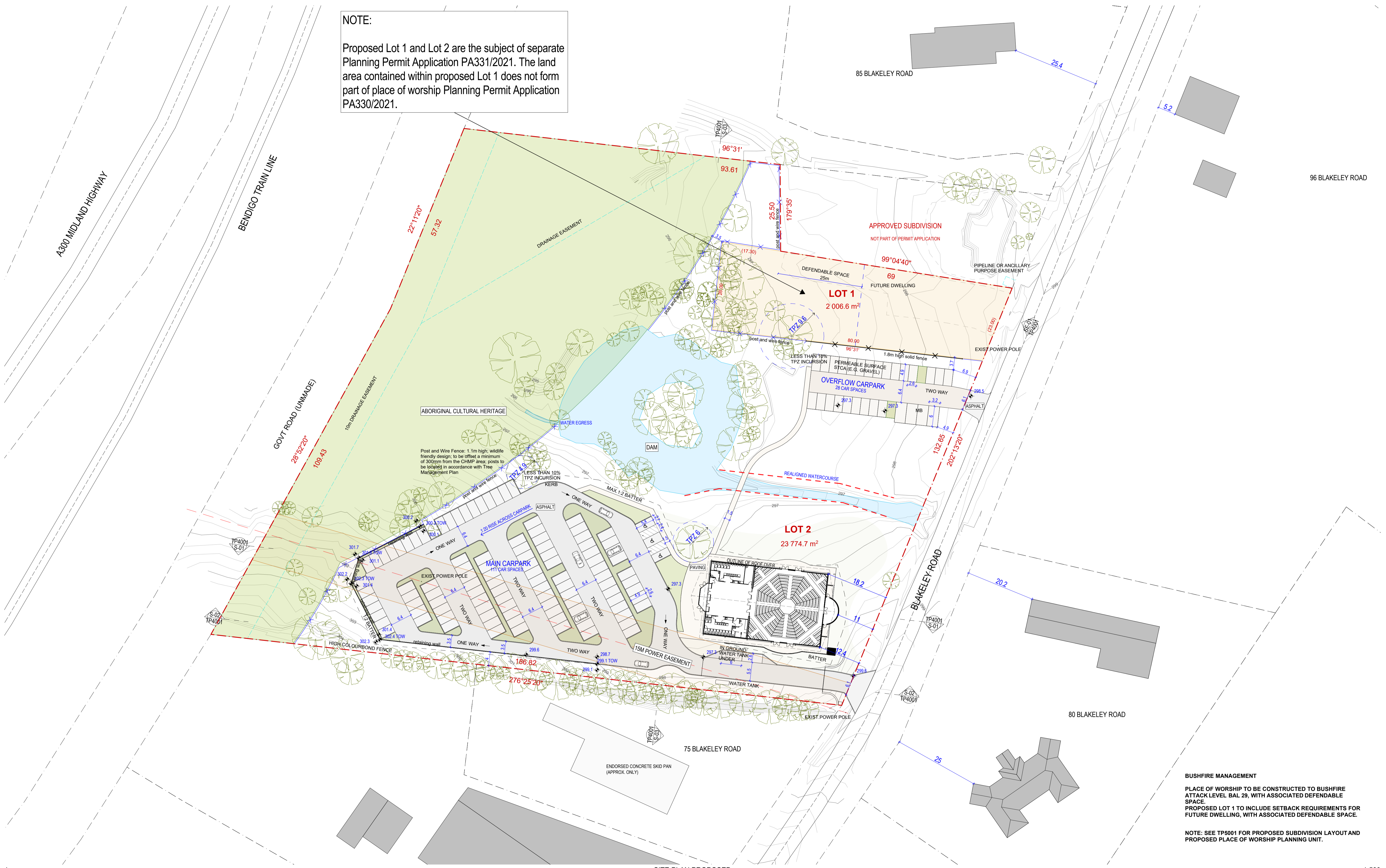
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DEMOLITION & TPZ	1:500 @ A1 1:1000 @ A3
Drawing Type:	
PLAN - GENERAL ARRANGEMENT	
Issue Date:	Architect: Drawn: Size:
10/02/2022	CG HD A1
Drawing No.:	Issue:
TP2002	A

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Job No: A21002

NOTE:
 Proposed Lot 1 and Lot 2 are the subject of separate Planning Permit Application PA331/2021. The land area contained within proposed Lot 1 does not form part of place of worship Planning Permit Application PA330/2021.



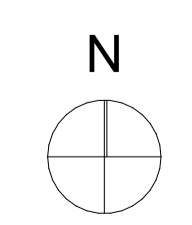
BUSHFIRE MANAGEMENT
 PLACE OF WORSHIP TO BE CONSTRUCTED TO BUSHFIRE ATTACK LEVEL BAL 29, WITH ASSOCIATED DEFENDABLE SPACE.
 PROPOSED LOT 1 TO INCLUDE SETBACK REQUIREMENTS FOR FUTURE DWELLING, WITH ASSOCIATED DEFENDABLE SPACE.
 NOTE: SEE TP5001 FOR PROPOSED SUBDIVISION LAYOUT AND PROPOSED PLACE OF WORSHIP PLANNING UNIT.

SITE PLAN PROPOSED

1:500



Rev	Date	Amendment
-	01/09/2021	VCAT
A	10/02/2022	PLANNING SUBMISSION

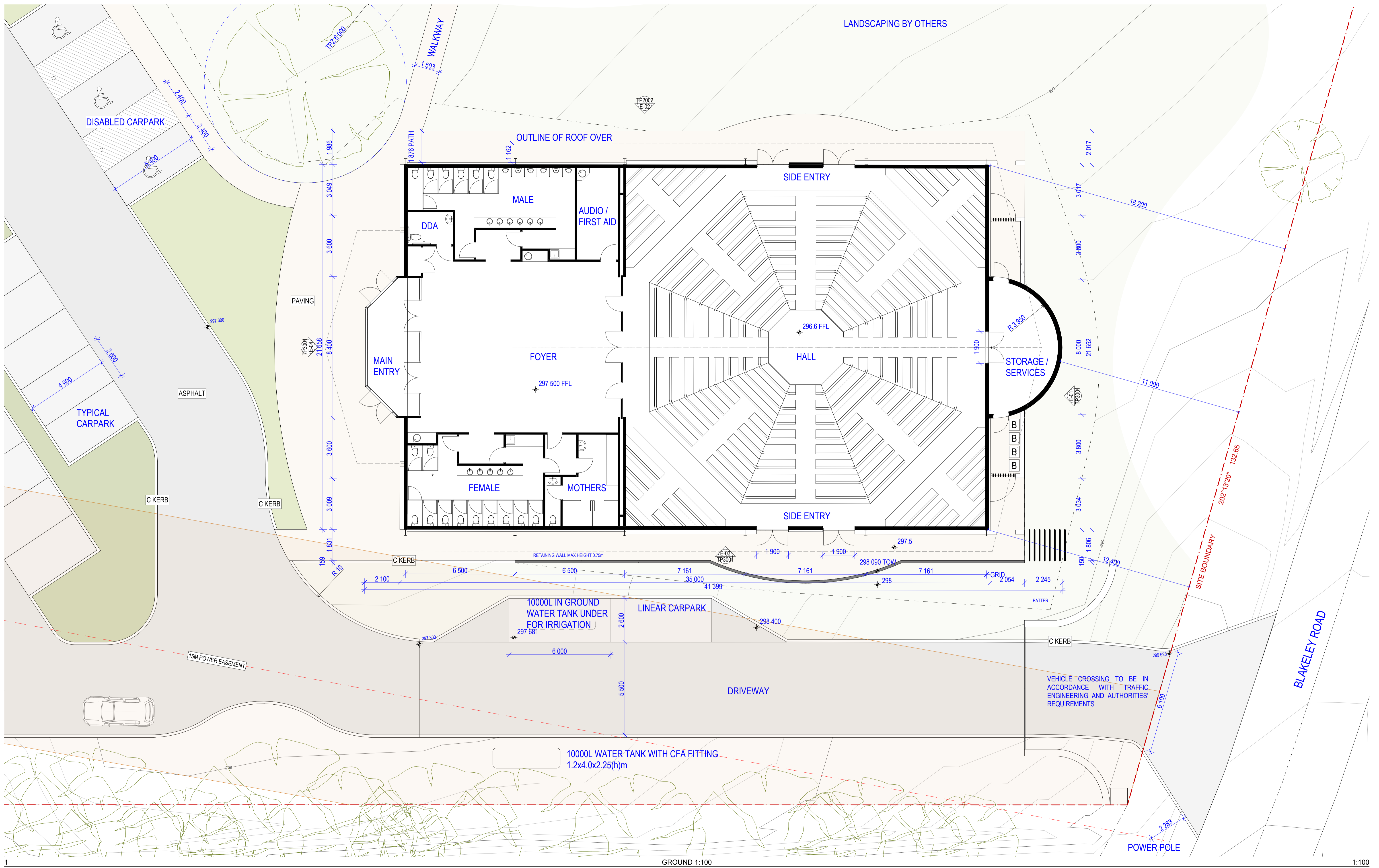


Project: **PLACE OF WORSHIP PA330/2021**
 At: **83 BLAKELEY RD, CASTLEMAINE VIC 3450**
 For: **CASTLEMAINE GOSPEL TRUST**

Drawing Name:	SCALE		
SITE PLAN PROPOSED	1:500 @ A1		
PLAN - GENERAL ARRANGEMENT	1:1000 @ A3		
Issue Date:	Architect:	Drawn:	Size:
10/02/2022	CG	HD	A1
Drawing No.:	Job No.:	Issue:	
TP2003	A21002	A	

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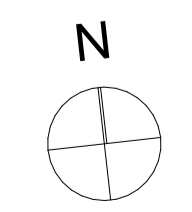
1

GROUND 1:100

1:100



Rev	Date	Amendment
-	01/09/2021	VCAT
A	10/02/2022	PLANNING SUBMISSION



Project: **PLACE OF WORSHIP PA330/2021**
At: **83 BLAKELEY RD CASTLEMAINE VIC 3450**
For: **CASTLEMAINE GOSPEL TRUST**

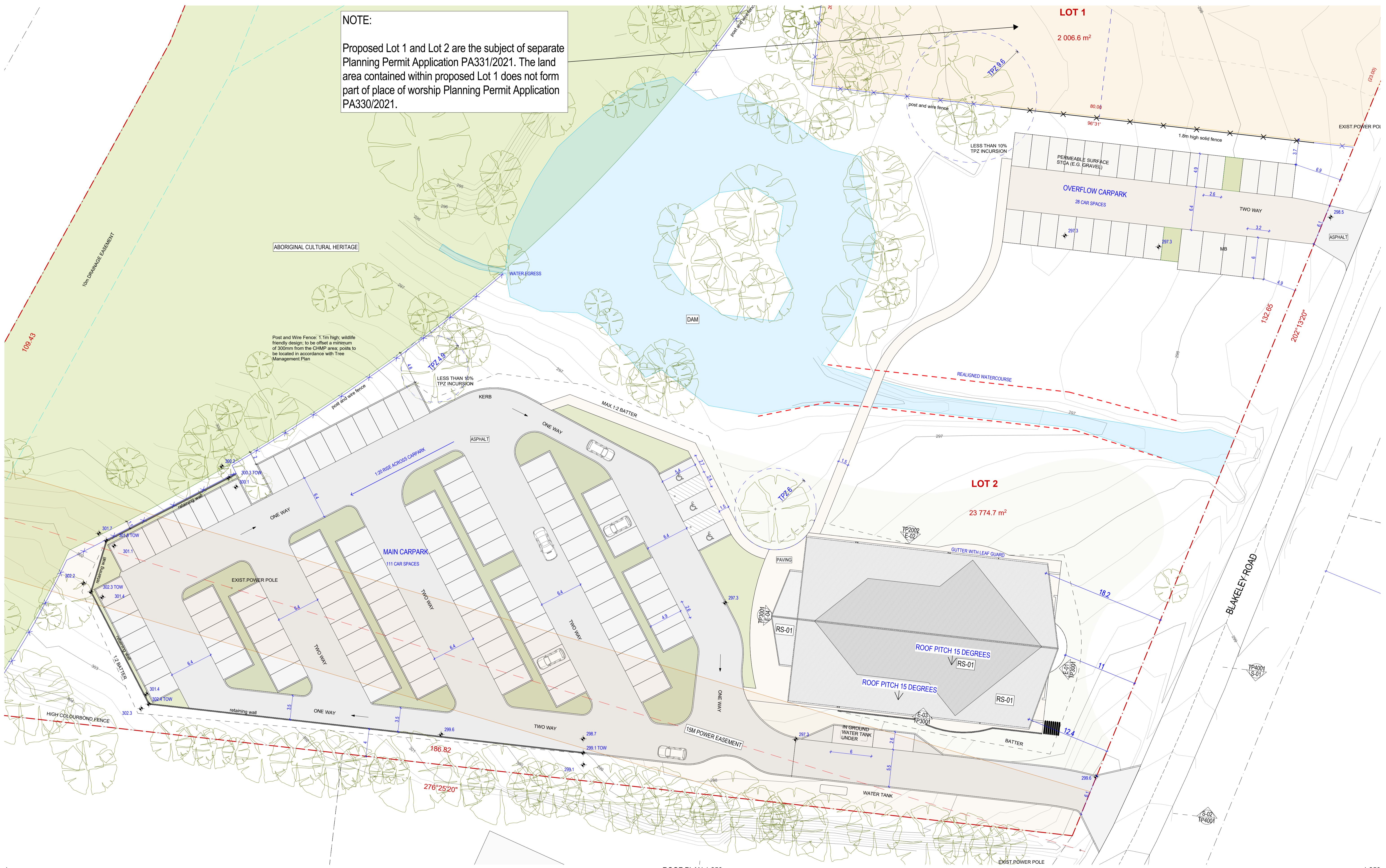
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Drawing Type: **PLAN - GENERAL ARRANGEMENT**
Issue Date: 10/02/2022 Architect: CG Drawn: HD Size: A1
Drawing No.: TP2004 Issue: A

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Job No: A21002

NOTE:
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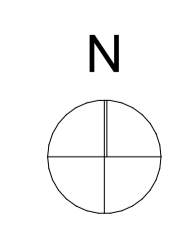
ROOF PLAN 1:250

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1:250



Rev	Date	Amendment
-	01/09/2021	VCAT
A	10/02/2022	PLANNING SUBMISSION



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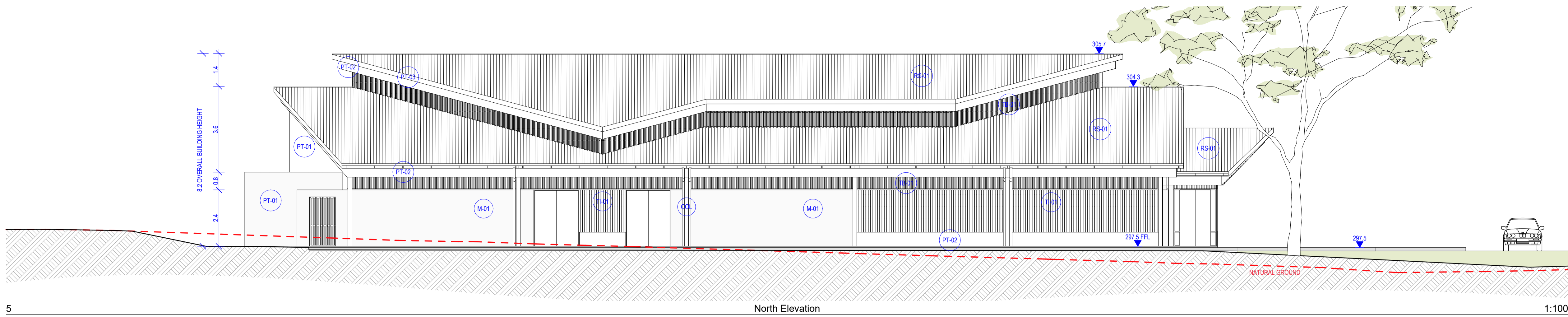
Project: **PLACE OF WORSHIP PA330/2021**
 At: **83 BLAKELEY RD, CASTLEMAINE VIC 3450**
 For: **CASTLEMAINE GOSPEL TRUST**

Drawing Name:	SCALE
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PLAN - GENERAL ARRANGEMENT	1:500 @ A3
Issue Date:	Architect:
10/02/2022	CG
Issue Date:	Architect:
10/02/2022	CG
Issue Date:	Architect:
10/02/2022	CG

Job No: A21002

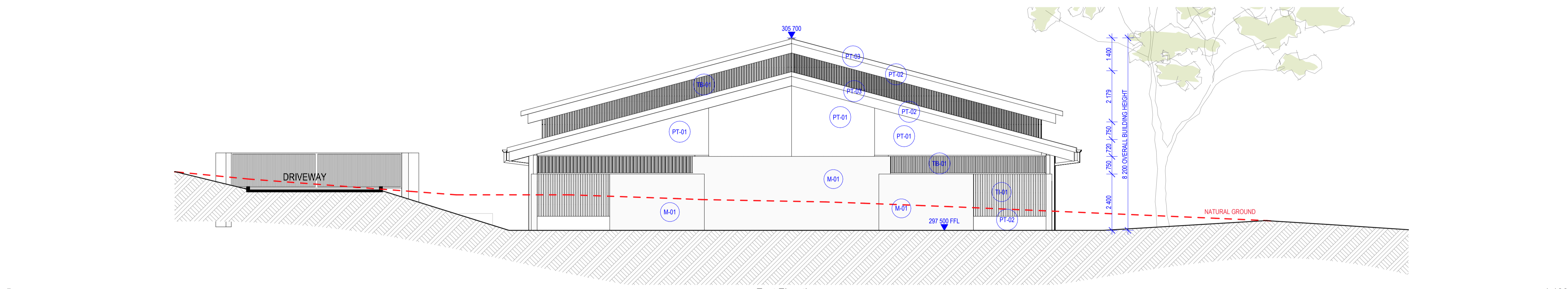
Drawing No: TP2005

Issue: A



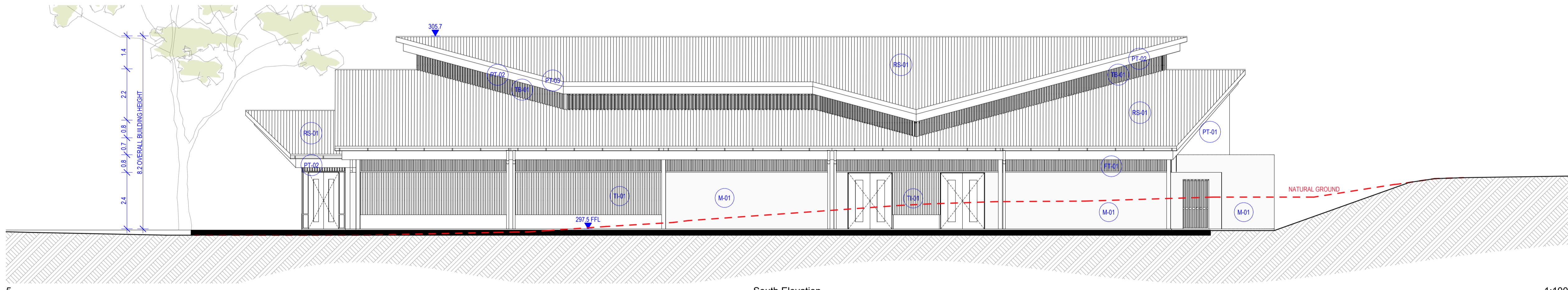
North Elevation

1:100



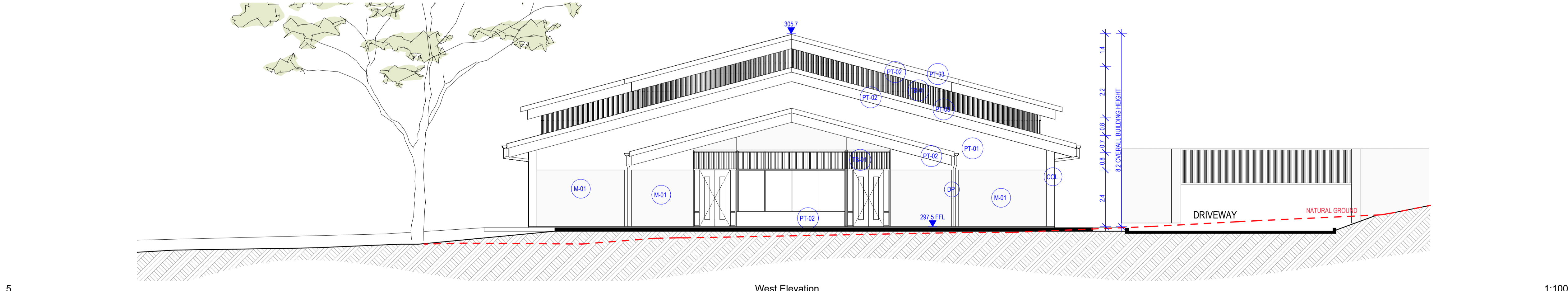
East Elevation

1:100



South Elevation









1:100



West Elevation

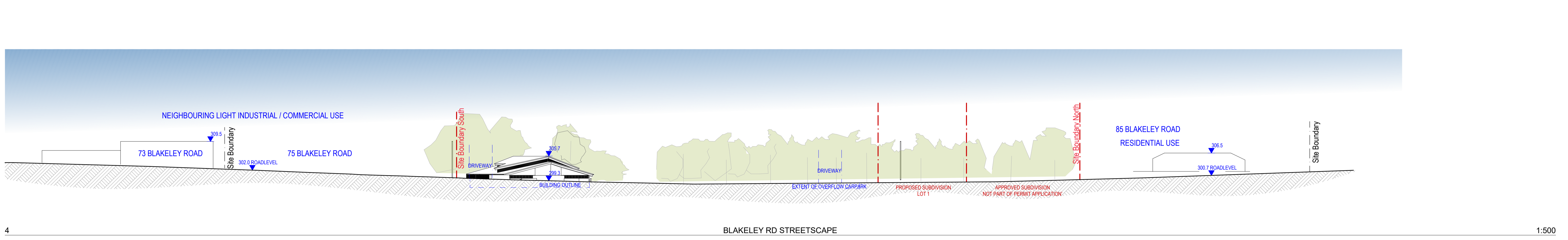
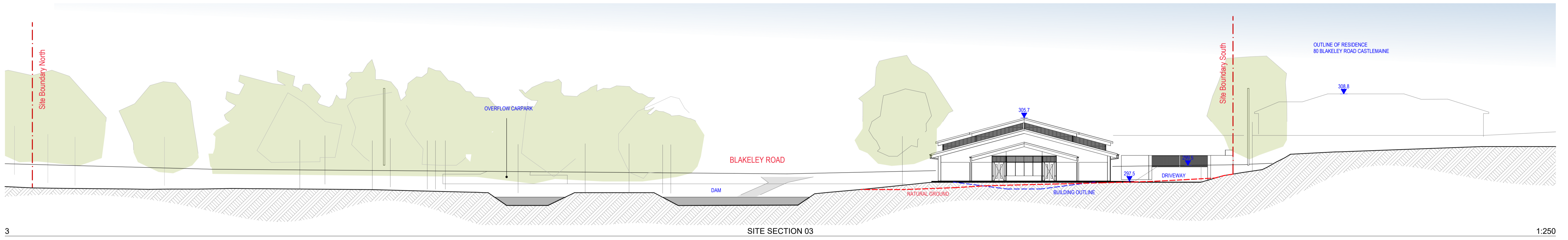
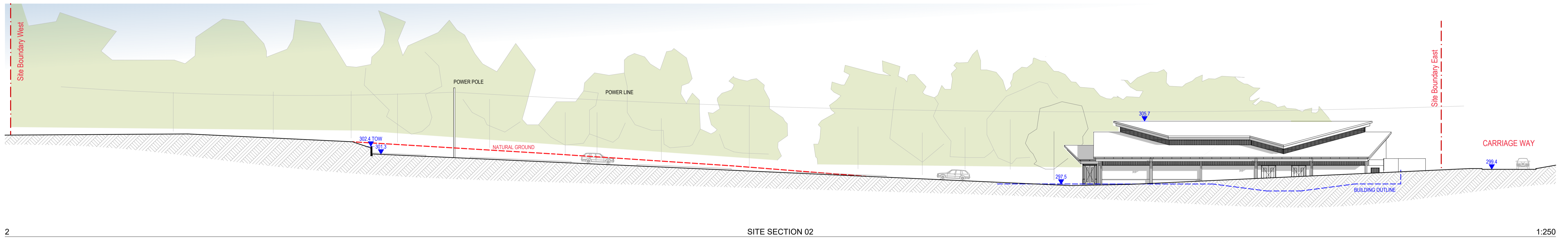
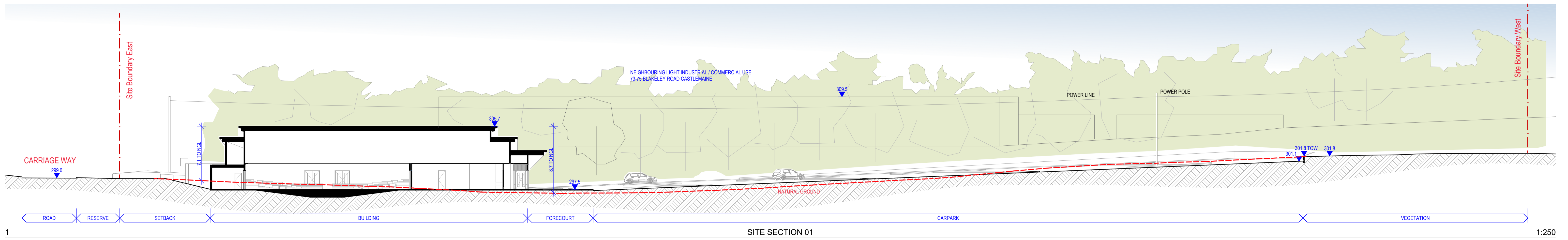
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FINISHES LEGEND

-  M-01 RAMMED EARTH
-  PT-01 CEMINTEL BARESTONE "EXTERNAL ORIGINAL" OR SIMILAR APPROVED
-  PT-02 COLORBOND "MONUMENT"
-  PT-03 COLORBOND "SHALE GREY"
-  TI-01 TIMBER LOOK ALUMINIUM CLADDING DECOCLAD "CASUARINA"
-  TB-01 TIMBER LOOK ALUMINIUM BATTENS DECOCLAD "CASUARINA"
-  RS-01 COLORBOND "PAPERBARK"
-  DP DOWNPIPE AND GUTTERS COLORBOND "SHALE GREY" INSTALL GUTTER LEAF GUARDS
-  COL EXPOSED COLUMNS GALVANISED OR COLORBOND "SHALE GREY"
-  D DOOR FRAMES COLORBOND "MONUMENT" DOOR PANELS DECOCLAD "CASUARINA" WITH COLORBOND "MONUMENT" INSET
-  W COLORBOND "MONUMENT"

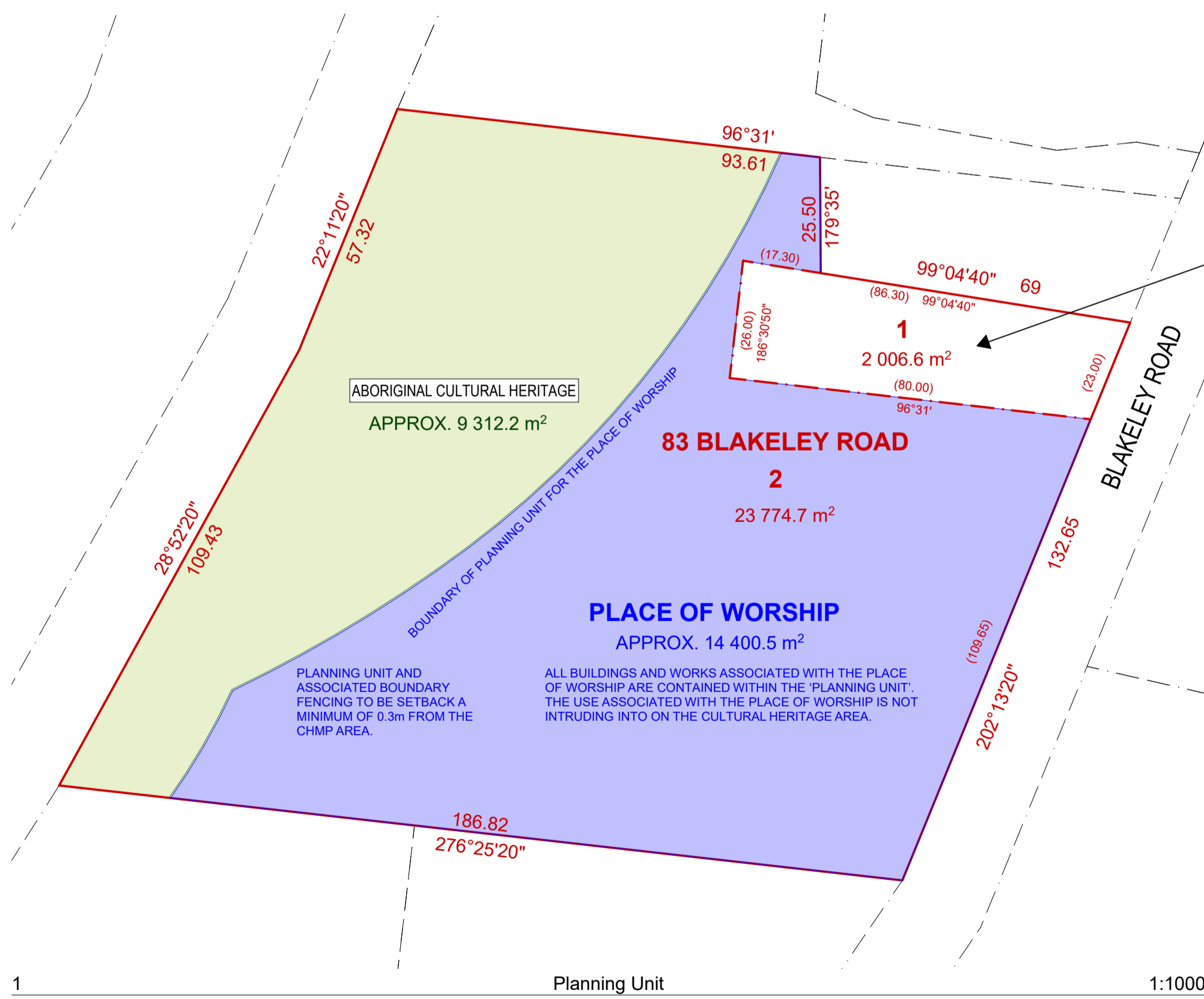
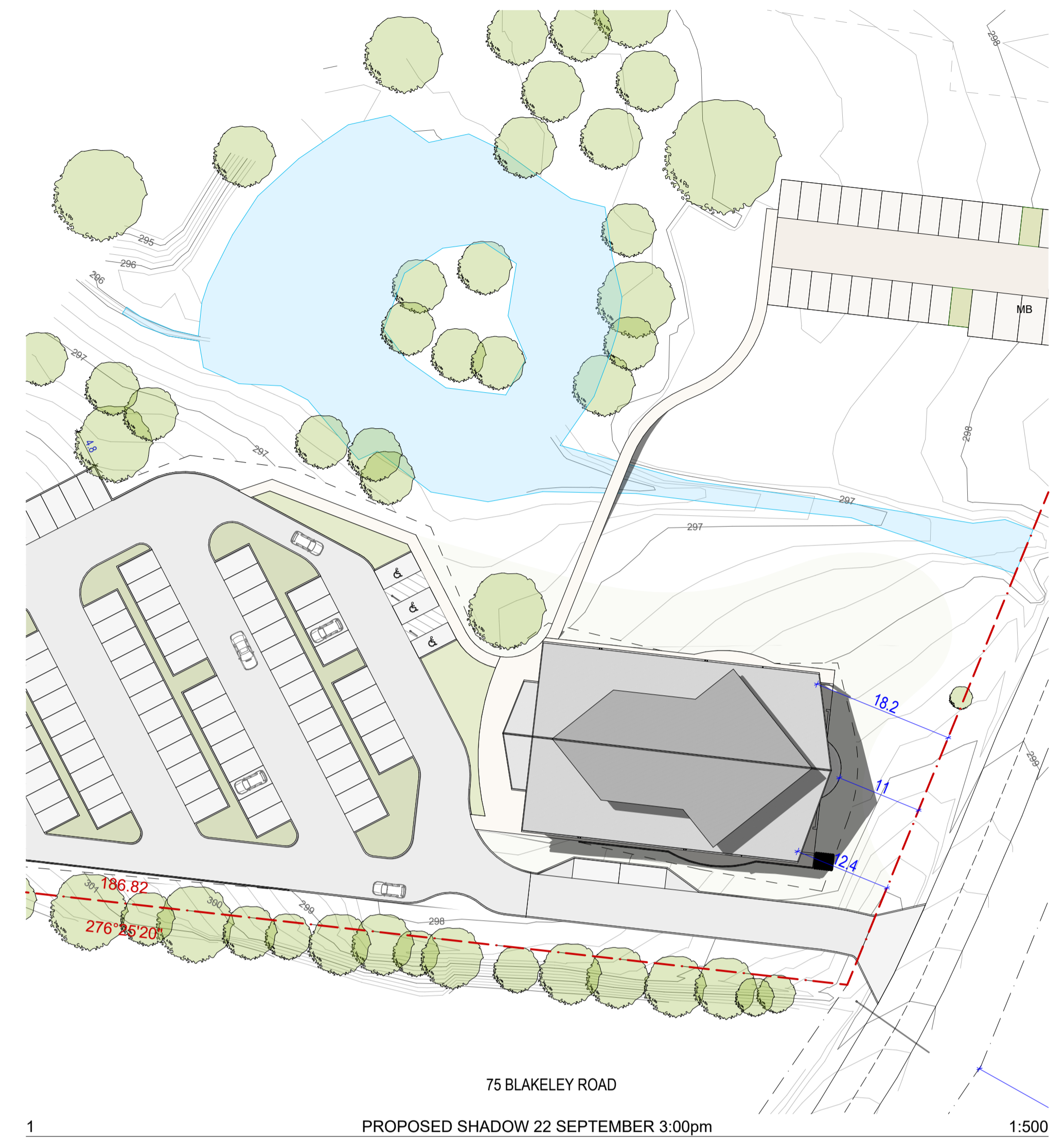
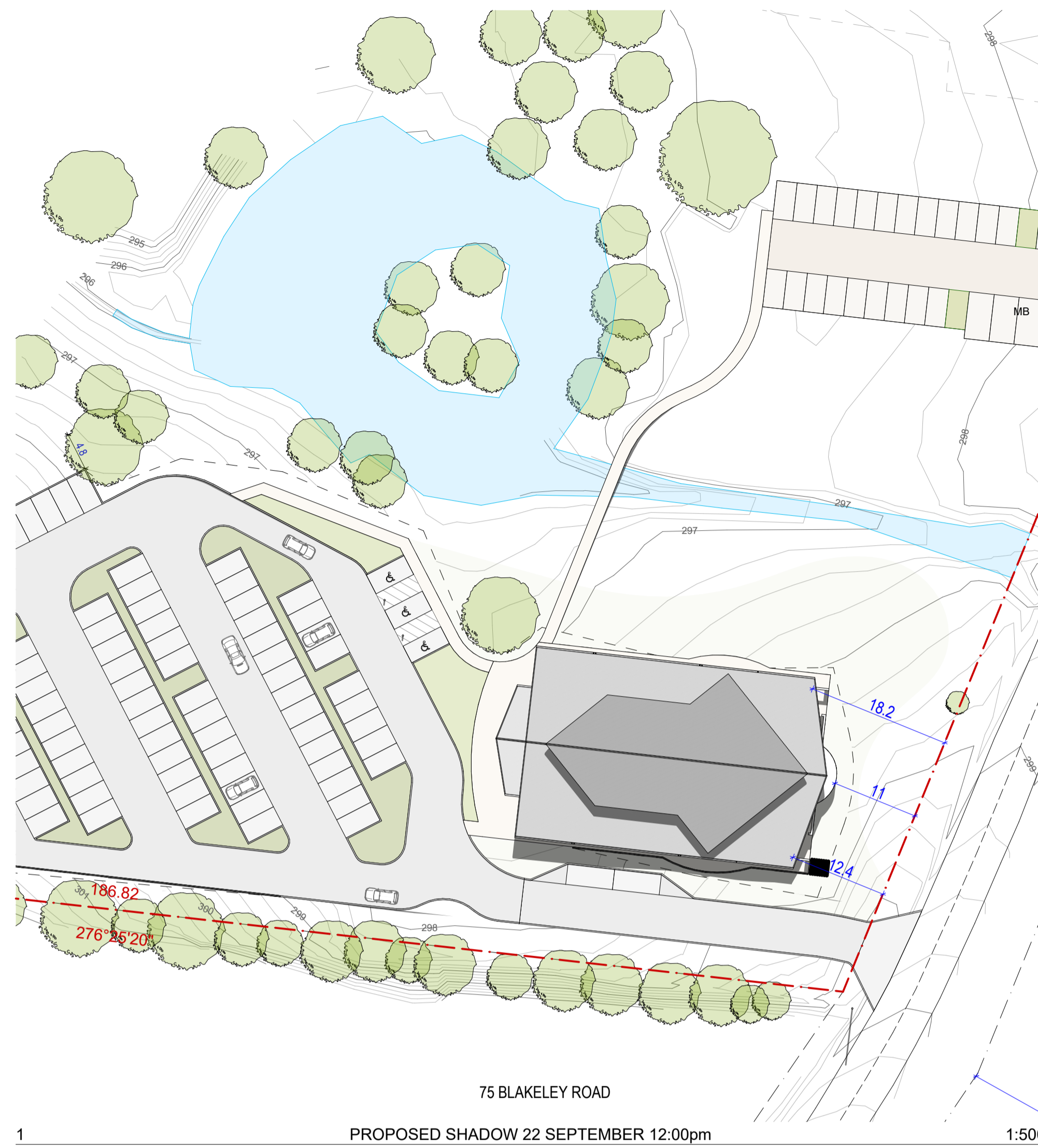
NOTES

CONSTRUCTION STANDARDS TO COMPLY WITH AUSTRALIAN STANDARD 3959 - 2009 & APPENDIX 3 OF PLANNING FOR BUSHFIRE PROTECTION BUSHFIRE ATTACK LEVEL (BAL) - 29 (HIGH)



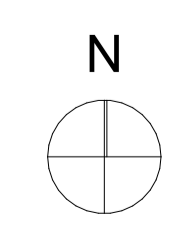
Rev	Date	Amendment
-	01/09/2021	VCAT
A	10/02/2022	PLANNING SUBMISSION

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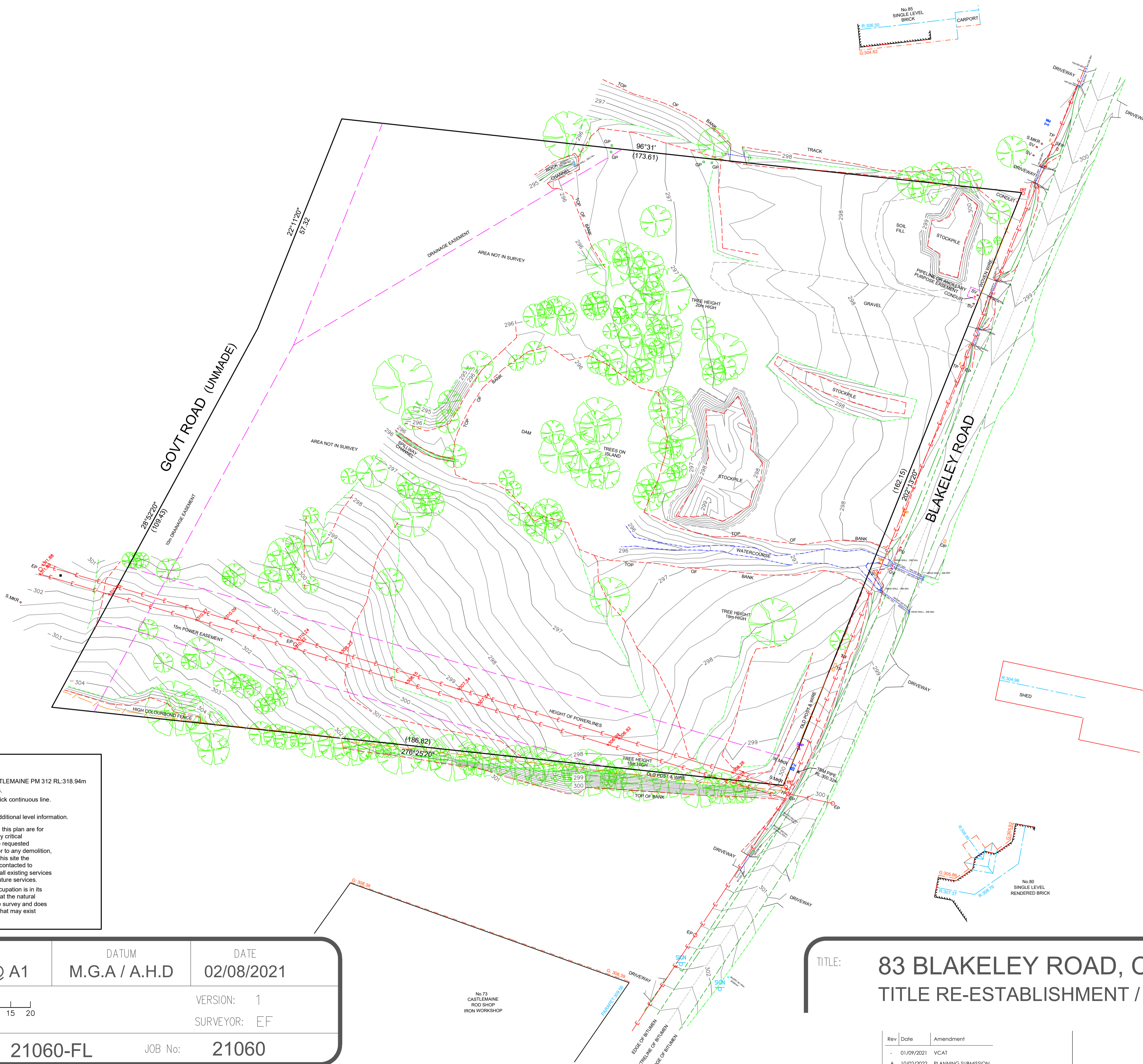


NOTE:
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Rev	Date	Amendment
-	01/09/2021	VCAT
A	10/02/2022	PLANNING SUBMISSION



MCA 94 ZONE 55



LEGEND

- GP : GRATED PIT
- PU : PIT UNCLASSIFIED
- SV : SEWER VALVE
- SFP : SEWER FLUSHER PIT
- TP : TELSTRA PIT
- OP : OPTUS PIT
- EPIT : ELECTRICITY PIT
- EP : ELECTRICITY POLE
- FH : FIRE HYDRANT
- WMKR : WATER MARKER POST
- TMP : TELECOM MARKER POST
- SMKR : SEWER MARKER POST
- GMKR : GAS MARKER POST
- R : ROOF/RIDGE
- G : BOTTOM OF GUTTERLINE

REFER TO CERTIFICATE OF TITLE FOR ADDITIONAL EASEMENT DIMENSIONS & NOTATIONS.

- OVERHEAD POWERLINES
- TREE

Notations
 Lengths shown are in metres.
 Levels are to A.H.D. vide CASTLEMAINE PM 312 RL:318.94m
 Contour Interval is 0.25 metres.
 Title boundary is shown in a thick continuous line.
 Date of survey : 28/07/2021.
 Refer to autocad.dwg file for additional level information.

Features and Levels shown on this plan are for general design works only - any critical dimensions required should be requested independently of this plan. Prior to any demolition, excavation or construction on this site the relevant Authorities should be contacted to ascertain detailed locations of all existing services and the possible locations of future services.
 The position of fencing and occupation is in its true location, and only applies at the natural surface level on the date of the survey and does not show any encroachments that may exist below the natural surface.

SCALE 1:500 @ A1	DATUM M.G.A / A.H.D	DATE 02/08/2021
		VERSION: 1
DRAWING No: 21060-FL		JOB No: 21060
		SURVEYOR: EF

TITLE: 83 BLAKELEY ROAD, CASTLEMAINE
TITLE RE-ESTABLISHMENT / LEVEL & FEATURE SURVEY

Rev	Date	Amendment
-	01/09/2021	VCAT
A	10/02/2022	PLANNING SUBMISSION



Project:
PLACE OF WORSHIP PA330/2021

At:
**83 BLAKELEY RD
CASTLEMAINE VIC 3450**

For:
CASTLEMAINE GOSPEL TRUST

Drawing Name: EXISTING SURVEY	Architect: CG	Drawn: HD	Size: A1
Drawing Type: SURVEY	Issue Date: 10/02/2022	Drawn: HD	Size: A1
Drawing No: TP6001	Job No: A21002	Issue: A	

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Survey 4D PTY LTD

A.C.N. 604 861 323
 67 Addison Street, Elwood 3184
 Phone: 0433 281 219
 Email: survey@survey4d.net

18 April 2023

Mount Alexander Shire Council
Attn: Anita Smith
Statutory Planning Department
PO Box 185
CASTLEMAINE VIC 3450

By email: info@mountalexander.vic.gov.au

Dear Sir/Madam,

**PLANNING PERMIT APPLICATION
USE AND DEVELOPMENT OF A PLACE OF WORSHIP
PART 83 BLAKELEY ROAD, CASTLEMAINE**

We act for *The Trustee of Castlemaine Gospel Trust* in relation to the above property and enclose for Council's consideration a planning permit application relating to 83 Blakeley Road, Castlemaine ('the Site')

The application seeks approval for use and development of part of the land for a place of worship, including associated removal of native vegetation.

APPLICATION MATERIAL AND PLANNING HISTORY

The current proposal follows Planning Permit Application PA330/2021 which sought similar approvals and underwent public notice in early 2022. The application was subsequently withdrawn in March 2023.

The current proposal seeks to address concerns raised by objectors to the previous application with a reduction in hours of operation and worshipper numbers as outlined below.

To assist your consideration, please find herewith the following documentation in support of the application:

- Completed Planning Permit Application form – Use of a Place of worship with associated removal of native vegetation;
- Certificate of Title and related registered Section 173 Agreements;
- Plans prepared by *Orbit Architecture* dated 1 September 2021;
- Report prepared by *Nature Advisory* in respect to flora & fauna considerations;
- Report prepared by *Traffix Group* in respect to traffic engineering considerations;
- Report prepared by *Nexus Planning* in respect to bushfire hazard considerations;
- Report prepared by *Water Technology* in respect to waterway and stormwater management considerations;
- Report by *CDA Design Group* in respect to landscape design considerations;
- Report prepared by *Enfield Acoustics* in respect to noise impact considerations;
- Photo montages prepared by *Orbit Solutions*;
- Report prepared by *Dr Richard Dluzniak* in respect to lighting design.

As Council will be aware, the above includes reports that were prepared in the form of expert evidence filed on behalf of the permit applicant in VCAT in Proceeding P409/202 (the VCAT Proceeding) and comprise a comprehensive independent assessment of the plans dated 10 February 2022 prepared by *Orbit Architecture*.

PLANNING CONTROLS

The Site is within a Low Density Residential Zone pursuant to provisions of the Mount Alexander Planning Scheme ('the Planning Scheme').

A 'place of worship' is a Section 2 (planning permit required use) within the zone. Planning approval is also required to construct buildings and works associated with a Section 2 use pursuant to Clause 32.03-4 of the Low Density Residential Zone.

The Bushfire Management Overlay applies to a small area at the northeast corner of the Site however no works are proposed by the application on land covered by the overlay. Appropriate bushfire protection measures have nonetheless been addressed as the accompanying report by *Nexus Planning* details.

The accompanying Traffic Engineering Assessment prepared by *Traffix Group* details that the required car parking provisions are provided onsite and that the design requirements at Clause 52.06 (Car Parking) of the Planning Scheme are satisfied by the proposal.

The application seeks planning approval to remove, destroy or lop native vegetation pursuant to Clause 52.17-1 of the Particular Provisions.

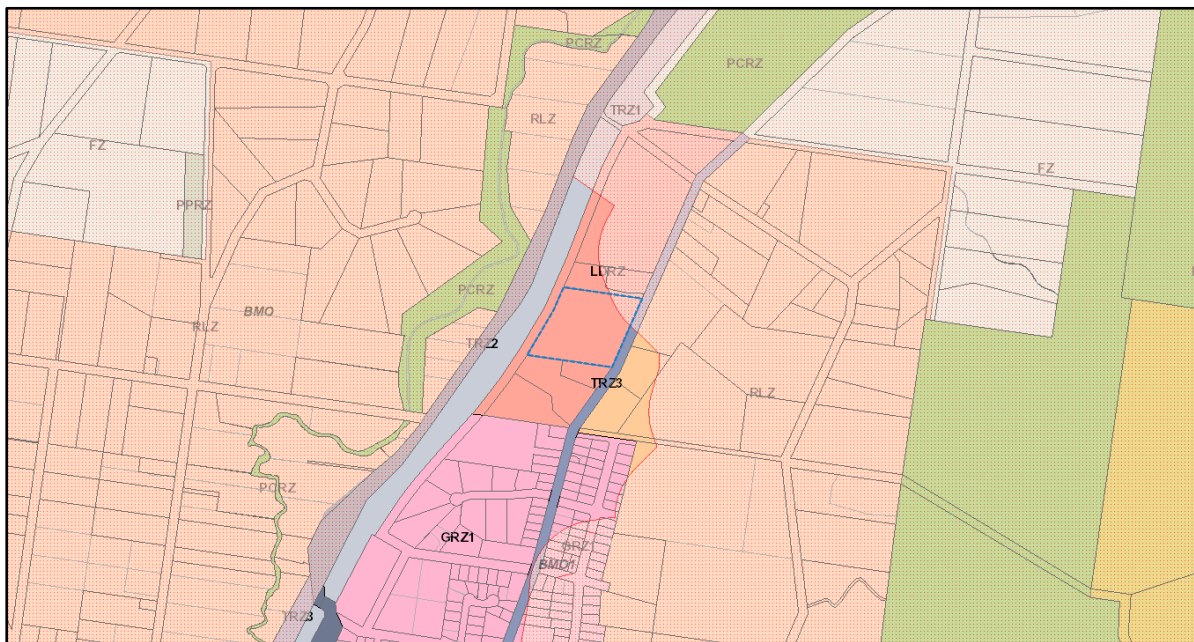


Figure 1 – Zoning controls and Bushfire Management Overlay applying to the Site and surrounds

Provisions of the Municipal Planning Strategy and Planning Policy Framework relevant to the application include:

Municipal Planning Strategy

- **Clause 2.03 Strategic Directions**
 - 2.03-1 Settlement
 - 2.03-2 Environmental and Landscape Values
 - 2.03-3 Environmental Risk and Amenity
- **Clause 2.04 Strategic Framework Plans**
 - Mount Alexander Strategic Framework Plan

- Mount Alexander urban living strategy

Planning Policy Framework

- **Clause 11 Settlement**
 - 11.01-1S Settlement
 - 11.01-1R Settlement – Loddon Mallee South
 - 11.01-1L-02 Castlemaine and Diamond Gully
- **Clause 12 Environmental and Landscape Values**
 - 12.01-1S Protection of biodiversity
 - 12.01-1L Protection of biodiversity
 - 12.01-2S Native vegetation management
 - 12.05-2S Landscapes
- **Clause 13 Environmental Risk and Amenity**
 - 13.02-1S Bushfire planning
 - 13.05-1S Noise abatement
 - 13.07-1S Land Use Compatibility
- **Clause 14 Natural Resource Management**
 - 14.02-1S Catchment planning and management
 - 15.01-1S Urban Design
 - 15.01-2S Building design
 - 15.01-6S Design for Rural Areas
 - 15.01-6L Design for rural areas
- **Clause 18 Transport**
 - 18.02-4S Car parking
- **Clause 19 Infrastructure**
 - 19.02-4S Social and cultural infrastructure

PLANNING ASSESSMENT

The enclosed material demonstrates that the place of worship proposal satisfies and is consistent with the requirements and strategic direction of the Planning Scheme. It comprises a well resolved architectural and landscaped outcome that appropriately addresses the Site's varying opportunities and constraints.

The proposed use and development are appropriately located within the Castlemaine Urban Boundary pursuant to the Castlemaine Land Use Framework Plan at Clause 11.01-1L-02 of the Planning Scheme (refer Figure 2 below). The use is an appropriate response to this urban context and will provide a service to residents of the township and surrounding areas noting that Castlemaine is a township intended to accommodate sustainable regional growth.

The Site is of an appropriate size to accommodate spatial requirements of the use particularly given the quantum of carparking and boundary setbacks necessary for the proposal. Locating the use within a residential area of this nature is preferable to an activity centre context where more intensive use and developments are encouraged that generate activity across wider hours.

The accompanying reports and plans demonstrate that the development will result in positive outcomes for the site including in respect to biodiversity, landscape, water management considerations and bushfire considerations.

The enclosed plans and photo montages further demonstrate that the proposed place of worship building and associated car parking have been designed to respect and provide a positive insertion into the Blakeley Road streetscape, set within a substantial proposed and existing landscape setting that will contribute to the semi-rural character of the neighbourhood.

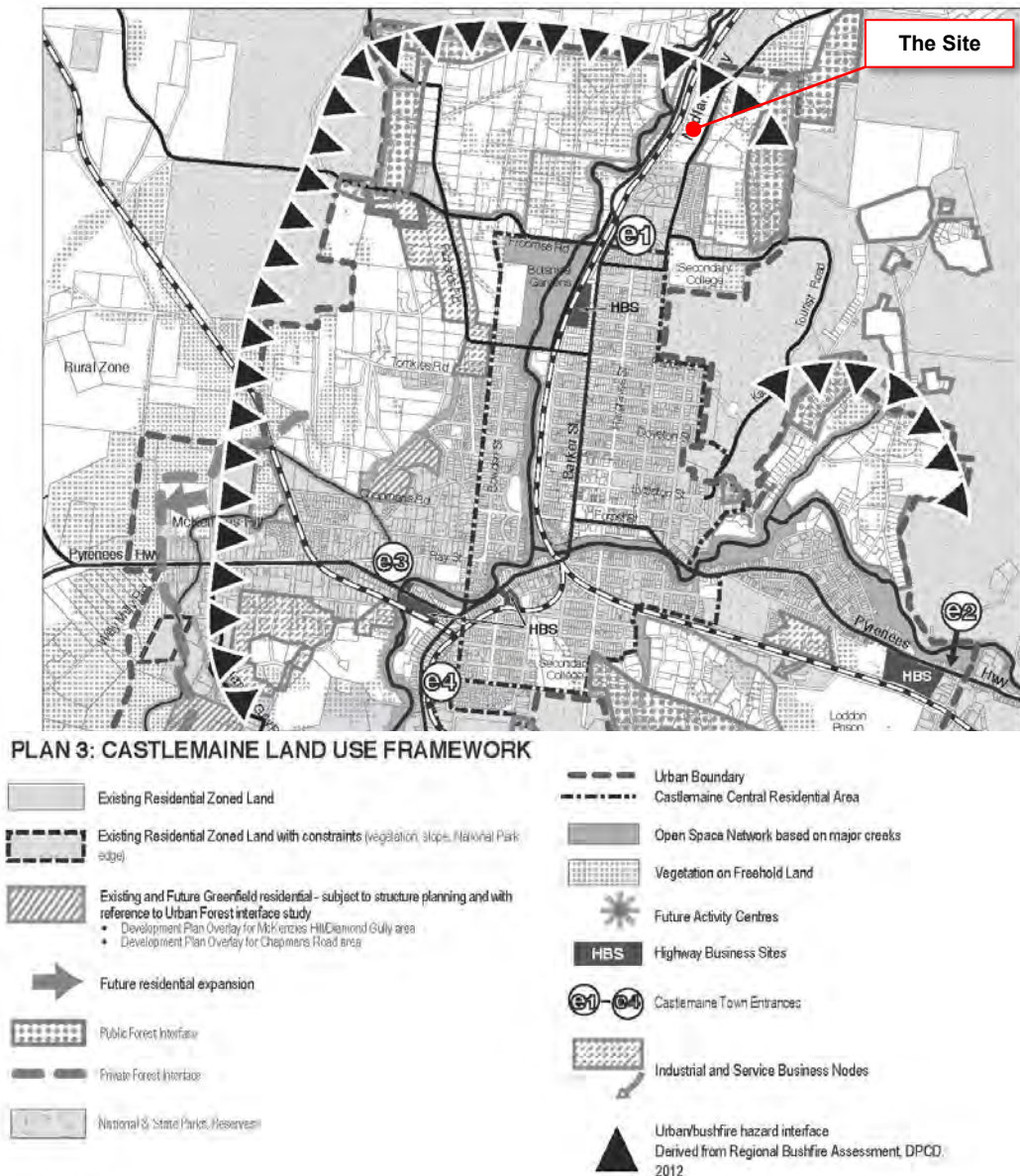


Figure 2 – Excerpt from Castlemaine Land Use Framework Plan at Clause 11.01-1L-02

Place of Worship

To understand the nature of the impact of the proposed use of the land it is necessary to have some understanding of the way in which the Brethren Christian faith approach their worship and organise their lives:

- family, community and worship are central to the Brethren’s way of life;
- smaller intimate groups comprised of people who live quite close together worship frequently as a group, often in smaller places of worship in discrete neighbourhoods;
- less frequently, these local congregations come together to worship with congregants from within the surrounding region – in this case from Bendigo and Kyneton – creating a larger congregation of around 466.

The Brethren exercise the choice, in the observance of their faith, predominantly to worship and commune among themselves. The coming together of smaller communities with larger communities is an important part of life for that community.

The search for a new site has not been easy. The Church has been seeking to build a new church for many years but there are very few places which are suitable. After an extensive search, the Trust identified the Site a suitable location for the new church.

It is important to observe that the practices of the Brethren lend themselves to being very good neighbours in a residential area:

- a) Unlike other religions, the Brethren do not hold the ancillary activities that are usually associated with a church:
 - i. There are no social events at the Church.
 - ii. Food and drink is not consumed at the Church.
 - iii. Alcohol is not consumed at the Church.
 - iv. The Church and grounds are not hired out for any reason.
 - v. There is no Easter or Christmas service where casual visitors to the church would ordinarily be expected to attend (with the dramatic increase in congregation numbers that occurs at these events).
 - vi. There are no events such as "Carols by Candlelight," youth group activities, or child play groups.
- b) There is no amplified music, and hymn singing is not accompanied by instruments.
- c) The Brethren do not use church bells.
- d) Worship is the only activity carried out in the Church and the Church will be closed when it is not being used for services.
- e) The predictable nature of the practice of the Brethren permits the establishment of hours of operations and maximum numbers of congregants in a way which facilitates the Brethren's worship, and also provides a transparent framework against which to assess any application for planning permit, and where necessary impose planning permit conditions to ameliorate any unreasonable impact.

Impacts on Surrounding Area

For most of the time the proposed church will have no impact on the surrounding area at all:

- a) The built form is relatively modest;
- b) The total number of hours per week where the church will be in use is very small;
- c) As the church is not used for any purpose other than worship, nothing will be happening there when services are not being conducted;
- d) Indeed, as the Brethren do not use their places of worship for recreational or social activities, living next door to them is likely to be better than living next door to an ordinary residential neighbour in many ways.

When services are conducted, the impact on the surrounding area could not be described as anything greater than "minimal":

- a) The earliest service attracts only 50 congregants;
- b) All other services are finished no later than 8.30pm
- c) The nature of the services which are conducted by the Brethren are low impact and benign;
- d) No social or recreational activities are proposed;
- e) The predominant levels of activity on the land will be very low; and

- f) The occasions of more intense activity are so infrequent and of such short duration that they could cause, at best, occasional inconvenience.

The Brethren have proved themselves to be very good neighbours. It has operated at its Parker Street location, adjacent to existing residences, for over 50 years. It has not received one complaint over those 50 years. It has operated three other smaller halls in Castlemaine and again, these churches are located next to existing residences.

The activities associated with the place of worship are modest and will ensure that the amenity of the surrounding area is suitably protected. It is noted in this respect that the hours of operation and worshipper numbers have been significantly reduced from the earlier application. This is demonstrated by the below table which compares the current proposal with Planning Permit Application PA330/2021 that was recently withdrawn:

Application PA330/2021			Current Proposal	
	Typical Hours	Typical Nos. of Worshipers & Occurrence	Typical Hours	Typical Nos. of Worshipers & Occurrence
Monday	6.30pm - 8.00pm	50 – weekly	6.00pm - 8.30pm	50 - weekly
Tuesday	7.15pm - 8.45pm	150 – weekly	No service	
Wednesday	7.15pm - 8.45pm	466 - every 3 weeks	No service	
Thursday	7.15pm - 8.45pm	466 - 1-2 times 3 weeks	No service	
Friday	7.15pm - 8.45pm	150 - monthly	No service	
Saturday	8.30am - 10am	150 - monthly	No service	
	10am -11.30am	466 - weekly	10.00am - 1.00pm	466 - every 3 weeks
Sunday	5.30am - 7.30am	50 - weekly	7.00am – 9.00am	50 - weekly
	11.00am -1.00pm	466 - every 3 weeks	9.00am – 1.00pm	466 - every 3 weeks
	4.00pm - 6.00pm	150 - 1-2 times 3 weeks	No service	

For most of the week the place of worship will not be in use. Further, the church activities are held inside the church building, benign in their off-site impacts. The proposal will not result in any unreasonable amenity impacts on nearby properties including in relation to neighbourhood character, traffic, noise, and lighting. All car parking associated with the place of worship is contained onsite.

The above is an accurate reflection of the anticipated typical usage of the proposed hall. That being said, the Permit Applicant seeks a planning permit that retains a good degree of flexibility.

It is the Permit Applicant's position that stringent restrictions on operating hours and attendance numbers is not justified because the impacts associated with the proposed use are able to be managed and contained without unreasonably impacting on surrounding residential amenity. This can be attributed in large part to the favourable site context.

More relevantly, the use of the building by the Brethren congregation, by its very nature, produces very little off-site impacts irrespective of whether there are 50 or 466 people in attendance.

Also, like all organisations, the Permit Applicant seeks flexibility to cater for circumstances when meeting times and arrangements do change. Appropriate rationale for restricting hours of operation is to ensure that activity not occur at times disruptive to amenity, and to ensure that the amount of usage of premises does not exceed reasonable levels.

Meeting times and arrangements can and do change when circumstances require, and the Brethren do not want to be locked into unnecessarily narrow restrictions which could otherwise be relaxed

without any detriment to amenity. At all times the Brethren have control of numbers, and know in advance the likely maximum attendance at a meeting.

The Permit Applicant understands the desire of authorities to sometimes impose some form of number or time restrictions, to maintain amenity in a neighbourhood. At the same time, freedom of religion is a right, including flexibility in the use of a place of worship as enjoyed by other mainstream churches and the Brethren in other locations.

The Permit Applicant is open to some form of limitation being included as conditions of a permit. Possible permit conditions are provided at Attachment A to this submission which provide a means of preserving the amenity of the wider area and confirming the hours of operation and worshipper numbers within the above table.

SUMMARY

The above assessment together with the accompanying report and plans demonstrate that the application for use and development of a place of worship and associated vegetation removal at 83 Blakeley Road, Castlemaine responds appropriately to the Site context and relevant provision of the Planning Scheme.

Please contact the undersigned on ph. 8626 9042 (email: mooney@pppartners.com.au) should Council have any queries regarding the correspondence.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Luke Mooney', written over a horizontal line.

LUKE MOONEY
PLANNING & PROPERTY PARTNERS PTY LTD

Encl.

Appendix A: Possible Permit Conditions

Hours of Operation and Attendance

1. *Except with the prior written consent of the Responsible Authority, the hours of the place of worship activities permitted by this permit must operate only between the following times and maximum number of occupants:*
 - *Monday 6.00pm – 8.30pm (no more than 50 people)*
 - *Saturday 10.00am – 1.00pm (no more than 466 people - Refer to condition 2).*
 - *Sunday:*
 - *7.00am – 9.00am (no more than 50 people)*
 - *9.00am – 1.00pm (no more than 466 people - Refer to condition 2).*

In relation to all persons who attend at the place of worship by vehicle, all such vehicles must enter and exit the site as close as reasonably practicable to the “start” and “finish” times listed above.

Restriction of Frequency of Attendances

2. *Except with the prior written consent of the Responsible Authority, the use of the premises by up to 466 people at any one time is restricted to the following:*
 - *On average once per month in a calendar year on a Saturday; and*
 - *On average once per month in a calendar year on a Sunday.*

Number of Persons attending premises

3. *The number of persons attending the premises, at any one time, must not exceed 466 except with the prior written consent of the Responsible Authority.*

Unless with the prior written consent of the Responsible Authority, the maximum usage of the site in any calendar week must not exceed 12 hours.

No outdoor activities

4. *Unless prior agreed in writing by the Responsible Authority, no services, functions or organised activities may be held outside of the building.*

CDA Design Group Pty Ltd
Landscape Architecture
Urban Design
ACN 097 027 113

185 Faraday Street
Carlton Victoria 3053
T 03 9349 5866
F 03 9349 5877
E office@cdadesigngroup.com.au



83 Blakeley Road, Castlemaine

LANDSCAPE STATEMENT OF EVIDENCE

VCAT REFERENCE No. P409/2021

PREPARED BY: TIM VERNON

4 October 2021

1. Introduction

Background

1. This VCAT proceeding relates to a section 77 review of Mount Alexander Shire Council issuing a Notice of Refusal to Grant A Permit for a town planning permit application seeking approval for a two-lot subdivision and construction of a place of worship with associated car parking and native vegetation removal.

Instructions

2. Tim Vernon of CDA Design Group Pty Ltd has been instructed by Planning & Property Partners Pty Ltd, on behalf of The Trustee of Castlemaine Gospel Trust, to develop a conceptual landscape design response and prepare this statement of evidence for presentation to VCAT.

Facts, Matters & Assumptions

3. In preparing this statement of evidence I have inspected the existing conditions on 7 August 2021, including the site context, the review land, and the streetscape character of Blakeley Road.

4. In preparing my evidence I have relied on the following material relating to the town planning application:

- Biodiversity Assessment (version 1), by Abzeco Pty Ltd, 9 May 2020.
- Bushfire Management Statement, by The Planning Professionals, June 2020.
- Native Vegetation Removal Report, 8 May 2020.
- Aboriginal Heritage Assessment letter by Nicholas Clark, Clakeology, 26 February 2020.
- Planning Report, by The Planning Professionals, January 2020.
- Letter from Goulburn Murray Water confirming no objection to the proposal subject to conditions, 21 October 2021.
- Council RFI, 23 January 2020.
- Response to Council RFI by The Planning Professionals, June 2020.
- Council Delegate report prepared for Council meeting on 15 December 2020.
- Objectors' statements of grounds.

5. I have also relied on the following:

- VCAT issued architectural drawings by Orbit Architecture, 1 September 2021.
- Title Re-establishment / Level & Feature Survey plan, by Survey 4D Pty Ltd, 2 August 2021.
- Arboricultural Assessment by Galbraith & Associates, 10 August 2021 (appended to my report).
- Flora & Fauna Assessment & Witness Statement by Brett Lane, Nature Advisory Pty Ltd, September 2021.
- Traffic engineering memo, by Traffix Group, 6 September 2021.
- Relevant policies of the Mount Alexander Planning Scheme.

Council Position

6. The Council issued a Notice of Decision to Refuse the application on 15 December 2020, citing the following grounds:

1. *The scale of the use and development of the place of worship is out of character within the context of the site and surrounds and would pose detrimental amenity impacts to the residential properties within the surrounding area.*
2. *The proposed operating hours are inappropriate within the context of the site and surrounds based on their early and late nature and would impact on the amenity of surrounding residential properties.*
3. *The proposed built form of the proposed place of worship does not represent a good urban design outcome due to the structure's lack of street integration and*

visual interest due to its location at the rear of the site and bulky design. Therefore, the proposal is inconsistent with Clause 15.01-2S which requires built form to respond and contribute to the context of the surrounding area and minimise detrimental impacts on neighbouring properties, the public realm and natural environment.

4. *The location of the proposed car park to the front of the building will result in detrimental visual bulking and restrict the ability to provide sufficient landscape buffers. Therefore, the proposed car park does not meet the requirements of Clause 18.02-4S, which seeks to ensure that car parking areas achieve a high standard of urban design and protect the amenity of the surrounding area.*
5. *The proposed reduction of car parking requirements does not represent an orderly planning outcome pursuant to Clause 52.06-10 and Clause 18.02-4S due to an inadequate supply of car parking in the context of the expected patron numbers.*
6. *The application has not adequately addressed traffic issues associated with the proposal and would impact on the amenity of the locality due to increased noise, light spill, and disturbance to dwellings pursuant to Clause 52.06-10.*
7. *Traffic safety along Blakely Road and Sawmill Road has not been addressed by the application, and the expected traffic generation would detrimentally impact on the role and function of the surrounding road network through road congestion associated with the proposed car parking area pursuant to Clause 52.06-10 and Clause 18.02-4S.*
8. *The application does not include the implementation of any measures to address the identified bushfire risk associated with the site pursuant to Clause 13.02-1S.*

Objectors' Statements of Grounds

7. The following is a summary of issues raised in the objectors' statements of grounds:

- Visual impact of proposal.
- Inappropriate scale of development.
- Out of character.
- Setbacks from watercourse.
- Stormwater management.
- Bushfire risk.
- Lack of landscaping & no landscape plan submitted with the application.
- Impacts on native vegetation & native fauna.

Summary of Opinions

8. From a landscape perspective I have formed the opinion that the proposal is worthy of support and the landscape design response is appropriate for the following reasons:

- Will result in a development outcome which is compatible with its visual context including the provision of a generally vegetated setting to assist with visually integrating the proposed built form and associated car parks.
- Will produce a vegetated appearance for the review land that integrates with the public realm interface to Blakeley Road.
- Will produce a visual and environmental buffer to the existing man-made watercourse and dam.
- Will respond to bushfire planning defensible space requirements.

3. Existing Visual Context

15. The following is a summary of elements that contribute to a visually diverse contextual character of the area surrounding the review land:

- Gently undulating topography.
- Urban fringe to the south comprises dwellings on more conventional lot sizes. Many of the dwellings are sited within a limited to moderate landscape setting.
- Scattered residential dwellings occur on large and varied size allotments to the north. Many of these properties comprise both native vegetation and grazing paddocks or extensive grass areas that produce a contrasting and spatially open character.
- Generally remnant and native canopy trees produce a vegetated character to the review land and areas to the north, west and east of the review land.



Figure 2: Existing Review land Context – Nearmap



Figure 3: Existing Blakeley Road character (south of review land) - view looking south



Figure 4: Existing Blakeley Road character (north of review land) - view looking south



Figure 5: Existing Blakeley Road character (south of review land) - view looking south



Figure 6: Existing Blakeley Road character (south-east of the of review land) - view looking south-east

4. Existing Blakeley Road Character

16. The following is a summary of elements that contribute to the existing Blakeley Road character:

- The review land occurs at a transition of character with an urban fringe to the south comprising dwellings on more conventional lot sizes and sited within a limited to moderate landscape setting. By contrast, scattered residential dwellings on large and varied size allotments exist to the north with many of these properties comprising both a vegetated character and grazing paddocks or extensive grass areas that produce a contrasting and spatially open character.
- Generally remnant and native canopy trees produce a vegetated character to the review land and areas to the north, west and east of the review land. The eastern portion of the review land contains minimal vegetation and produces a spatially open character when viewed from Blakeley Road.
- Semi-transparent rural fencing comprising split hardwood posts and tension wire is the prevalent fence style.
- No footpaths exist within close proximity of the review land.
- Overhead power line exists along the review land frontage and produces visual clutter.



Figure 7: Existing Blakeley Road character (south of review land) - view looking north



Figure 8: Existing Blakeley Road review land frontage - view looking north-west



Figure 9: Existing frontage to adjoining property at 85 Blakeley Road (north of review land) - view looking west



Figure 10: Existing interface to adjoining property at 75 Blakeley Road (south of review land) - view looking west

5. Existing Site Character

17. The review land is vacant and comprises both remnant canopy trees and the establishment of naturally occurring re-vegetation within the central and western areas of the site. With the exception of 3 scattered native trees the eastern area of the review land is otherwise devoid of vegetation.
18. A watercourse entering the site via a pipe under Blakeley Road connects to an existing man-made dam within the centre of the site.
19. The site has been modified and contains stockpiles of excavated material in the eastern area of the land.
20. I have reviewed the Arboricultural Assessment report prepared by Rob Galbraith, Galbraith & Associates, 10 August 2021. This report assesses the vegetation in the central and south-eastern area of the review land in the area where the proposal is contemplated.
21. The existing canopy tree vegetation on the review land comprises indigenous Eucalyptus species including Grey Box (*Eucalyptus microcarpa*), Waxy Yellow Gum (*Eucalyptus leucoxylon*) and River Red Gum (*Eucalyptus camaldulensis*).
22. The report also reviewed a windrow of canopy trees along the northern boundary of the adjacent property (75 Blakeley Road) to the south which includes trees up to an average of 15 metres in height. These include:- Silver Stringybark (*Eucalyptus cinerea*), Ironbark (*Eucalyptus sideroxylon*), Yellow Box (*Eucalyptus melliodora*) and Red Box (*Eucalyptus polyanthemos*).
23. I have also reviewed the Flora & Fauna Assessment & Witness Statement by Brett Lane, Nature Advisory Pty Ltd, September 2021 and Ecological Assessment by Abzeco Pty Ltd, 9 May 2020.
24. The reports assess the vegetation to be highly modified from its pre-1750 condition.
25. Whilst the site comprises a range of indigenous canopy trees there also a range of invasive under-storey weed species, including Gorse and Blackberry.
26. The following photographic survey has been prepared from my site inspection on 7 August 2021 to illustrate the existing conditions of the review land.



Figure 11: Existing southern area of the review land – view looking west



Figure 12: Existing watercourse within central-eastern area of the review land – view looking west



Figure 13: Existing watercourse culvert along Blakeley Road frontage of the review land – view looking south-east



Figure 14: Existing central-eastern area of the review land – view looking generally west



Figure 15: Existing dam within the central area of the review land – view looking south



Figure 16: Existing western-central area of the review land – view looking south-west

6. Planning Framework

27. The following is a summary of the landscape & visual related planning provisions that are most relevant to this hearing:

Purpose & Vision

- Clause 02.03 Strategic Directions.

Planning Policy Framework

- Clause 11 Settlement.
- Clause 12 Environmental & Landscape Values.
- Clause 13 Environmental Risks & Amenity.

Particular Provisions

- Clause 52.17 Native Vegetation Policy.
- Clause 53.02 Bushfire Planning Policy.
- Clause 53.18 Stormwater Management in Urban Development Policy.

General Provisions

- Clause 65.00 Decision Guidelines.

Zones

- Clause 32.03 Low Density Residential Zone (LDRZ).

Overlays

- Clause 44.06 Bushfire Management Overlay (BMO).

The BMO affects the north-eastern corner of the review land. The BMO also affects land west of the Melbourne-Bendigo railway (west of the review land) and to the north and east of the review land.

- The review land lies within a Designated Bushfire Prone Area.

Other

- The western portion of the review land lies within an area of Aboriginal Cultural Heritage Sensitivity.
- Landscaping for Bushfire, CFA, 2011.

7. The Proposal

Site Layout

28. The proposal for 83 Blakeley Road involves the following key components:

- A place of worship building in the south-eastern area of the site.
- A “main car park” in the southern area of the site with access onto Blakeley Road near the south-east site corner.
- An “overflow car park” in the north-eastern area of the site with access onto Blakeley Road.
- Pedestrian access includes a path from the Blakeley Road frontage to the place of worship building.

Key Landscape Considerations

29. I was instructed to prepare a landscape design response for the proposal which is appended to this report.

30. In reviewing the proposal, the planning controls, various reports (outlined in paragraph 4 of my report), Council’s grounds of refusal, and objectors’ statements of grounds, the following are in my opinion the key landscape and visual related considerations in assessing the proposal:

- Visual and landscape character.
- Blakeley Road streetscape integration.
- Relationship with existing man-made watercourse and dam.
- Protection of existing canopy tree vegetation.
- Bushfire Management.

Landscape & Visual Character

31. The place of worship building will be a free-standing element of built form setback 11-18 metres from Blakeley Road and 16 metres from the southern boundary. The building will have a finished floor level of RL 297.50. In reviewing the Blakeley Road streetscape elevation on architectural drawing TP4001 the eastern elevation of the proposed building will be approximately 6.4 metres above the existing natural surface level at the title boundary along the review land frontage of Blakeley Road.

32. A main on-grade paved car park has been sited to the rear of the place of worship building. As a result, when viewed from Blakeley Road, the paved surface of the car park and clutter of vehicles will not be readily apparent. The car park will produce a landscape setting with a combination of the establishment of planting around the perimeter of the car park and within four landscape strips through the centre of the car park. These landscape areas will enable the installation of canopy trees, evergreen screen shrubs and low-level planting, including the inclusion of vegetated WSUD rain gardens.

33. The majority of the car park has been designed with a 1:20 gradient and sited to minimise earthworks by generally following the natural surface profile. In referring to architectural drawing TP2005 a retaining wall and 1:2 batter is proposed along the southern and western edges of the car park to deal with the difference in level. My suggestion is for the retaining wall to be increased to a maximum of 1.4 metres in height and the subsequent deletion of the 1:2 batter. This will avoid the requirement for any earthworks in close proximity or within the tree protection zones of any existing trees on the review land and along the northern boundary of the adjoining property at 75 Blakeley Road. At the western edge of the car park where the proposed retaining wall will be at its highest (1.4 metres) the wall will be setback from the car park and the combination of planting at both the bottom and top of the wall will enable the establishment of planting to soften the appearance of the wall when viewed within the car park.

34. An on-grade gravel overflow car park has been sited rear the north-east site corner with access to Blakeley Road. The car park will appear within a generally landscaped

setting with a combination of planting established around the perimeter of the car park and within two outstands within the centre of the car park. These landscape areas will enable the installation of canopy trees, evergreen screen shrubs and low-level planting to visually integrate the car park when viewed from Blakeley Road and from within the site.

35. The proposed canopy trees in combination with under-planting will ameliorate views to the place of worship built form and produce a generally vegetated setting. The specified medium sized trees (Wallangarra White Gum) within the car park will attain an expected height of approximately 10-12 metres.
36. An existing windrow of evergreen canopy trees up to an approximate height of 15 metres and comprising various native Eucalyptus species is located on the northern boundary of the adjoining property to the south (75 Blakeley Road). A row of medium evergreen canopy trees is proposed along the southern setback between the southern boundary and the proposed access driveway.



Figure 17: Site-wide landscape plan

37. In summary, the design response will allow the proposed built form and car park to integrate effectively with the existing character by producing an appropriately vegetated appearance for the site.

Blakeley Road Streetscape Integration

38. The proposed place of worship building has been sited in the south-eastern corner and will generally limit views of the main car park further within the site when viewed from Blakeley Road. The building will have a 11-18 metre setback from the eastern boundary and this front setback will enable the installation of native canopy trees and under-planting. The proposed planting will assist with visually integrating the building when viewed from the public realm.
39. The overflow car park is proposed within the north eastern area of the site. Canopy trees around the perimeter and within the centre of the car park, in combination with evergreen shrub and low-level planting, will assist with creating a vegetated setting for this area of the site.
40. A new exposed aggregate concrete footpath is proposed to the north of the driveway to the main car park to enable pedestrian access into the site.

41. A set of automatic vehicle gates and solid walls to both edges of the driveway accessing the main car park are proposed to highlight the main entry.
42. Hardwood posts at varied spacings will produce a visually open appearance whilst delineating the front boundary and allow the movement of fauna.



Figure 18: Blakeley Road front entry gate sketch elevation

Relationship with watercourse and existing dam

43. The proposed place of worship building has been sited with a 20 metre minimum setback to the watercourse and the main car park has a 8-14 metre setback to the existing dam. These setbacks will provide a spatially open and comprehensively vegetated buffer zone and visually appealing relationship to the watercourse and dam.
44. It is proposed to adjust the existing watercourse to the north and install rockwork and low-level riparian vegetation. Given this is a man-made channel I see no landscape-related reasons why these design initiatives should not be approved by Council or external referral authority, Goulburn Murray Water.



Figure 19: Landscape part plan – relationship with watercourse and dam

45. I defer to the evidence of Warick Bishop on catchment management and stormwater related matters. The landscape plan incorporates setbacks and design treatments, including the inclusion of WSUD initiatives (rain gardens, buffer swales) to treat water quality prior to discharge into the watercourse and dam.
46. A 1.5 metre wide path and elevated boardwalk over the watercourse will enable pedestrian access between the place of worship building and the overflow car park, to the north.

Protection of existing canopy tree vegetation

47. As described in the arboricultural assessment by Galbraith and Associates there are a number of existing canopy trees on the site and along the northern boundary of the adjoining property to the south (75 Blakeley Road). The retention of these existing canopy trees has been considered in the site planning of the proposal.
48. The existing trees requiring removal are:
- A large Grey Box (*Eucalyptus macrocarpa*) to the north-east of the proposed place of worship building. This tree has been assessed by the arborist to be of poor health with a short expected safe useful life expectancy.
 - A small Grey Box (*Eucalyptus macrocarpa*) near the western area of the proposed car park. This tree has been assessed by the arborist to be of poor health with a short expected safe useful life expectancy.
 - A Grey Box (*Eucalyptus macrocarpa*) and a copse of nine Waxy Yellow Gums (*Eucalyptus leucoxylon*). These trees have a dominant height of 11 metres and a trunk diameter of less than 0.2 metres.
49. The proposed removal of these trees will trigger the requirement for a permit under Clause 52.17.

Bushfire Management

50. A BMO affects the north-east corner of the subject land. As is the case with the broader site context all other areas of the site lie within a Designated Bushfire Prone Area.
51. Defendable space zones as provided by my instructor are illustrated on Landscape Plan – TP01, appended to my report.
52. The landscape plan prepared for the proposal adopts the following design related defendable space requirements as setout in Table 6, Vegetation Management Requirement, of Clause 53.02 - Bushfire Planning of the Mount Alexander Shire Planning Scheme:
- *Within 10 metres of a building, flammable objects must not be located close to the vulnerable parts of the building.*
 - *Plants greater than 10 centimetres in height must not be placed within 3 metres of a window or glass feature of the building.*
 - *Shrubs must not be located under the canopy of trees.*
 - *Individual and clumps of shrubs must not exceed 5 square metres in area and must be separated by at least 5 metres.*
 - *Trees must not overhang or touch any elements of the building.*
 - *The canopy of trees must be separated by at least 5 metres.*
53. In preparing the landscape design response I was instructed that preferably only smooth-trunked canopy trees should be located within the defendable space areas of the site. Dwarf Brittle Gum (*Eucalyptus mannifera* "Little Spotty") and Wallangarra White Gum (*Eucalyptus scoparia*) are proposed smooth trunked canopy trees.
54. I defer to the evidence of Anthony Matthews on Bushfire management related issues.

8. Other Considerations

Ecological

55. Whilst I acknowledge the introduction of smooth-trunked Eucalyptus trees (Dwarf Brittle Gum and Wallangarra White Gum) are not of local provenance, they are Australian native trees and their appearance provides a visual reference to Candlebark Gum (*Eucalyptus rubida*) which is endemic to the Goldfields bioregion.
56. These trees will provide a visual presence, enable shading to the car park and assist with reducing heat island effect and provide habitat value.
57. The design will facilitate the retention and protection of a large number of existing canopy trees, including naturally occurring Eucalyptus re-growth in the central and western areas of the subject land.

Aboriginal Cultural Heritage Sensitivity

58. The western area of the review land lies within an area of Aboriginal Cultural Heritage Sensitivity. No works are proposed within this zone.

Stormwater Management

59. I am instructed that a 40m² area of biofiltration will be required to treat stormwater runoff from the proposed paved areas on site to best practice standards. As illustrated on Landscape Plan – TP01, WSUD rain gardens have been included along the northern edge and within the centre of the main car park. Surface flows from the proposed car park will be directed to these rain gardens for treatment prior to entering the watercourse and dam.
60. It is proposed to improve the man-made watercourse by the inclusion of rock lining and riparian vegetation to minimise the risk of erosion, enhance habitat opportunities and improve its appearance when viewed from Blakeley Road and within the site.

9. Response to Relevant Landscape Related Planning Considerations

61. The following is a summary of my assessment of the proposal's response to the landscape & visual related planning provisions that are most relevant to this application for review:

Clause 32.03 – Low Density Residential Zone (LDRZ)

62. As outlined at 32.3-6 of the LDRZ the following subdivision related Decision Guidelines require consideration:

- *The protection and enhancement of the natural environment and character of the area including the retention of vegetation and faunal habitat and the need to plant vegetation along waterways, gullies, ridgelines and property boundaries.*
- *The availability and provision of utility services, including sewerage, water, drainage, electricity, gas and telecommunications.*

Design Response:

63. The proposal will respond positively to this policy by the following:

- The proposed place of worship building and associated car parks have been sited to limit the removal of existing canopy trees. Extensive open landscape areas are provided to enable the installation of indigenous and native canopy tree vegetation and under-planting to produce a generally vegetated setting for the proposal.
- The existing watercourse will be rock-lined and vegetated to enhance its environmental and visual qualities.
- I am instructed that the permit applicant has initiated discussions with Powercor to install the existing overhead power lines through the site in an underground trench. This will enable additional opportunities for the establishment of canopy tree vegetation.

Clause 53.02 – Bushfire Planning

64. Table 6, Vegetation management requirement, of this policy outlines the following:

Defendable space is provided and is managed in accordance with the following requirements:

- *Grass must be short cropped and maintained during the declared fire danger period.*
- *All leaves and vegetation debris must be removed at regular intervals during the declared fire danger period.*
- *Within 10 metres of a building, flammable objects must not be located close to the vulnerable parts of the building.*
- *Plants greater than 10 centimetres in height must not be placed within 3 metres of a window or glass feature of the building.*
- *Shrubs must not be located under the canopy of trees.*
- *Individual and clumps of shrubs must not exceed 5 square metres in area and must be separated by at least 5 metres.*
- *Trees must not overhang or touch any elements of the building.*
- *The canopy of trees must be separated by at least 5 metres.*
- *There must be a clearance of at least 2 metres between the lowest tree branches and ground level.*

Unless specified in a schedule or otherwise agreed in writing to the satisfaction of the relevant fire authority.

Design Response:

65. The landscape plan prepared for the proposal adopts the requirements set out in table 6 and as a result will satisfy this policy.

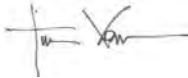
10. Conclusion

66. From a landscape perspective I have formed the opinion that the proposal is worthy of support and the landscape design response is appropriate for the following reasons:

- Will result in a development outcome which is compatible with its visual context including the provision of a generally vegetated setting to assist with visually integrating the proposed built form and associated car parks.
- Will produce a vegetated appearance for the review land that integrates with the public realm interface to Blakeley Road.
- Will produce a visual and environmental buffer to the existing man-made watercourse and dam.
- Will respond to bushfire planning defensible space requirements.

11. Declaration

67. I have made all inquiries that I believe are desirable and appropriate and that no matters of significance which I regard as relevant have to my knowledge been withheld from the Panel.



Tim Vernon B.App.Sci (L.Arch), AAILA

4 October 2021

Appendix 1.

Statement of Qualification & Experience

NAME & ADDRESS

Timothy James Vernon
Landscape Architect
CDA Design Group Pty Ltd
185 Faraday Street
CARLTON Victoria 3053

QUALIFICATIONS & EXPERIENCE

Bachelor of Applied Science (Landscape Architecture) RMIT, 1986.

My Professional affiliations include:

- Associate, Australian Institute of Landscape Architects.
- Member, Australian Institute of Project Management.

I have practiced Landscape Architecture since 1986, including the following:

- Employed at Ratio Consultants Pty Ltd - 1986-1992, 1994.
- Employed at Landesign Limited, Hong Kong – 1993.
- Director of VLA Pty Ltd from May 1995 – June 2001.
- Director of CDA Design Group Pty Ltd (formerly known as Contour Design Australia Pty Ltd, established in July 2001).

AREAS OF EXPERTISE

Landscape Architecture dealing with a range of project types, including environmental (constructed wetlands, water sensitive urban design, environmental management), visual assessment, master planning, site assessment associated with development feasibility studies, streetscape design, residential estate design, open space design, aged care, industrial, commercial, and infill residential.

EXPERTISE TO PREPARE THIS REPORT

Professional training in the field of Landscape Architecture.

Over 35 years post graduate experience working on a wide range of projects of varying scales and levels of complexity.

I regularly provide landscape architectural evidence to VCAT and panel hearings for various land use development proposals.

I have made all inquiries that I believe are desirable and appropriate and that no matters of significance which I regard as relevant have to my knowledge been withheld from the Tribunal.

I prepared this report.

Appendix 2.

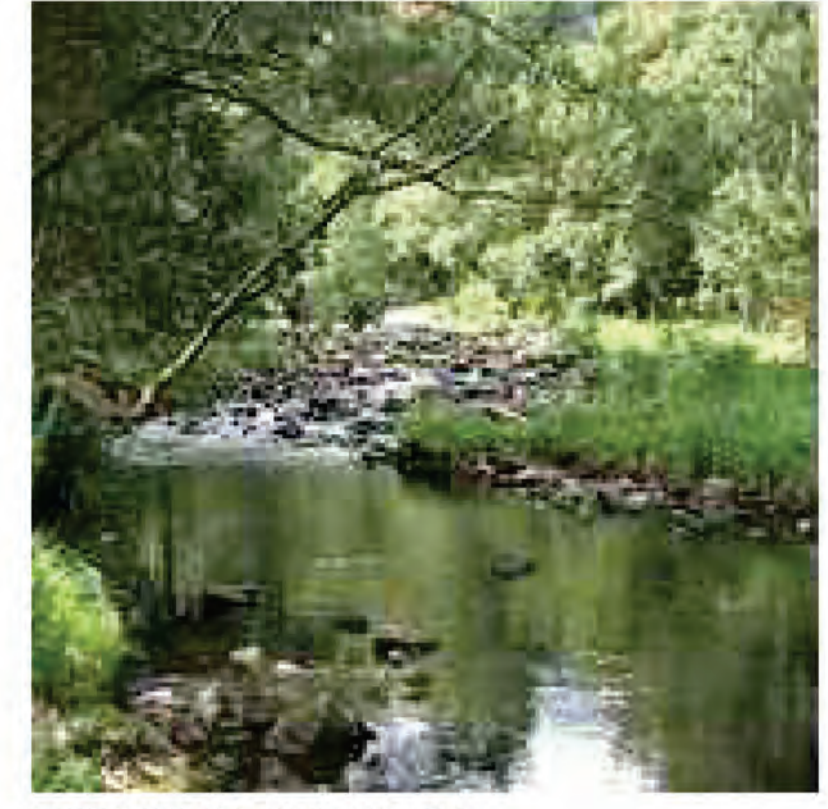
- Landscape Concept Plan – TP01.
- Blakeley Road Entry Gate – TP02.
- Arboricultural Assessment, Galbraith & Associates, 10 August 2021.



PLANT SCHEDULE

SYMBOL	BOTANICAL NAME	COMMON NAME	MATURE HEIGHT (m)	MATURE SPREAD (m)	SYMBOL	BOTANICAL NAME	COMMON NAME	MATURE HEIGHT (m)	MATURE SPREAD (m)
INDIGENOUS & NATIVE EVERGREEN TREES									
	<i>Eucalyptus microcarpa</i>	Grey Box	12.0-15.0	8.0-10.0		<i>Carex appressa</i>	Tall Sedge	1.2	1.0
	<i>Eucalyptus leucoxylon subsp. Pruinosa</i>	Waxy Yellow Gum	12.0-15.0	8.0-10.0		<i>Eleocharis sphacelata</i>	Tall Spike-Sedge	1.5	1.5
	<i>Eucalyptus melliodora</i>	Yellow Box	15.0-20.0	12.0-15.0		<i>Eleocharis acuta</i>	Common Spike-Sedge	0.9	1.0
	<i>Eucalyptus camuldulensis</i>	River Red Gum	12.0-15.0	12.0-15.0	INDIGENOUS STRAP LEAF, GRASSES & GROUND COVER PLANTS				
	<i>Eucalyptus rubida</i>	Candlebark	12.0-15.0	8.0-10.0		<i>Acaena echinata</i>	Sheep's Burr	Prostrate	0.6
	<i>Eucalyptus scoparia</i>	Wallangarra White Gum	10.0-12.0	6.0-8.0		<i>Geranium sp.5</i>	Naked Crane's-Bill	Prostrate	0.3
	<i>Eucalyptus mannifera</i> "Little Spotty"	Dwarf Brittle Gum	6.0-7.0	4.0-5.0		<i>Microlaena stipoides var. stipoides</i>	Weeping Grass	0.2	0.3
INDIGENOUS EVERGREEN SHRUBS									
	<i>Acacia acinacea</i>	Gold-Dust Wattle	1.5-2.0	1.5-2.0		<i>Dianella amoena</i>	Matted Flax-Lily	0.8	0.7
	<i>Bursaria spinosa</i>	Sweet Bursaria	3.0-3.5	2.0-2.5		<i>Dianella revoluta</i>	Black-Anther Flax-Lily	0.6	0.6
	<i>Callistemon sieberi</i>	River Bottlebrush	2.0-2.5	1.5-2.0		<i>Lomandra longifolia ssp. longifolia</i>	Spiny-Headed Mat-Rush	1.0	1.0
	<i>Grevillea alpina</i>	Cat's Claw Grevillea	2.0-3.0	1.5-2.0		<i>Lomandra filiformis</i>	Wattle Mat-Rush	0.3	0.3
	<i>Pimelea humilis</i>	Common Rice-Flower	0.3-0.35	0.5-0.6		<i>Poa sieberiana</i>	Grey Tussock Grass	0.9	0.7
INDIGENOUS RIPARIAN PLANTS									
	<i>Juncus amabilis</i>	Hollow Rush	1.0	0.5		<i>Wahlenbergia stricta</i>	Tall Bluebell	0.3	0.3
	<i>Carex tereticaulis</i>	Rush Sedge	1.2	1.0		<i>Hardenbergia violacea</i>	Purple Coral-Pea	0.3	1.5
						<i>Kennedia prostrata</i>	Running Postman	Prostrate	0.8
						<i>Chamaesyce drummondii</i>	Flat Spurge	Prostrate	0.6
						<i>Xanthorena minor ssp. lutea</i>	Small Grass-Tree	0.5	0.5

DESIGN IMAGES



MODIFIED STORMWATER CHANNEL



DAM WETLAND



CAR PARK WSUD BUFFER



PEDESTRIAN BRIDGE



HARDWOOD TIMBER POSTS



WSUD BIO-SWALE IN CAR PARK

LEGEND

- EXISTING TREES TO BE RETAINED
TPZ SHOWN RED DASHED
- EXISTING TREE TO BE REMOVED
- PROPOSED CANOPY TREES
- GARDEN BED
75mm APPROVED CRUSHED STONE
150mm APPROVED TOPSOIL
300mm CULTIVATED SUBGRADE
- WSUD
BIO-RETENTION SWALES
TOTAL AREA OF 53M² INCORPORATED
INTO THE DESIGN - REFER PLAN
- GRASS
APPROVED GRASS MIX/TURF
75mm APPROVED TOPSOIL
300mm CULTIVATED SUBGRADE
- FEATURE ROCKS
- PEDESTRIAN PAVING
EG. EXPOSED AGGREGATE CONCRETE
- PEDESTRIAN PAVING
EG. TIMBER DECKING
- VEHICLE PAVING
EG. ASPHALT
- OVERFLOW CAR PARK
EG. AGGREGATE GRAVEL
- 60M DEFENDABLE SPACE
- TITLE BOUNDARY
- PROPOSED LIGHTING**
- BOLLARD LIGHTS
- 8m HIGH POLE MOUNTED LIGHTS

FENCE TYPE SCHEDULE

- FN01** POST AND WIRE FENCE: 1.1M HIGH WILDLIFE FRIENDLY DESIGN. TO BE OFFSET A MINIMUM OF 300MM FROM THE CHMP AREA. POSTS TO BE LOCATED IN ACCORDANCE WITH TREE MANAGEMENT PLAN
- FN02** EXISTING 1.8M APPROXIMATE HEIGHT COLORBOND FENCE TO BE RETAINED. REPLACE EXISTING POST & WIRE FENCE WITH COLORBOND FENCE TO MATCH EXISTING AND EXTEND TO FRONT ENTRY WALL.
- FN03** 1.8M SOLID FENCE - REFER ARCHITECTURAL DRAWINGS
- FN04** 1.2M HIGH NON-CLIMBABLE WATER SAFETY FENCE TO DAM AREA
- FN05** INFORMALLY SPACED SPLIT HARDWOOD POSTS TO DELINEATE SITE FRONTAGE

VCAT

Rev	04.10.2021	VCAT ISSUE
	Date	Description

THE TRUSTEE FOR CASTLEMAINE GOSPEL TRUST

**PLACE OF WORSHIP
PART 83 BLAKELEY ROAD - CASTLEMAINE**

LANDSCAPE PLAN - PLACE OF WORSHIP PLANNING UNIT

0 2.5 5 10 25m
Scale: 1:500 @ A1 size

CDA Design Group Pty Ltd
Landscape Architecture
Urban Design
185 Faraday Street
Carlton Victoria 3053
T 03 9349 5866
F 03 9349 5877
E office@cdaesigngroup.com.au

Project No. 21016
Date: AUGUST 2021
Drawn by: ASP
Checked: TV

Drawing No. **TP01**



BLAKELEY ROAD ELEVATION

DESIGN IMAGES



METAL GATES



RAMMED EARTH



HARDWOOD TIMBER POSTS

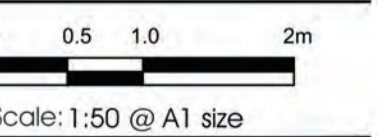


Rev	Date	Description
-	04.10.2021	VCAT ISSUE

THE TRUSTEE FOR CASTLEMAINE GOSPEL TRUST

**PLACE OF WORSHIP
PART 83 BLAKELEY ROAD - CASTLEMAINE**

BLAKELEY ROAD FRONT ENTRY



CDA Design Group Pty Ltd
Landscape Architecture
Urban Design
185 Faraday Street
Carlton Victoria 3053
T 03 9349 5866
F 03 9349 5877
E office@cdadesigngroup.com.au
Project No. 21016
Date: AUGUST 2021
Drawn by: ASP
Checked: TV
Drawing No. TPO2





Tree Consultants & Contractors
Tel (03) 9888 5214

10 Aug 2021

Trustee of the Castlemaine Gospel Trust
C/o Planning and Property Partners
Attn. Chris Taylor

Dear Sir,

re: 83 Blakeley Road, Castlemaine

I am informed it is proposed to construct a place of worship including car parking spaces at the above property. A number of trees are located on the site, including a row of trees along the southern boundary, but within the neighbouring property to the south.

Galbraith and Associates has been requested by Planning and Property Partners to undertake the following:

- A. Check scattered trees 1, 2 and 3 identified in the Abzeco report, including their TPZ's;
- B. The plan changes are exploring locating a driveway along the southern boundary of the site. We need to identify an offset from the southern boundary of the site, taking into account TPZ of the neighbouring 'linear vegetation line' which follows our southern boundary;
- C. Check some other on-site trees, which we may need to consider in our amended plan design process (locations C1, C2, C3, and C4)

Each of the scattered trees as identified by Abzeco, the adjacent row of trees and the other four clumps of trees are located and numbered on the accompanying copy of the existing site conditions survey on page 2 and described on page 3.

THE TREES

Tree No.	Species Indigenous (I) Victorian (V) Australian (A) Exotic (E) Weed (W)	DBH (cm)	HxS (m)	Comments, WOR, TPZ(m), SRZ(m)
A1	Eucalyptus microcarpa I Grey Box	40	13x9	Split prone bifurcation of the trunk at 4m height – pressure fork. Vehicular impact wound on the trunk at 1m, probably inflicted during the site clearance some 4 years ago. The tree would require tree surgery to mitigate the possibility of splitting at 4m if retained. WOR 4 TPZ 4.8 SRZ 2.5
A2	Eucalyptus leucoxylon I Yellow Gum	50	20x13	Tall healthy tree but with a structurally weak pressure fork at 5m. A canker is present in the main stem at 7m. Needs tree surgery works if retained. WOR 6 TPZ 6 SRZ 2.7
A3	Euc. microcarpa I	50, 38	13x9	Although it has a moderately healthy crown, the tree is essentially in poor condition. At 1.3m there is a split prone pressure fork where the bifurcates. There is also a canker rot extending from ground level to the fork. Even with much needed tree surgery works, including cabling of the main co-dominant stems, the tree has a short safe useful life expectancy of < 10 years. WOR 3 TPZ 7.5 SRZ 2.9

B – Row of planted trees in the adjacent property to the south. Heading west from Blakely Road, the initial 30% of the row consists of primarily Silver Stringybark (*Eucalyptus cinerea*), after which the majority consist of Red Iron bark (*Eucalyptus sideroxylon*) with a few Yellow Box (*Euc. melliodora*) and Red Box (*Euc. polyanthemus*). The dominant height is approx. 15m. The DBHs are predominantly in the range of 20-40cm, with very few exceeding 50cm. The trees are hardy and long lived.

A driveway could be constructed opposite this row within the subject site, however the following distances from the boundary fence should be observed in order to be confident of not adversely impacting the trees:

Up to 8m in from the property frontage: the drive can be constructed to the boundary

Between 11m and 20m from the front fence keep 2m off the boundary

At 21m from the front fence and westwards, keep 4m off the boundary.

- C1 This clump consists of a large River Red Gum (*Eucalyptus camaldulensis*) of DBH 80cm and TPZ 9.6m, an almost dead Grey Box at the northern end of 32cm DBH and regrowth of River Red Gum and Grey Box of < 2.5m TPZs. Good condition, except for the almost dead Grey Box.
- C2 This clump consists of Yellow Gum, Grey Box and River Red Gum in good condition, despite fill having been spread over the ground, with TPZs up to 7.2m. Healthy – dominant height 20m.
- C3 This group consists of a River Red Gum with a TPZ of 4.9m and a clump of Grey Box and River Red Gum with stems of less than 30cm DBH. Healthy – dominant height 15m.
- C4 Copse of predominantly Yellow Gum with one multi stemmed Grey Box. The stems have DBHs of < 20cm. Dominant height 11m.



A1 Split prone pressure fork and basal impact wound arrowed.



A2



A2 – Pressure fork and canker are arrowed.



A3



Trunk of A3. A decaying canker rot is established between ground and the fork. The fork is a split prone included bark pressure fork.



Row B



Row B



Row B

C4



Almost dead Grey Box. Group C1



C2



C3



C4

Notes on Terminology

In order to understand the column headings of the tables of data, I have provided the following explanations:

DBH diameter of trunk over bark at breast height. In a number of cases where the tree has forked into multiple trunks below breast height (1.3-1.5m) the diameter is measured below the fork and an estimate is made for the single trunk equivalent at breast height, or else figures for each of the individual stems can be given.

HxS This is the estimated height (H) of the tree and its average crown spread (S).

SULE Safe useful life expectancy in years. Taken in the context that the area is to be developed for residential use, and that sensible distances are maintained between the buildings and the trees, this is the estimate of time that the tree will continue to provide useful amenity without imposing an onerous financial burden in order to maintain relative safety, and avoid excessive nuisance.

Worthiness of Retention (WOR):

The worth for retention of a tree is based on the assumption that the site is to be re-developed, and that there is the opportunity for new tree planting. It is based on a number of factors. These factors are:

1. structure, health, form and safe useful life expectancy,
2. size, prominence in the landscape,
3. species rarity,
4. whether indigenous,
5. whether an environmental weed.
6. importance for habitat of native wildlife
7. whether of historical or cultural interest

Any tree with a WOR rating of 3 or less should be seriously considered for removal before development begins because it is dead, nearly dead or dangerous, a weed, is causing or is likely to cause a severe nuisance in the near future, or just of very little significance and readily replaceable with new plantings. Trees rated 4-6 are of some significance. Some of these trees may respond to treatments such as formative pruning, removal of dead wood, weight reduction pruning etc. Trees rated 7 or higher are of high significance (the higher the ranking the more so), primarily because of their good health, structure, form, prominence in the landscape and SULE, although all they still may need substantial works done on them as already detailed, if they are to be retained.

Tree Protection Zone (TPZ) According to the Australian Standard AS 4970-2009 'Protection of Trees on Building Sites', the TPZ is the principal means of protecting trees on development sites. It is a combination of the root area and crown area requiring protection. It is an area isolated from construction disturbance, so that the tree remains viable.' The radius of the TPZ is calculated by multiplying the DBH by 12. The radius is measured from the centre of the stem at ground level. An area of 10% of the TPZ is deemed acceptable to violate if 10% of the *area* of the TPZ is made up in other directions. *Thus if encroachment is from one side only, encroachment to as close as approximately 8 times the DBH (2/3 the listed TPZ radius) is permissible according to the Standard.*

Where the tree has more than one trunk, the TPZ is deduced by taking the square root of the sum of the squares of each of the DBHs, and multiplying this figure by 12

The TPZs as determined by the AS 4970-2009 approach should be construed as a rough guide. Many factors such as the type of encroachment on the TPZ, species tolerance, age, tree height, presence of spiral grain, soil type, soil depth, tree lean, the existence of onsite structures or root directional impediments, level of wind exposure, irrigation and ongoing tree care and maintenance are each highly influential on the size and success of the TPZ estimation.

Tree Origin Categories

Each tree has been classified as to whether it is indigenous (**I**), native to Victoria (**V**), native to Australia (**A**), exotic (**E**) or an environmental weed (**W**).

An indigenous species (**I**) is one that is known to grow naturally in the local area, even if the individual tree has been planted and is from a seed source or provenance foreign to the area.

A species classified **V** is one which has a part or all, even if very small, of its natural range within Victoria, although it may occur outside the state as well. It does not however occur naturally in the local area.

A species classified **A** is native elsewhere in Australia than Victoria. It does not occur naturally in the local area.

A species classified **E** has its natural range occurring outside Australia.

A species classified **W** is a seriously invasive environmental weed.

GALBRAITH & ASSOCIATES

Rob Galbraith
B.For.Sci.(Melb.)
N.C.H. (Arb.)(U.K.)



VISUALIZATION

Orbit Solutions Pty Ltd

PO BOX 736, Port

Melbourne, VIC 3207

p: +61 3 9690 4418

orbitsolutions.com.au

VISUAL AMENITY STATEMENT OF EVIDENCE

VCAT REFERENCE No. P409/2021

Address: 83 BLAKELEY ROAD, CASTLEMAINE VIC 3450

Prepared by Christopher Goss (B.Env.Des, B.Arch)

05 October 2021

To accompany documentation:

"V21035_Visual Amenity Evidence_"

(Dated Tuesday, 5 October 2021)

FOR: THE TRUSTEE FOR CASTLEMAINE GOSPEL TRUST

INSTRUCTIONS RECEIVED FROM: PLANNING & PROPERTY PARTNERS PTY LTD

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1.0 INTRODUCTION

1.1 Preliminary Statement

- 1.1.1 I, Christopher David Goss, of Orbit Solutions Pty Ltd, Port Melbourne, Victoria, am the author of this statement of evidence.
- 1.1.2 My qualifications are summarised below and my complete CV is in Appendix 3.
- 1.1.3 I have been instructed by Planning & Property Partners Pty Ltd on behalf of the applicant The Trustee for Castlemaine Gospel Trust to provide expert evidence regarding VCAT no. P409/2021 83 Blakeley Road, Castlemaine VIC 3450 (**Proposed Development**).
- 1.1.4 I have read the Code of Conduct for expert witnesses as set out by the Tribunal and agree to be bound by it.
- 1.1.5 I was not involved in the preparation or assessment of the application prior to the lodgment of the appeal.
- 1.1.6 In preparation of the Architectural Plans, I was the Principal Architect and assisted by Hagen Diers, Associate of Architecture Orbit Solutions Pty Ltd (Dip Ing. Arch)

1.2 Name and Professional Address of Expert

- 1.2.1 Christopher David Goss
- 1.2.2 Director of Orbit Solutions Pty Ltd
- 1.2.3 PO BOX 736, Port Melbourne VIC 3207

1.3 Qualifications

- 1.3.1 Registered Architect (ARBV)
- 1.3.2 Bachelor of Architecture
- 1.3.3 Bachelor of Environmental Design

1.4 Relevant Membership

- 1.4.1 Victorian Planning Environmental Law Association (Fellow)
- 1.4.2 Australian Institute of Architects (A+ Member)
- 1.4.3 Architects Registration Board of Victoria
- 1.4.4 Architects Registration Board of NSW

1.5 Experience to Prepare the Photomontages

- 1.5.1 I have presented the concepts of Building Simulation at the Australian Institute of Architects, the Professional Design & Drafting Group, VPELA, UDIA, Melbourne University, Deakin University, Victoria University of Technology, University of Tasmania, the International Alliance for Interoperability and VCAT Professional Development Sessions.
- 1.5.2 I have provided evidence to VCAT and Planning Panels Victoria since 2001 in respect of visual amenity considerations. Visual Amenity Evidence has also been presented in aligned planning jurisdictions in QLD, NSW, ACT, TAS, WA.
- 1.5.3 My level of expertise developed over this period has resulted in ongoing development of the techniques and technology used to produce this type of evidence. Orbit Solutions are widely regarded as a leader in this field of expertise.

1.5.4 As a registered and practicing Architect, I am generally familiar with planning schemes and have developed expertise in the preparation of planning proposals for assessment by responsible authorities.

1.6 Overview of the Site

1.6.1 The subject site, 83 Blakeley Road, Castlemaine VIC 3450, is located in the Mount Alexander Shire.

1.6.2 The site is to the west of Blakely Rd. There is a shallow water course that drains under Blakeley Rd to a water dam in the center of the site.

1.6.3 There are no existing buildings on the site.

1.7 Orbit Solutions Scope

1.7.1 Initial instructions were received from Planning & Property Partners Pty Ltd on behalf of the applicant The Trustee for Castlemaine Gospel Trust on 22 June 2021 to take on the role of Project Architect and produce the amended plans for VCAT.

1.7.2 Further instructions were received from Planning & Property Partners Pty Ltd on behalf of the applicant The Trustee for Castlemaine Gospel Trust on 22 June 2021 to prepare Visual Amenity Evidence comprising photomontages of the Proposed Development.

1.7.3 Position locations were provided by Planning & Property Partners Pty Ltd and I subsequently attended the site to direct the positions on 26 July 2021.

1.7.4 Further instructions were received from Planning & Property Partners Pty Ltd on 30 September 2021 to provide a simulated view of the Proposed Development.

1.8 Declaration

1.8.1 In preparing this statement of evidence I have visited the site and made all enquiries which I believe are desirable and appropriate and no matters of significance that I regard as relevant have, to my knowledge, been withheld from the Tribunal. The opinions expressed are my professional opinions and are honestly held.

Signed:



Date: 5 October 2021

2.0 SUMMARY

2.1.1 In this matter I have not been asked to form an opinion as to the merits of the application before the Tribunal.

2.1.2 The preparation of the Visual Amenity Evidence is undertaken with a methodology that utilises configured data sets and is repeatable, verifiable and has quality assurance measures to ensure accurate representations of the proposed works in the photographed context.

2.1.3 The align-view photomontage(s) have been prepared based on the preferred view positions selected by other experts involved in this matter.

3.0 ORBIT VISUAL AMENITY EVIDENCE

3.1 Content

3.1.1 This Statement of Evidence seeks to represent the potential visual impact of the development of the proposed built form in the existing context.

3.2 Accompanying Documentation

3.2.1 This Statement of Evidence accompanies the A3 booklet 'Visual Amenity Evidence' containing the align-view photomontages and simulated view.

3.3 Evidence Register

Figure No.	Drawing Title	Equivalent SLR Lens	Date
	COVER PAGE	-	05-10-21
i	Camera Locations	-	05-10-21
1.0	View 1 Original Photograph @ 20mm	20mm	05-10-21
1.1	View 1 Proposed Built Form	20mm	05-10-21
1.2	View 1 Proposed Built Form with Landscaping	20mm	05-10-21
1.3	View 1 Proposed Built Form with Landscaping and Building Outline	20mm	05-10-21
2.0	View 2 Original Photograph @ 20mm	20mm	05-10-21
2.1	View 2 Proposed Built Form	20mm	05-10-21
2.2	View 2 Proposed Built Form with Landscaping	20mm	05-10-21
2.3	View 2 Proposed Built Form with Landscaping and Building Outline	20mm	05-10-21
3.0	View 3 Original Photograph @ 20mm	20mm	05-10-21
3.1	View 3 Proposed Built Form	20mm	05-10-21
3.2	View 3 Proposed Built Form with Landscaping	20mm	05-10-21
3.3	View 3 Proposed Built Form with Landscaping and Building Outline	20mm	05-10-21
4.0	View 4 Original Photograph @ 20mm	20mm	05-10-21
4.1	View 4 Proposed Built Form	20mm	05-10-21
4.2	View 4 Proposed Built Form with Landscaping	20mm	05-10-21
4.3	View 4 Proposed Built Form with Landscaping and Building Outline	20mm	05-10-21
5.0	View 5 Simulated Image @ 20mm with Landscaping	20mm	05-10-21

4.0 INITIAL INFORMATION

4.1 Others who assisted in the preparation of the Visual Amenity Evidence

4.1.1 Orbit Solutions Team: David Fardon (B. Applied Science (Photography), 3D Artist)

Zoe Rolfe (Project Manager)

4.1.2 Architect: Orbit Solutions Pty Ltd

4.1.3 Landscape Architect: CDA Design Group Pty Ltd

4.1.4 Surveyor: Survey4D Pty Ltd

4.1.5 Photographer: David Rosendale Photography

4.2 Field Works

- 4.2.1 On 26 July 2021 I attended the site to undertake the field work. This included direction of photography and survey works.
- 4.2.2 Configured data points and general survey feature points were collected by Eden Fellows of Survey4D Pty Ltd that day.
- 4.2.3 Photography was undertaken at a height of 1.65m above ground level.
- 4.2.4 It is important to understand that the accuracy of the representation in a photomontage is based on the quality of the information that is collected at the time that the initial photograph is taken and that this information is correctly correlated with the spatial data relied upon in the documentation of the Proposed Development.
- 4.2.5 Orbit have developed a procedure that is replicated each time through a quality assured process that has been interrogated through cross examination in various Planning Tribunals and Panels. Orbit's process undertakes Industry Best Practice in the collection of verified data and configuration of all utilized data sets. A decision maker's ability to rely on the information that is being presented relies on an unbiased, fair and reasonable representation of the proposal.
- 4.2.6 I understand that it is our obligation to represent the proposal in the photographic context without manipulating or altering either the original or the simulated views. I am satisfied that has been achieved and the proposal is accurately represented in the montages.

4.3 Architectural Information

- 4.3.1 Orbit Solutions referenced the following information provided by the architect;

Dwg No.	Rev	Drawing Title	Type	Date
-	-	A21002 83-85 Blakeley Road, Castlemaine VCAT	3DS	14-09-21
TP0001	-	COVERSHEET	PDF	01-09-21
TP1001	-	SITE PHOTOS	PDF	01-09-21
TP1002	-	LOCATION PLAN	PDF	01-09-21
TP1003	-	SITE ANALYSIS	PDF	01-09-21
TP1004	-	DESIGN RESPONSE	PDF	01-09-21
TP2001	-	SITE PLAN EXISTING	PDF	01-09-21
TP2002	-	DEMOLITION & TPZ	PDF	01-09-21
TP2003	-	SITE PLAN PROPOSED	PDF	01-09-21
TP2004	-	GROUND FLOOR PLAN	PDF	01-09-21
TP2005	-	ROOF PLAN	PDF	01-09-21
TP3001	-	ELEVATIONS	PDF	01-09-21
TP4001	-	SITE SECTIONS	PDF	01-09-21
TP6001	-	EXISTING SURVEY	PDF	01-09-21

4.4 Landscape Information

- 4.4.1 Orbit Solutions referenced the following information provided by the landscape architect;

Dwg No.	Rev	Drawing Title / File Name	Type	Date
TP01_	VCAT	Landscape Plan – Place of Worship Planning Unit	PDF	04-10-21

4.5 Survey Information

- 4.5.1 Site survey information was utilised from CAD material supplied by the Surveyor.
- 4.5.2 Further detail of the survey data is available in Appendix 1.

4.6 Photography

- 4.6.1 Direction was provided to the Photographer in relation to the set-up of the photography. The constraints that determined the final selection included the physical elements of the built form, vegetation and topography as well as consideration of general issues such as travel paths and primary viewpoint.
- 4.6.2 The intention of the compositions is to provide sufficient contextual information to represent the impact of the proposal in its wider context. The photographs were taken with the digital equivalent of a 20mm SLR lens. The choice of the lens is consistent with evidence presented and accepted in many other VCAT submissions. This selection of lens does not create discernible barrel distortion and as such is suitable for representing the view of the proposal and the context in which it sits. Each photograph is taken at a standard eye height of 1650mm height with a 20mm lens above ground level at the camera position. The camera was mounted upon a tripod and spirit levels were taken to ensure a level target. The camera is a Canon EOS 5DSR 50.6MP Full Frame Digital Camera using a Sigma 20mm F/1.4 DG HSM Art lens.
- 4.6.3 The base photo utilises Adobe Photoshop CC tools to enhance clarity and acuity. Standard post production techniques are used, such as adjustments to brightness, contrast, exposure, levels, curves, temperature, highlights, dehazing and sharpness. Unless otherwise noted, no transformation of the image is undertaken that would change or alter the content or composition of the context.

4.7 Digital Model

- 4.7.1 The built form 3D base model was modelled by Orbit Solutions in ArchiCAD 24. For the purpose of the align-view photomontages, it was converted to 3DS MAX 2021.
- 4.7.2 Landscape models represent 80% maturity heights in accordance with any provided planting schedule and/or additional instructions. Reference has been made to any schedules provided for size and visual representation. Regard is given to the physical constraints of the context for each instance. Landscape assets are generally accessed from a stock library and are consistent with other evidence that has been presented in other matters. Vegetation is represented with summer canopy independent of the date the photo. Software utilised to depict each landscape digital stock asset: Archmodels - Evermotion, 3D Mentor, Xfrog, Speed Tree, iToo Forest Pack, Exlevel GrowFX.
- 4.7.3 Geometry, materials and Lighting effects are representative of real world conditions. Orbit Solutions Pty Ltd is a professional architectural and visualization studio with over twenty years of experience creating accurate and coordinated architectural simulations.

5.0 PROCESS FOR ALIGN-VIEW PHOTOMONTAGE

5.1 How the Views were Chosen

- 5.1.1 The view locations were chosen because they are made relevant by the grounds of appeal and the planning scheme.
- 5.1.2 In my opinion, the views fairly present representational views to the subject site and allow an assessment of the visual impact that would be possibly affected by the Proposed Development. These photomontages provide a comparative contextual assessment of the proposed site coverage, setback, height, massing, articulation, material palette and associated visual elements that fairly and broadly represent the visual bulk in relation to the neighbourhood context.

5.2 Align-View Camera Match

- 5.2.1 The function of creating the camera match utilises the suite of tools contained in the proprietary software package and can therefore be reproduced and as such is scientifically provable.

5.3 3DS MAX 2021 Align-View Technology

- 5.3.1 An algorithm calculates the position of the viewpoint and correlates this position with that of the camera settings used to take the photograph. Measured data points referenced from the data set provided by the Surveyor are entered and the software calculates the rendered image and positions it accurately within the surveyed photo context. The position of the camera is determined within the software once the selected surveyed points are configured, providing an optimal camera match within the software. These AHD levels and AMG positions are directly correlated to the Cartesian Coordinate system as is the architectural model of the Proposed Development. The interpolation of the data point coordinates provides the system with the correlated position (x, y, z coordinates) and the matched lens settings for the camera.
- 5.3.2 The advantage of this system over the use of standard feature survey data is apparent when considering that the survey positions from a feature survey identify and record data for elements that vary over a distance such as a gutter, ridge line, 'top of wall', 'corner of chimney', 'top of telegraph pole' and are translated through annotation into averaged geometry. The potential for compound error in this approach gives rise to errors in the matching when adopting this type of approach. Further, it is often the case when using this approach that the software fails to interpolate the data entered in a way that gives consistent feedback with the recorded camera lens focal length or the camera position. In this respect, other approaches that do not employ configured data sets in the preparation of the photomontages are subject to a greater likelihood of error.
- 5.3.3 Additionally, the system Orbit Solutions utilises reduces that degree of error considerably. The software places a simulated camera in the location that it calculates the photo has been taken from. By checking that this position correlates with the nominated position of the camera set up on site it can be confirmed that the software has successfully interpolated and subsequently matched the simulated view with the photographed view.

5.4 Photomontage Process

5.4.1 Adobe Photoshop CS6 was used to composite the 3D rendered image with the original photograph. There is no distortion of the original photographic image or that of the computer rendered image. White / grey hatch may be shown where existing elements are to be removed / demolished and no proposed elements conceal existing elements that would be revealed.

5.5 Photomontage Representation

5.5.1 Photomontages have been prepared at 20mm equivalent focal lengths. The presentation of these on A3 layouts provides a contextual setting with the view cone representing an approximate 84° ARC on the horizontal plane.

5.5.2 All care and effort has been made to represent the development's scale and mass that would be evident if the proposal were to be built.

5.5.3 It is my opinion that the photomontages do represent the proposal.

5.5.4 In utilising a photomontage to assess the impact of a proposal in its context, it is important that the composition allows the viewer to rely on the accuracy of the information presented.

5.6 Simulated View Representation

5.6.1 A simulated view has been prepared at a 20mm equivalent focal length. The presentation of this on A3 layouts provides a contextual setting with the view cone representing an approximate 84° ARC on the horizontal plane.

5.6.2 Instructions for the location of the simulated view came from Chris Taylor (Planning & Property Partners Pty Ltd) for the purpose of representing a view from Blakely Road demonstrating the setback of the proposed building in the proposed landscape setting. Further, the view shows the arrangement of the proposed car parking with the main allocation to the furthestmost western end of the site and the proposed overflow allocation to be used intermittently to the northern end of the site so that all proposed works are located in areas unencumbered by overlays that might otherwise be effected.

5.6.3 Model geometry and materials are consistent with the methodology employed for the Align-View Photomontages and as described above.

5.6.4 All care and effort has been made to represent the development's scale and mass as well as the activation of the proposed environment that would be evident if the proposal were to be built.

5.6.5 It is my opinion that the simulated view does represent the proposal.

6.0 FINAL REPRESENTATION

6.1 Visual Amenity Evidence

6.1.1 All care and effort has been made to represent the development's scale and mass that would be evident if the proposal were to be built.

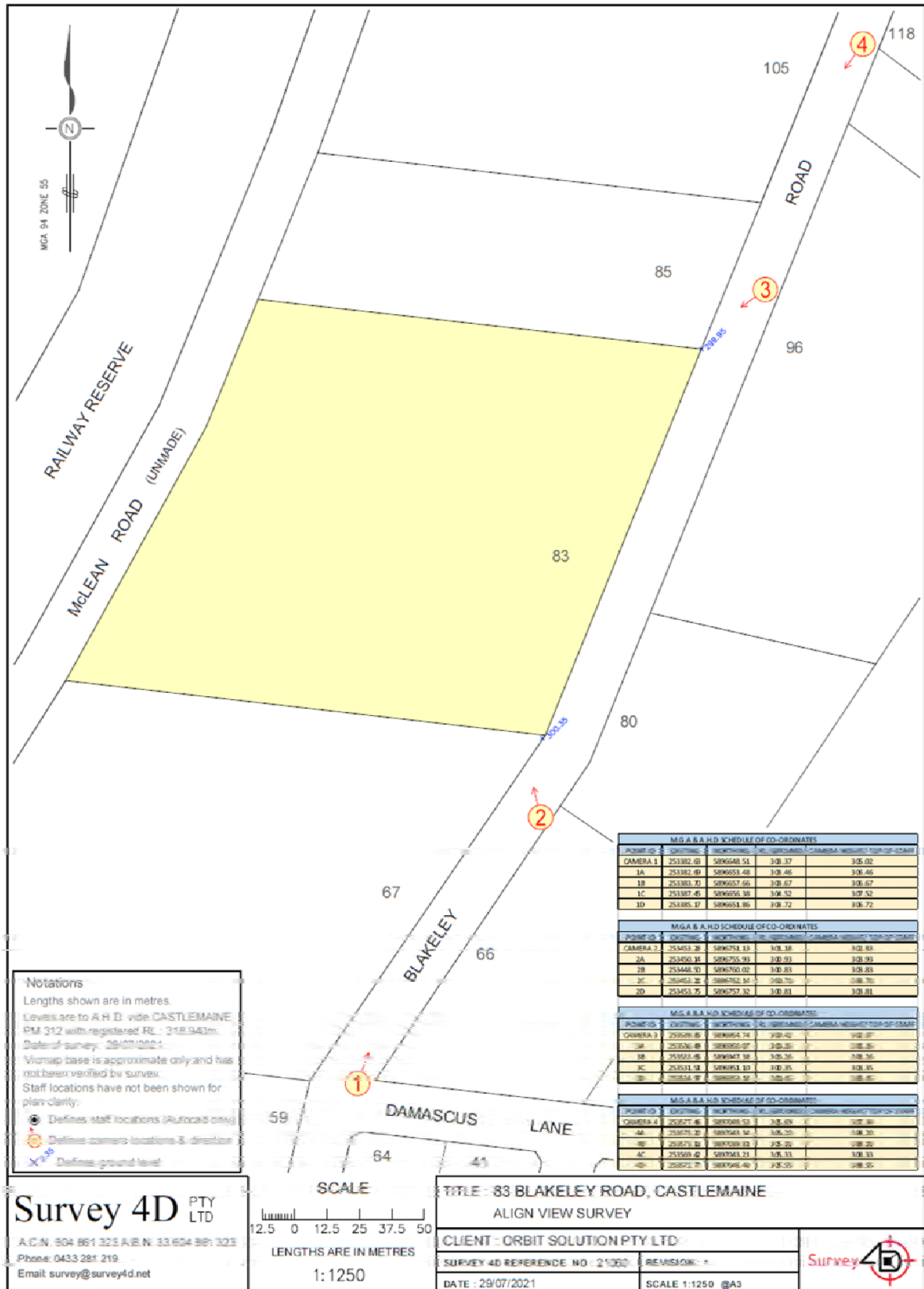
6.1.2 I am of the opinion that the visual amenity evidence that I am submitting accurately represent the proposal.

6.1.3 This visual amenity evidence is consistent with the representation of this type of evidence produced by Orbit Solutions Pty Ltd. While continued improvement in technology sees the


level of photo-realism continue to improve, the important issues relating to the accuracy of size, scale and position remain dependable.

7.0 APPENDICES

7.1 Appendix 1 – Survey Data



7.2 Appendix 2 – Photo Data



D A V I D
R O S E N D A L E
P H O T O G R A P H Y

David Rosendale
Photographer
+61 (0)417 375 614

Brazil North Melbourne
112 Langford Street
North Melbourne 3051
Victoria Australia

info@davidrosendale.com.au
davidrosendale.com
ABN 59 436 807 645

Contextual Views: 83 Blakeley Rd_Castlemaine VIC

<i>Position</i>	<i>Approx Location</i>	<i>Lens</i>	<i>Exposure Time</i>	<i>Camera Height</i>
Position 1:	North east corner of intersection at Blakely Rd & Damascus Lane, on road, facing approx 34 Degrees North East to Site	20mm	11:06am EST 0n 26/07/2021	1650 mm
Position 2:	Southern Shoulder of Northern cossver/entrance to 66 Balkely Rd (Castlemaine Church of Christ) facing approx 335 Degrees North to Site	20mm	11:21am EST 0n 26/07/2021	1650 mm
Position 3:	96 Blakeley Rd on crossover, facing approx 265 Degrees West to Site	20mm	11:34am EST 0n 26/07/2021	1650 mm
Position 4:	118 Blakely Rd on crossover, facing approx 204 Degrees South West to Site	20mm	11:54am EST 0n 26/07/2021	1650 mm

All Images Captured on Canon EOS 5DSR, 50.6 MGPXL Full Frame Digital Camera.
 Position 1 - 4 Taken on Sigma 20mm F/1.4 DG HSM Art lens (For Canon)

Legend: EDST = Eastern Daylight Savings Time
 EST = Eastern Standard Time

7.3 Appendix 3 – Curriculum Vitae

CHRISTOPHER GOSS

BArch, BEnvDes, Registered Architect
(Victoria)

Name and Professional Address

Christopher David Goss
Director
Orbit Solutions Pty Ltd
PO Box 736, Port Melbourne, VIC 3207

Qualifications

Registered Architect (ARBV 16399)
Bachelor of Architecture
Bachelor of Environmental Design

Membership

Victorian Planning Environmental Law
Association (Fellow)
Australian Institute of Architects (A+
Member)

Experience

Since graduating from the school of Architecture, Department of Architecture and Engineering, University of Tasmania in 1995 my architectural work has been involved in the IT field, design, documentation and visualization. Visual Amenity Expert Evidence is regularly provided to VCAT and Planning Panels as well as other Authorities.

1999 – 2021: Founding Director of Orbit Solutions Pty Ltd

I am a Registered & Practicing Architect. At Orbit I am the Architectural Director and Visualization Creative Director, Expert Witness specializing in Visual Amenity Evidence. Project work includes; Residential, Multi-Unit, Apartments, Commercial, Hospitality and Institutional.

Previous offices and projects were undertaken in New South Wales, Queensland, Vienna and Abu Dhabi. Project work has also been undertaken in other countries including The United Arab Emirates, Malaysia, China, France, New Zealand. Work has also been undertaken in Victoria, Tasmania, New South Wales, Queensland, Western Australia, Northern Territory and the Australian Capital Territory.

Publications and seminars related to Visual Amenity Evidence have been delivered to the Victorian Planning and Environmental Law Association, the Victorian Civil Appeals Tribunal, The Australian Institute of Architects (Victorian Chapter), the Building Design Association of Victoria and the Urban Development Institute of Australia.

1997– 1999: Victorian Manager of Arkitech Building Simulation Systems

In this role I worked with architectural and building design practices in the implementation and instruction of ArchiCAD Software.

1996 I worked in Berlin Germany with Sebastian Wagner Architects.

1995 I Graduated with a Bachelor of Architecture from the Faculty of Architecture and Engineering at the University of Tasmania

1993 – 1995 I worked part time and during University Break for Glenn Smith Architects Pty Ltd. I also worked as a wilderness guide in the Western Tiers of Tasmania.

1993 I Graduated with a Bachelor of Environmental Design from the Faculty of Architecture and Engineering at the University of Tasmania

7.4 Appendix 4 – Images as Assessment Tools

7.4.1 Monoscopic images cannot truly represent the human eyes' stereoscopic view as we see in real life. The 'before' and 'after' images are an assessment tool used to address the relevant planning issues through the qualitative and quantitative representation.

7.4.2 The integrity of any comparison between a 'before' and an 'after' image is ensuring that consistency is maintained. The choice of a broad field of view allows the wider context to be represented when viewing the subject site within the composition. When the subject site is within the centre of the lens, where the curvature is at its flattest, there is negligible distortion.

Perceptual Constancies

7.4.3 Familiar objects that allow a viewer to compare the shape, size, colour or location of objects in context regardless of changes in angle of perspective, distance or lighting are known as Perceptual Constancies. These constancies tend to prevail through the dimensions of size, shape, brightness and colour as long as the viewer has the appropriate contextual cues. In the photomontage it is of primary importance that the layering of foreground, middle ground and background elements is accurately represented as the apparent distance of a proposal from the observer impacts on the apparent size and scale.

Choice of Lens Size

7.4.4 While it has been purported that the human eye is best represented by a 50mm SLR lens there is no substantiated reason to limit the assessment of visual amenity evidence to a photographic image captured in this format. Given consideration of the phenomena related to perceptual constancies it follows that the broader the context the better able the observer is to make an assessment of a proposals impact in its context.

7.4.5 It is only at the periphery of an image taken through a lens where curvature is more pronounced that distortion comes into play. People, armed with the experience of having viewed many photographic images over their lives and correlating these with real world experience, have the ability to use a photomontage as a visual assessment tool.

7.4.6 When undertaking an analysis of a vista over large distances the selection of a higher lens setting that provides a flatter image (one less affected by the curvature of the lens) is appropriate. In such cases a range of focal lengths ranging from 60mm to 90mm may be considered appropriate.

7.4.7 Other focal lengths may be considered. All cases should consider the capacity of the photograph of existing conditions to provide adequate context in to which a proposal can be located for visual assessment. Given that more distant elements take up less area of the visual field of view it goes that a higher focal length with a smaller view cone angle will provide adequate context and higher clarity of detail when reproduced.

Visual compatibility of development

7.4.8 Evaluation of the Visual Conditions are derived from the critical influences outlined below and with primary consideration of the Visual Character Units (VCU) in the field of view and secondary consideration to VCUs in the panoramic context and then broadly as experienced in each View.

- 7.4.9 **FORM**; The form is perceived by receptors as the distinguishable elements of the proposal and as such even when some elements are partially occluded from a receptor viewing position the similarity of each form is still understood as a whole because of the cognitive ability to recognize structure, logic and pattern.
- 7.4.10 **LINE**; As the human eye is attuned to the recognition of lines as a primary identifier, constructed linear elements can easily be discerned in contrast to the organic patterns and shapes of vegetation and the contours of geological forms. The Human eye has developed a capability to distinguish lines and can recognize a straight line as limited in length to 30' (minutes of angular measurement) when contrasted against other perceptual constancies present in recognisably distinct visual units. This phenomenon can be mitigated through an architectural response that 'frays the edges' of planes that might otherwise create more discernible lines.
- 7.4.11 **TEXTURE & COLOUR**; Colour and texture are closely related and in combination play a significant role in providing an appropriate built form response. The technical performance of materials as they relate to reflectivity, glare/bedazzlement and any changes that may occur over time as the material ages needs to be considered. The use of texture can also be used to break the visual continuity of linear elements and planes. Considering the ephemeral nature of lighting conditions that can occur the key considerations of lighting and colour relate to mitigation of visual and aesthetic aspects from relevant views.
- 7.4.12 **SCALE**; Scale assists the viewer to assess visual bulk, this is a direct correlation of height, footprint, articulation of form and mitigation through texture and colour. The appropriate scale of built form assists in mitigating the proposal's potential contrast to its context. Familiar objects that allow a viewer to compare the shape, size, colour or location of objects in context regardless of changes in angle of perspective, distance or lighting are known as Perceptual Constancies (see 7.4.3). These constancies tend to prevail through the dimensions of size, shape, brightness and colour as long as the viewer has the appropriate contextual cues, so mitigation strategies that relate specifically to dealing with the unique forms of a proposed development need to be addressed with consideration of how they affect visual perception of the overall form of the proposed works.
- 7.4.13 **SPATIAL CHARACTER**; We perceive and interpret an object in context through our interaction with it; both as a participant in and viewer of the spatial characteristics. Perceptual Realism considers the various ways we interpret an object in space, in their baseline application in a Visual Impact Assessment the purpose of considering this aspect is to raise awareness that our perceptions of an object is based on our personal experience, our comprehension (memory) of the context outside of the current view and our interpretation of the information through both the laws of optics and perceptual constancies. Spatiotemporal awareness assists the viewers comprehension of an object in space. Our understanding of distance is derived from the relative size, shape, scale and patterning phenomenon. We understand perspectives impact on diminishing size and that varying lighting levels impact acuity; accordingly, we adjust our interpretation on a varying spectrum as conditions change and we gain more information (input data). These spatial characteristics are the specific cues that provide the receptor inputs in that time and place.

Visual Amenity Evidence

VCAT Reference No. P409/2021

Revision:

-

Place of Worship 83 Blakeley Road, Castlemaine

Project #:

V21035

Prepared For:

The Trustee for Castlemaine Gospel Trust

Instructions Received From:

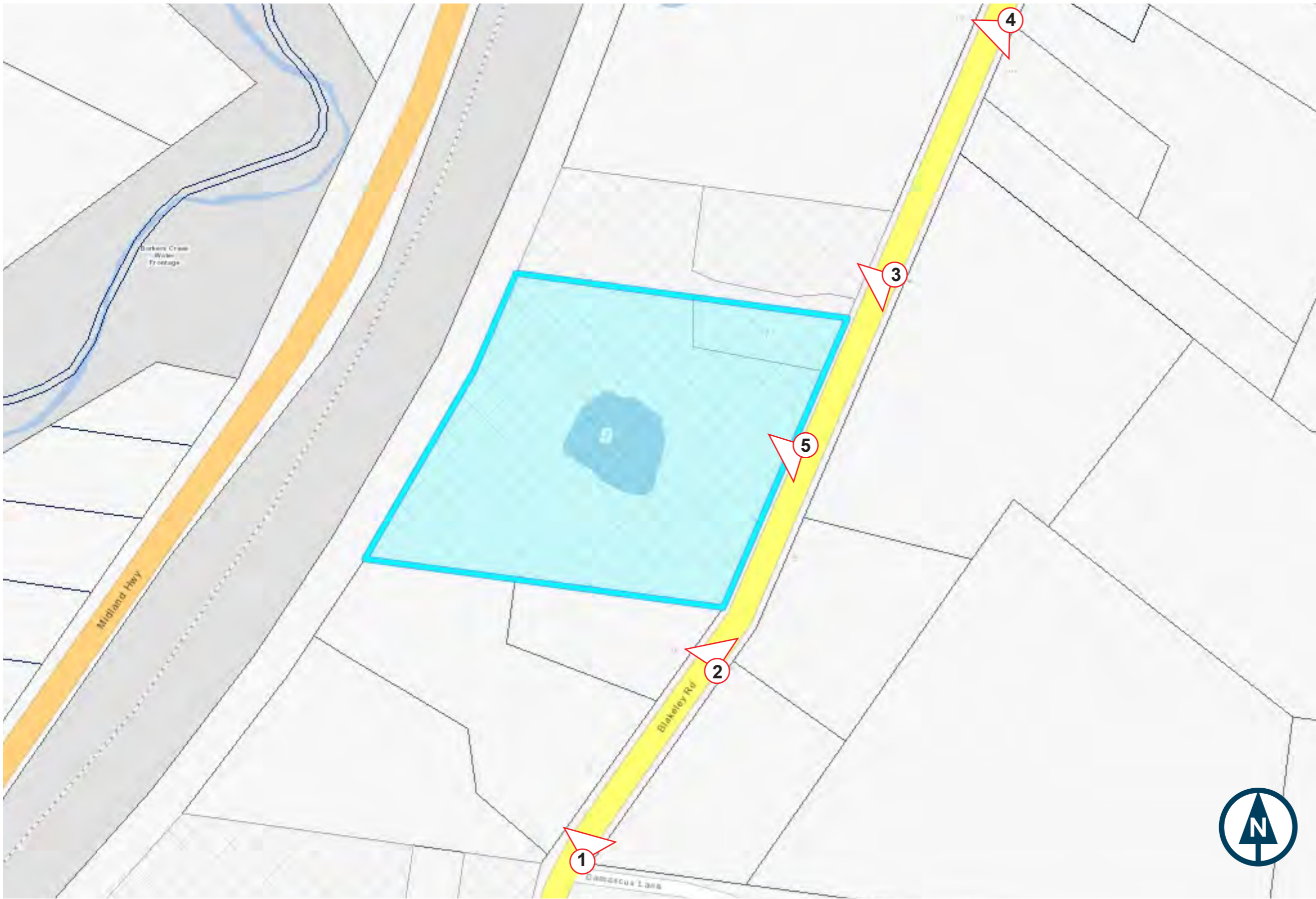
Planning & Property Partners Pty Ltd

Author:

Chris Goss
Registered Architect (ARBV)
BArch, BEnvDes

Date:

05/10/21



VCAT Ref:
P409/2021

At:
83 Blakeley Road,
Castlemaine VIC 3450

For:
The Trustee for
Castlemaine Gospel
Trust

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At:
83 Blakeley Road, Castlemaine VIC 3450

For:
The Trustee for Castlemaine Gospel Trust

Section:



Date:
05/10/21

Project Number:
V21035

Camera Locations

View cones are a representation of camera view only



Orbit Solutions Pty Ltd

🏠 PO BOX 736, Port Melbourne, VIC 3207

☎️ +61 3 9 690 4418

🌐 orbitsolutions.com.au

VCAT Ref:
P409/2021

At:
83 Blakeley Road,
Castlemaine VIC 3450

For:
The Trustee for
Castlemaine Gospel
Trust

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Section:

1.0

Date:
05/10/21

Project Number:
V21035

View 1 Original Photograph @20mm

At:
83 Blakeley Road, Castlemaine VIC 3450

For:
The Trustee for Castlemaine Gospel Trust





VCAT Ref:

P409/2021

At:

83 Blakeley Road,
Castlemaine VIC 3450

For:

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Castlemaine Gospel
Trust

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Section:

1.1

Date:

05/10/21

Project Number:

V21035

View 1 Proposed Built Form

At:

83 Blakeley Road, Castlemaine VIC 3450

For:

The Trustee for Castlemaine Gospel Trust





VCAT Ref:
P409/2021

At:
83 Blakeley Road,
Castlemaine VIC 3450

For:
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Section:

1.2

Date:
05/10/21

Project Number:
V21035

View 1 Proposed Built Form with Landscaping

At:
83 Blakeley Road, Castlemaine VIC 3450

For:
The Trustee for Castlemaine Gospel Trust





VCAT Ref:
P409/2021

At:
83 Blakeley Road,
Castlemaine VIC 3450

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Castlemaine Gospel
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Section:

1.3

Date:
05/10/21

Project Number:
V21035

View 1 Proposed Built Form with Landscaping and Building Outline

- Unoccluded silhouette of proposed built form (excludes vegetation)
- Silhouette of proposed built form that is occluded by existing built form (excludes vegetation)

At:
83 Blakeley Road, Castlemaine VIC 3450

For:
The Trustee for Castlemaine Gospel Trust



At:

For:



VCAT Ref:
P409/2021

At:
83 Blakeley Road,
Castlemaine VIC 3450

For:
The Trustee for
Castlemaine Gospel
Trust

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Section:

2.0

Date:
05/10/21

Project Number:
V21035

View 2 Original Photograph @20mm

At:
83 Blakeley Road, Castlemaine VIC 3450

For:
The Trustee for Castlemaine Gospel Trust





VCAT Ref:
P409/2021

At:
83 Blakeley Road,
Castlemaine VIC 3450

For:
The Trustee for
Castlemaine Gospel
Trust

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Section:

2.1

Date:

05/10/21

Project Number:

V21035

View 2 Proposed Built Form

At:
83 Blakeley Road, Castlemaine VIC 3450

For:
The Trustee for Castlemaine Gospel Trust



View cones are a representation of camera view only



VCAT Ref:
P409/2021

At:
83 Blakeley Road,
Castlemaine VIC 3450

For:
The Trustee for
Castlemaine Gospel
Trust

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Section:

2.2

Date:
05/10/21

Project Number:
V21035

View 2 Proposed Built Form with Landscaping

At:
83 Blakeley Road, Castlemaine VIC 3450

For:
The Trustee for Castlemaine Gospel Trust



View cones are a representation of camera view only



VCAT Ref:

P409/2021

At:

83 Blakeley Road,
Castlemaine VIC 3450

For:

The Trustee for
Castlemaine Gospel
Trust

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Section:

2.3

Date:

05/10/21

Project Number:

V21035

View 2 Proposed Built Form with Landscaping and Building Outline

- Unoccluded silhouette of proposed built form (excludes vegetation)
- - - Silhouette of proposed built form that is occluded by existing built form (excludes vegetation)

At:

83 Blakeley Road, Castlemaine VIC 3450

For:

The Trustee for Castlemaine Gospel Trust



View cones are a representation of camera view only



Orbit Solutions Pty Ltd

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VCAT Ref:
P409/2021

At:
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Castlemaine VIC 3450

For:
The Trustee for
Castlemaine Gospel
Trust

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Section:

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Date:
05/10/21

Project Number:
V21035

View 3 Original Photograph @20mm

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For:
The Trustee for Castlemaine Gospel Trust





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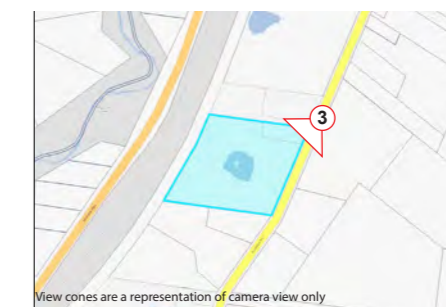
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View 3 Proposed Built Form with Landscaping

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Project Number:
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View 3 Proposed Built Form with Landscaping and Building Outline

- Unoccluded silhouette of proposed built form (excludes vegetation)
- - - Silhouette of proposed built form that is occluded by existing built form (excludes vegetation)

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View 4 Original Photograph @20mm

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For:
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Project Number:
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View 4 Proposed Built Form with Landscaping and Building Outline

- Unoccluded silhouette of proposed built form (excludes vegetation)
- Silhouette of proposed built form that is occluded by existing built form (excludes vegetation)

At:
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For:
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View 5 Simulated Image @ 20mm with Landscaping

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**83 Blakeley Rd,
Castlemaine**

Flora and Fauna
Assessment and Witness
Statement of Brett Lane

VCAT Reference No P409/2021
**Prepared for The Trustee of
Castlemaine Gospel Trust**

C/- Planning & Property
Partners Pty Ltd

September 2020
Report No. 21202.1 (1.1)



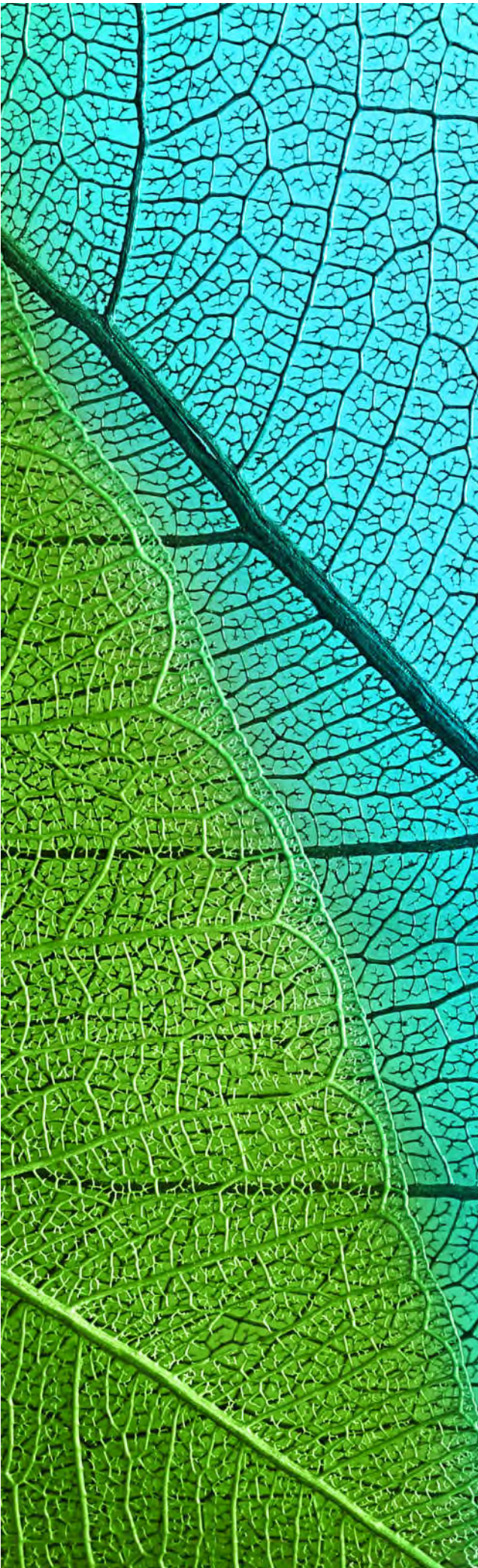
**Nature
Advisory**

(Formerly Brett Lane & Associates Pty Ltd)

5/61-63 Camberwell Road
Hawthorn East, VIC 3123
PO Box 337, Camberwell VIC 3124

(03) 9815 2111

www.natureadvisory.com.au



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1. Preface

1.1. Expert witness information

1.1.1. Name and address

Brett Alexander Lane
Brett Lane & Associates Pty Ltd
Suite 5, 61–63 Camberwell Road
Hawthorn East VIC 3123

1.1.2. Area of expertise

Brett Lane has extensive expertise in terrestrial ecology and related legislation and policies.

His qualifications and experience are summarised in Appendix 9.

1.1.3. Business relationship

Planning & Property Partners Pty Ltd, on behalf of The Trustee of Castlemaine Gospel Trust, engaged Nature Advisory to undertake a native vegetation assessment of land at 83 Blakely Rd in Castlemaine.

I was subsequently instructed by Planning & Property Partners Pty Ltd to prepare an updated vegetation assessment, review the findings of a previous report on the ecology of the site and to give expert evidence on ecological matters.

1.2. Information of other significant contributors

The names, addresses and areas of expertise of other significant contributors to this statement are presented in Table 1.

Table 1: Details of other significant contributors

Name of contributor	Address	Area of Relevant Expertise	Location of summary of qualifications and expertise
Arend Kwak	Nature Advisory Pty Ltd Suite 5, 61-63 Camberwell Road Hawthorn East, VIC 3123	Botanist, DELWP-Accredited VQA assessor	Appendix 9

1.3. Instructions

Nature Advisory Pty Ltd were instructed by Planning & Property Partners Pty Ltd to undertake a native vegetation assessment of a 2.578-hectare area of land at 83 Blakely Road in Castlemaine on behalf of The Trustee of Castlemaine Gospel Trust. The development of a Place of Worship is proposed for the study area. See Figure 1 outlining the study area, which also included Lot 1 to the north of the proposed Place of Worship.

This investigation was commissioned to provide information on the extent and condition of native vegetation in the study area to inform a permit application to remove native vegetation under Cl. 52.17 of the Mount Alexander Shire Planning Scheme according to the incorporated *Guidelines for the removal destruction and lopping of native vegetation* (DELWP 2017).

Specifically, the scope of the investigation included:

- A review of existing information on the flora, fauna and native vegetation of the study area, including:

- Abzeco (2020) *Biodiversity assessment report: 83 Blakeley Rd, Castlemaine*. Consultant's report prepared for The Planning Professionals.
- A site survey involving:
 - Assessment of fauna habitat conditions and the presence of indigenous fauna species as well as inspection of areas of affected native vegetation by Brett Lane; and
 - A vegetation assessment in accordance with the Guidelines by DELWP-certified native vegetation assessor, Arend Kwak
- Preparation of this expert witness statement.

1.4. Declaration

I have made all the inquiries that I believe are desirable and appropriate and no matters of significance which I regard as relevant have to my knowledge been withheld from the Tribunal.

Signed:

Brett Lane



Managing Director and Principal Consultant
Nature Advisory Pty Ltd
Suite 5, 61–63 Camberwell Road
Hawthorn East, VIC 3123

1st October 2021

2. Executive summary

Nature Advisory Pty Ltd undertook a native vegetation assessment of a 2.578-hectare area of private land at 83 Blakeley Road, Castlemaine, where a Place of Worship is to be constructed.

This report presents the information relevant to native vegetation on the property to accompany a planning permit application under Clause 52.17 of the Mount Alexander Shire Planning Scheme, in accordance with the *Guidelines for the removal, destruction or lopping of native vegetation* (DELWP 2017a), herein referred to as 'the Guidelines'.

The following native vegetation was recorded in the study area (excluding the cultural heritage management plan area):

- Two patches of native vegetation, totalling 0.412 hectares; and
- Three scattered trees (namely one large scattered tree and two small scattered trees).

The proponent proposed to remove the following vegetation:

- 0.027 hectares of native vegetation in patches (including 0 large trees in patches);
- One large scattered tree; and
- One small scattered tree.

The application site lies within Location 1 and includes one large scattered tree. As such, the proposal will be assessed under the **Intermediate** assessment pathway. This **would not** trigger a referral to DELWP.

The *Native Vegetation Removal* (NVR) report for this proposed removal will be provided before the VCAT case commences and will be based on the Scenario test report provided in Appendix 7. The table below summarises the compliance of the information in this report with the relevant application requirements of the Guidelines (DELWP 2017a).

Offsets required to compensate for the proposed removal of native vegetation from the study area are provided below.

- 0.036 general habitat units and must include the following offset attribute requirements:
 - Minimum strategic biodiversity value (SBV) of 0.416
 - One large tree.
 - Occur within the North Central CMA boundary or the Mount Alexander municipal district.

Under the Guidelines all offsets must be secured prior to the removal of native vegetation. The required offset is readily available on the state Native Vegetation credit Register (see Appendix 8).

The offset target for the current proposal will be achieved via a third-party offset.

An online search of the *Native Vegetation Credit Register* (NVCR) has shown that the required offset is currently available for purchase from a native vegetation credit owner (DELWP 2020e).

Application requirement		Response
1.	Information about the native vegetation to be removed.	Section 5.3, Section 5.4.2, Appendix 7
2.	Topographic and land information relating to the native vegetation to be removed.	Section 5.1

Application requirement		Response
3.	Recent, dated photographs of the native vegetation to be removed.	Appendix 5
4.	Details of any other native vegetation approved to be removed, or that was removed without the required approvals, on the same property or on contiguous land in the same ownership as the applicant, in the five-year period before the application for a permit is lodged.	N/A
5.	An avoid and minimise statement.	Section 5.4.1
6.	A copy of any Property Vegetation Plan contained within an agreement made pursuant to section 69 of the <i>Conservation, Forests and Lands Act 1987</i> that applies to the native vegetation to be removed.	N/A
7.	Where the removal of native vegetation is to create defensible space, a written statement explaining why the removal of native vegetation is necessary. This statement is not required when the creation of defensible space is in conjunction with an application under the Bushfire Management Overlay.	N/A
8.	If the application is under Clause 52.16, a statement that explains how the proposal responds to the Native Vegetation Precinct Plan considerations (at decision guideline 8).	N/A
9.	An offset statement providing evidence that an offset that meets the offset requirements for the native vegetation to be removed has been identified and can be secured in accordance with the Guidelines.	Section 5.4.6, Appendix 8

3. Introduction

The Trustee of Castlemaine Gospel Trust engaged Nature Advisory Pty Ltd to conduct a flora and fauna assessment for a 2.578 -hectare area of private land at 83 Blakeley Road, Castlemaine, where a Place of Worship is to be constructed.

This investigation was commissioned to provide information on the extent and condition of native vegetation in the study area according to Victoria's *Guidelines for the removal, destruction or lopping of native vegetation* (DELWP 2017a), herein referred to as 'the Guidelines'.

Specifically, the scope of the investigation included:

Existing information on the flora and native vegetation of the study area and surrounds was reviewed, and included:

- DELWP's *Native Vegetation Information Management system* (NVIM);
- DELWP's *NatureKit*; and
- Existing Abzecco assessment.
- A site survey was undertaken involving:
 - Characterisation and mapping of native vegetation on the site, as defined in Victoria's *Guidelines for the removal, destruction or lopping of native vegetation* (the 'Guidelines');
 - Assessment of native vegetation in accordance with the Guidelines, including habitat hectare assessment and/or scattered tree assessment;
 - Ecological assessment of the condition of the waterway vegetation and habitat and the impacts of the proposal on the ecological attributes of the waterway; and
 - Compilation of a flora species list for the site.
- This witness statement was prepared that includes the following:
 - Witness information and declaration;
 - A statement of the methods used and sources of information for the investigation, including any limitations, where applicable;
 - The results of the review of existing information and site survey, documenting the native vegetation on the site;
 - Peer review of the Abzecco assessment provided with the original planning permit application, including in relation to its methodologies and conclusions;
 - An assessment of the amended proposal, including any implications / requirements arising from the changes (including additional vegetation proposed to be removed);
 - The results of the waterway assessment and the potential impacts of the proposal on the ecological attributes of the waterway to accompany an application for works in a waterway. Biodiversity information to be provided to Water Technology Pty Ltd for the works in waterways permit;
 - A map of the site showing the results of the assessment based on ground truthing and aerial photographs obtained through *NearMap*;

- The extent of proposed native vegetation removal based on the original submitted development plans will be compared to amended development layout plans to be lodged with VCAT (to be provided by Planning & Property Partners Pty Ltd in MGA coordinates);
- A *Native Vegetation Removal* (NVR) report for the amended plans, identifying any native vegetation removal, offset requirements and assessment pathway for a permit;
- Discussion of the implications of the findings for the proposed use of the land, specifically addressing relevant legislative and policy requirements;
- Advice in relation to the restoration of the waterway which may be included in the final landscape concept plan; and
- Recommendations for mitigation and management strategies, as well as any further investigation required.

This report is divided into the following sections:

Section 3 describes the methods used for the assessment, definitions and the legislative background.

Section 4 presents the assessment results, proposed native vegetation removal and implications under the Guidelines.

This investigation was undertaken by a team from Nature Advisory comprising Brett Lane (Principal Consultant), Arend Kwak (Botanist) and Nhung Thi Hong Nguyen (GIS Analyst).

4. Definitions, methods and assessment process

4.1. Definitions

4.1.1. Study area

The study area for this investigation is defined as 83 Blakeley Road, Castlemaine.

4.1.2. Native vegetation

Native vegetation is currently defined in Clause 73.01 of all Victorian planning schemes as ‘plants that are indigenous to Victoria, including trees, shrubs, herbs and grasses’. The Guidelines (DELWP 2017a) further classify native vegetation as belonging to two categories:

- Patch; or
- Scattered tree.

The definitions of these categories are provided below, along with the prescribed DELWP methods to assess them. Further details on definitions of patches and scattered trees, as well as the native vegetation assessment approach required in the Guidelines are provided in Appendix 1.

Patch

A patch of native vegetation is either:

- An area of vegetation where at least 25 per cent of the total perennial understorey plant cover is native; or
- Any area with three or more native canopy trees¹ where the drip line² of each tree touches the drip line of at least one other tree, forming a continuous canopy; or
- Any mapped wetland included in the *Current wetlands map*, available at *MapShareVic* (DELWP 2020b).

Patch condition is assessed using the habitat hectare method (Parkes *et al.* 2003; DSE 2004b) whereby components of the patch (e.g. tree canopy, understorey and ground cover) are assessed against an EVC benchmark. The score effectively measures the percentage resemblance of the vegetation to its original condition.

The *Native Vegetation Information Management* (NVIM) system (DELWP 2020c) provides modelled condition scores for native vegetation to be used in certain circumstances.

Scattered tree

A scattered tree is:

- A native canopy tree that does not form part of a patch.

Scattered trees are counted and mapped, the species identified and their circumference at 1.3 m above the ground is recorded.

¹ A native canopy tree is a mature tree (i.e. it is able to flower) that is greater than 3 metres in height and is normally found in the upper layer of the relevant vegetation type.

² The drip line is the outermost boundary of a tree canopy (leaves and/or branches) where the water drips on to the ground.

4.2. Field methods

The field assessment was conducted on the 23rd September, 2021. During this assessment, the study area was surveyed on foot by both ecologists.

Sites in the study area found to support native vegetation were mapped through a combination of aerial photograph interpretation and ground-truthing using a hand-held GPS (accurate to approximately five metres).

Whilst this assessment was not designed to provide an exhaustive inventory of flora species in the study area, all efforts were made to schedule the site assessment at a time of year when the majority of native vegetation life forms are likely to be present. The spring timing of the survey and condition of vegetation was considered suitable to ascertain the extent and condition of native vegetation.

4.3. Planning permit and application requirements

State planning provisions are established under the *Victorian Planning and Environment Act 1987*. Clause 52.17 of all Victorian Planning Schemes states that:

A permit is required to remove, destroy or lop native vegetation, including dead native vegetation.

A permit is not required if:

- If an exemption in Table 52.17-7 specifically states that that a permit is not required.
- If a native vegetation precinct plan corresponding to the land is incorporated into the planning scheme and listed in the schedule to Clause 52.16.
- If the native vegetation is specified in a schedule to Clause 52.17.

4.3.1. Exemptions

Exemptions listed in Table 52.17-7 relevant to the study area include:

- *Planted vegetation*: Native vegetation that is to be removed, destroyed or lopped that was either planted or grown as a result of direct seeding. This exemption does not apply to native vegetation planted or managed with public funding for the purpose of land protection or enhancing biodiversity.
- *Regrowth*: Native vegetation that is to be removed, destroyed or lopped that has naturally established or regenerated on land lawfully cleared of naturally established native vegetation, and is:
 - Less than 10 years old; or
 - Austral Bracken (*Pteridium esculentum*); or
 - Within the boundary of a timber production plantation, as indicated on a Plantation Development Notice or other documented record, and has established after the plantation; or
 - Less than ten years old at the time of a property vegetation plan being signed by the Secretary to the Department of Environment, Land, Water and Planning (as constituted under Part 2 of the *Conservation, Forests and Lands Act 1987*), and is shown on that plan as being 'certified regrowth'; and on land that is to be used or maintained for cultivation or pasture during the term of that plan.

This exemption does not apply to land where native vegetation has been destroyed or otherwise damaged as a result of flood, fire or other natural disaster.

4.3.2. Application requirements

Any application to remove, destroy or lop native vegetation must comply with the application requirements specified in the Guidelines (DELWP 2017a).

When assessing an application, Responsible Authorities are also obligated to refer to Clause 12.01-2 (Native vegetation management) in the Planning Scheme which in addition to the Guidelines, refers to the following:

- *Assessor's handbook – applications to remove, destroy or lop native vegetation* (DELWP 2018a).
- Statewide biodiversity information maintained by DELWP.

The application of the Guidelines (DELWP 2017a) is explained further in Appendix 1.

4.3.3. Referral to DELWP

Clause 66.02-2 of the Planning Scheme determines the role of DELWP in the assessment of native vegetation removal permit applications. If an application is referred, DELWP may make certain recommendations to the responsible authority in relation to the permit application.

Any application to remove, destroy or lop native vegetation must be referred to DELWP if:

- The impacts to native vegetation are in the *Detailed* assessment pathway;
- A property vegetation plan applies to the site; or
- The native vegetation is on Crown land which is occupied or managed by the responsible authority.

5. Existing information and results

5.1. Site description, zoning and overlays

The study area for this investigation (Figure 1) consists of approximately 2.578 hectares of private land located at 83 Blakeley Road, Castlemaine, about 2 kilometres north of the Castlemaine town centre. The site is bordered by Blakeley Road to the west, a railway line and the Midland Highway to the east, semi-rural dwellings to the north and an automotive repair shop and semi-rural dwellings to the south.

The study area supports loamy clay soil, with the landscape gently declining towards a central drainage line that runs east-west along the site and empties into a small dam.

The land is likely to have historically been part of the Castlemaine gold fields and more recently served as grazing land for livestock. This is indicated by the uneven soil suggesting past diggings and the presence of a watering dam on-site, as well as the clearing that has historically occurred. Surrounding land predominantly supports livestock grazing, and semi-rural dwellings.

Vegetation in the eastern half of the study area consists of open clearings of exotic pasture species, predominantly composed of Onion Grass, Bulbous Meadow-grass, Capetown Grass and Big Heron's-bill. Scalping of topsoil was found to have occurred in this section of the site, leading to large areas of disturbance. The western portion of the site consists of native treed vegetation with a shrubby understory. Canopy species include River Red-gum, Grey Box and Yellow Gum. The native understory was composed of species including Sifton Bush and Gold-dust Wattle, overlying Weeping Grass, Wallaby Grass, Sheep's Burr and Slender Dock. The western portion of the site also exhibited significant weed cover, with Early Black-wattle, Gorse and Blackberry being particularly prevalent. A drainage channel also runs east-west across the site and empties into a small dam, which was fringed by Native Rush and Rush Sedge, as well as a significant proportion of River Red-gum recruits. Weeds such as Gorse and Blackberry are abundant along the drainage channel and the eastern edge of the dam.

The study area lies within the Goldfields bioregion and falls within the North Central catchment and Mount Alexander local government area. It is currently zoned Low Density Residential (LDRZ).

No overlays relevant to this investigation cover the study area.

5.2. Review of the Abzeco Pty Ltd Flora and Fauna Assessment

The table below provides comment on key elements of the Abzeco (2020) report.

Matter	Comment
<p>Was there accurate and complete consideration of the regulatory controls?</p> <ul style="list-style-type: none"> - EPBC Act - FFG Act - Cl. 52.17 (and the Guidelines) 	<p>EPBC Act</p> <p>The Abzeco report accurately demonstrates that no EPBC-listed species or communities were present on-site, through consideration of historical records and an on-site assessment. I concur with their conclusion that a Referral under the EPBC Act is not being required.</p> <p>FFG Act</p> <p>The Abzeco report accurately demonstrates that no FFG Act-listed species were present on-site, through consideration of historical records and an on-site assessment. The land is also correctly identified as</p>

Matter	Comment
	<p>private land, which removes the need for any permit under the FFG Act.</p> <p>Cl. 52.17 (and the Guidelines)</p> <p>Native vegetation was correctly identified as being an area of vegetation where at least 25% of the total perennial understory plant cover is native; or any area where at least three or more native canopy trees exhibit touching driplines with at least one other tree; or any DELWP mapped wetland. Scattered trees were correctly identified as being a native canopy tree that does not form part of a patch. Therefore, vegetation was assessed in accordance with the Guidelines.</p> <p>The avoid and minimise principle has been adhered to through the provision of an avoid and minimise statement.</p> <p>The requirement for an offset statement was also satisfied with an offset strategy and associated search using the Native Vegetation Offset Register (NVOR) provided.</p> <p>The Abzeco report correctly identifies the need for a Basic assessment, based upon their on-site findings. Specifically, <0.5 hectares of native vegetation, with no large trees, was recorded in the area falling under the Location 1 category. All relevant requirements in a Basic assessment were met in the Abzeco report.</p>
<p>Were sources appropriate and the review of exiting information on threatened flora and fauna accurate?</p>	<p>The Victorian Biodiversity Atlas (VBA) and Protected Matters Search Tool (PMST) were used to determine potential occurrences of threatened flora and fauna on-site. This was utilised in conjunction with a site visit, providing direct observations of potential habitat. This process is standard practice for assessing the occurrence or potential occurrence of threatened flora and fauna. An updated search of these sources was not warranted as information in the search provide is still up to date.</p> <p>Records indicated that the nearby occurrence of significant flora and fauna is concentrated in more intact habitat in the Walmer State Forest and Kalimna Park. This is an accurate explanation of nearby occurrences not being related to the immediate study area. These records are typically pre-2000, which is also not considered recent. Therefore, the likelihood of occurrence for threatened flora and fauna was accurately considered unlikely on these grounds.</p>

Matter	Comment
<p>Did adequate field assessment to ascertain threatened flora and fauna likelihood of occurrence occur?</p>	<p>The autumn-timing of field assessment is not considered ideal to detect all potential listed species. However, the degraded nature of the site and scalping that has occurred makes it unlikely that these species would have occurred on-site. There are no prior records of these species on-site. The conclusions of the threatened flora assessment are therefore considered accurate.</p> <p>The potential for the EPBC-listed communities Grey Box (<i>Eucalyptus macrocarpa</i>) Grassy Woodlands and Derived Native Grasslands of South Eastern Australia; and White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Grassland, were accurately assessed in the Abzeco report. While canopy species were present for these communities, the extent of these canopy species and their understory values are accurately assessed as not consistent with condition thresholds used for identification of community presence.</p> <p>Threatened fauna field assessments may have been slightly impacted by the seasonal timing. Of note are field assessments which consider the Swift Parrot. This species may utilise Yellow Gums on-site, when in flower in spring. This food source would not have been present during the field assessment, therefore limiting the likelihood of occurrence for Swift Parrots. However, the Abzeco report correctly indicates that the site is unlikely to serve as limiting or critical habitat for the species, due to its limited extent and its sub-optimal quality.</p> <p>The lack of hollow-bearing trees in the immediate study site and lack of structural complexity in the west of the site, as well as the scalped understory, is correctly identified as being sub-optimal for the threatened species with potential to occur. The lack of relevant habitat niches is also considered accurate on these grounds. I concur with their conclusion that the site does not support any habitat of value for any threatened fauna species.</p>
<p>Was mapping and VQA of native vegetation complete and accurate?</p>	<p>The major point of difference with the Abzeco report native vegetation mapping and VQA is the identification of a patch of Box Ironbark (EVC 61) in the south-west corner of the site in the Nature Advisory assessment. This patch was not mapped by Abzeco. However, the mapping of this patch was due to amended development plans and is therefore not indicative of an inaccuracy in the Abzeco report.</p>

Matter	Comment
	<p>Rather, it reflects a change in the extent and location of the proposed development.</p> <p>The DBH of scattered trees recorded does differ slightly between the Nature Advisory and Abzeco reports. This has contributed to the identification of a large scattered tree by us, which was identified as a small scattered tree in the Abzeco report. This classification was based upon a difference of 2cm, which is not considered a significant inconsistency and has likely resulted from the inherent subjectivity and variation of native vegetation measurements completed by to different assessors.</p> <p>The mapping and VQA of native vegetation is otherwise considered consistent between the Abzeco and Nature Advisory surveys.</p>
<p>Was there an accurate assessment of the extent of native vegetation removal?</p>	<p>The removal of one small scattered Grey Box was an accurate assessment of the proposed development plans, at the time of the Abzeco assessment. Amendments to development plans have contributed to an impact on a patch of Box Ironbark Forest (EVC 61), and a large tree which is absent from the Abzeco report. However, based upon the development plans at the time of the Abzeco assessment, this additional removal is beyond the scope of their assessment.</p>
<p>Does the report provide all ‘Application Requirements’ – as per p. 21-23 of the Guidelines, based on an accurate decision on the assessment pathway?</p>	<p>The assessment pathway was correctly identified as being Basic, given the site falling under Location 1, impacts to native vegetation less than 0.5 hectares and no large trees impacted.</p> <p>The relevant application requirements for the Basic assessment pathway are provided in the Abzeco report. These include:</p> <ul style="list-style-type: none"> - Information about the native vegetation to be removed. - Topographic and land information relating to the native vegetation to be removed. - Recent, dated photographs of the native vegetation to be removed. - An avoid and minimise statement. - An offset statement providing evidence that an offset that meets the offset requirements for the native vegetation to be removed has been identified and can be secured in accordance with the Guidelines.
<p>Have limitations of the investigation been addressed adequately and have these affected the veracity of the findings?</p>	<p>The late-autumn timing of the Abzeco field assessment is considered sub-optimal, as many flora species are not flowering at this time and are therefore less easily detected and accurately</p>

Matter	Comment
	<p>identified. However, it has been noted in the Abzeco report that the wet summer of 2019-2020 contributed to prolonged growth periods and seed retention in flora. It is considered that this sufficiently addresses the seasonal limitations. This is made further evident by a minor difference of four additional flora species identified in the Nature Advisory assessment, which was conducted in optimal spring conditions.</p> <p>The most significant weed species on-site, as well as the dominant native flora that is to be impacted by works, is also considered readily identifiable regardless of the seasonal timing.</p>

5.3. Native vegetation

5.3.1. Species recorded

During our field assessment, 43 plant species were recorded. Of these, 18 (42%) were indigenous and 25 (58%) were introduced or non-indigenous native in origin (Appendix 4).

5.3.2. Patches of native vegetation

Pre-European EVC mapping (DELWP 2020a) indicated that the study area and surrounds would have supported Box Ironbark Forest (EVC 61) and a mosaic of Alluvial Terraces Herb-rich Woodland/Creekline Grassy Woodland (EVC 81, a mosaic of EVC 67 and EVC 68) prior to European settlement based on modelling of factors including rainfall, aspect, soils and remaining vegetation.

Evidence on site, including floristic composition and soil characteristics, suggests that Box Ironbark Forest (EVC 61) and a mosaic of Alluvial Terraces Herb-rich Woodland/Creekline Grassy Woodland (EVC 81) are present in the study area (Figure 1). A description of these EVCs is provided within the EVC benchmarks in Appendix 6.

One patch (referred to herein as a habitat zone) comprising the abovementioned Box Ironbark Forest (EVC 61) was identified in the study area (Table 1). This totalled an area of 0.111 hectares of native vegetation in patches and included two large trees.

Table 1: Description of habitat zones in the study area

Habitat Zone	EVC	Description
A	Box Ironbark Forest (EVC 61)	Characterized by a canopy of Grey Box and Yellow Gum in fair health (60%), overlying a sparse understory. Two large trees, one Yellow Gum and one dead eucalypt, were also present. The native understory included species such as Wallaby Grass, Slender Fireweed, Grey Everlasting and Gold-dust Wattle. Weed cover was low (5%) and notably included Annual Veldt Grass, Water-button, Flatweed and Ribwort. Bryophyte and lichen cover was moderate (5%), while soil crust cover was low (5%). Bare ground cover was also low (2%). Organic litter was primarily native in origin and moderate in cover (15%). Logs were absent.

The habitat hectare assessment results for these habitat zones are provided in Table 2. More detailed habitat scoring results are presented in Appendix 2. Details of large trees in patches are provided in Appendix 3.









Table 2: Summary of habitat hectare assessment results

Habitat Zone	EVC	Area (ha)	Condition score (out of 100)	No. of Large Trees in HZ
A	Box Ironbark Forest (EVC 61)	0.111	41	2
Total		0.111		2

The balance of the two properties is either cleared of native vegetation (i.e. the north-eastern portion of the study area) or supports a mosaic of patches of EVC's (i.e. the western part of the study area). The western part of the study area lies in an area of cultural heritage sensitivity from which development has been excluded and no changes to land use or detrimental impacts on native vegetation are expected in native vegetation outside areas assessed as being removed for the current development.

Figure 1: Study area and native vegetation

Project: 83 Blakeley Road,
Castlemaine
Client: Planning and Property
Partners Pty Ltd
Date: 4/10/2021

-  Study
-  Large tree in patch
-  Large scattered
-  Small scattered
-  Tree Protection
- Native
 -  Alluvial Terraces Herb-rich Woodland/Creekline Grassy Woodland (EVC 81)
 -  Box Ironbark Forest (EVC 61)
 -  Native vegetation not assessed



N



Metres
0 10



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03 9815 2111 - info@natureadvisory.com.au

5.3.3. Waterway condition

The waterway on-site consisted of a narrow ephemeral drainage channel running east-west and feeding into a small dam. The drainage channel was occupied by a dense infestation of Blackberry and Gorse, as well as considerable growth of Native Rush (Photo 1). Groundcover consisted of exotic pasture species and herbs tolerant to waterlogging. Onion Grass, Ribwort, Dock and Naked Crane's-bill were commonplace along the drainage channel.

It should be noted that being close to the roadside, the drainage channel may carry runoff from the road into the connected dam.



Photo 1: The drainage channel occupied by Gorse and Native Rush.

The dam was small and fringed by dense growth of both native and exotic flora on its eastern edge, while being more sparsely vegetated on its western edge (Photo 2). Native vegetation values consisted of River Red-gum and Grey Box along the perimeter of the dam, with a native understory primarily composed of Sifton Bush, Native Rush and Rush Sedge. Exotic flora included Gorse, Blackberry, Early Black-wattle and herbs such as Flatweed, Drain Flat-sedge and Ribwort. Logs and other fallen woody debris were common in and around the dam.

The waterway and dam provides fauna habitat of moderate quality for small numbers of waterbirds (e.g. Pacific Black Duck) and frogs (e.g. Common and Plains Froglets were heard calling from the dam during the site survey). The area of the waterway where limited modification is proposed is dominated by mostly exotic shrub and ground cover species and lacks a tree canopy. This part of the waterway is therefore of very limited value for native fauna.



Photo 2: The small dam, fringed by a range of native and exotic flora.

Impacts of the proposal on the waterway

The proposed development will include a car park in unvegetated land in the north eastern part of the study area, a well as a slight realignment of the waterway and provision of a narrow (two metre) footpath to provide access from the car park to and from the place of worship.

Given the lack of native vegetation and indigenous fauna habitat of any value, these works will not have a detrimental effect on native flora and fauna values of the study area or its surrounds.

5.3.4. Scattered trees

Scattered trees recorded in the study area would have once comprised the canopy component of a mosaic of Alluvial Terraces Herb-rich Woodland/Creekline Grassy Woodland (EVC 81).

Three scattered trees occurred in the study area (Figure 1), including:

- One large scattered tree (≥ 70 -centimetre DBH); and
- Two small scattered trees (< 70 -centimetre DBH).

Details of all scattered trees recorded are listed in Appendix 3.

5.4. Proposed development

The current proposal will involve the construction of a Place of Worship.

To determine impacts to native vegetation, the proposed construction plan was overlaid with the native vegetation mapped as part of this investigation. Native vegetation occurring in the following locations was considered to be removed based on the proposed construction plan:

- Direct removal:
 - Native vegetation within all proposed building envelopes
 - Native vegetation within all proposed driveways
- Consequential removal:
 - Native vegetation within 10m of all proposed building envelopes

Impacts to trees

In accordance with the *Assessor's Handbook* (DELWP 2018a), a tree is deemed lost when earthworks encroach on more than 10% of its Tree Protection Zone (TPZ). A TPZ is defined as an area around the trunk of the tree which has a radius of $12 \times$ the DBH (to a maximum of 15 metres but no less than 2 metres). Dead trees are treated in the same manner.

5.4.1. Avoid and minimise statement

In accordance with the Guidelines, all applications to remove native vegetation must provide an avoid and minimise statement which details any efforts undertaken to avoid the removal of, and minimise the impacts on biodiversity and other values of native vegetation, and how these efforts focussed on areas of native vegetation that have the most value.

The proposed development of the property has minimised impacts to native vegetation by locating all components of the project outside the most valuable areas of native vegetation in the north and west of the study area. Consequently, the proposal avoids impacts on the best quality vegetation on the site. Vegetation in Patch A, which is impacted does not include any large, hollow-bearing trees and is minimal in its contribution to the ecological value of the site lying at the very edge of the more extensive vegetation elsewhere in the study area.

5.4.2. Proposed native vegetation removal

The current construction footprint will result in the loss of a total extent of 0.128 hectares of native vegetation as represented in Figure 2 and documented in the *Native Vegetation Removal* (NVR) report provided by DELWP (Appendix 7).

Appendix 7 comprises a scenario test. An official, DELWP-generated Native Vegetation Removal Report will be provided to VCAT before the hearing.

A total of 0.128 hectares of native vegetation is proposed to be removed, comprising of:

- 0.027 hectares of native vegetation in patches (including no large trees in patches)
- One large scattered tree equating to an area loss of 0.070 hectares; and,
- One small scattered tree, equating to an area loss of 0.031 hectares.

The native vegetation to be removed is not in an area mapped as an endangered Ecological Vegetation Class.

It is understood that no native vegetation has been approved for removal on the property within the last five years.

Photographs of native vegetation proposed for removal are provided in Appendix 5.

5.4.3. Modelled species important habitat

The current proposal footprint will not have a significant proportional impact on any habitat for any rare or threatened species as determined in Appendix 7.

Figure 2: Native vegetation to be removed

Project: 83 Blakeley Road,
 Castlemaine
 Client: Planning and Property
 Partners Pty Ltd
 Date: 4/10/2021

- Study
- Large tree in patch
- Large scattered
- Small scattered
- Tree Protection
- Native
 - Alluvial Terraces Herb-rich
 - Woodland/Creekline
 - Grassy Woodland (EVC 81)
 - Box Ironbark Forest (EVC 61)
 - Native vegetation not assessed
 - ✕ Tree to be removed
 - Native vegetation to be removed



5.4.4. Assessment pathway

The assessment pathway is determined by the location category and the extent of native vegetation as detailed for the study area as follows:

- **Location Category:** Location 1
- **Extent of native vegetation:** A total of 0.128 hectares of native vegetation (including one large and one small scattered trees).

Based on these details, the Guidelines stipulate that the proposal is to be assessed under the **Intermediate** assessment pathway.

This proposal **would not** trigger a referral to DELWP based on the criteria specified in Section 3.3.3.

5.4.5. Offset requirements

Offsets required to compensate for the proposed removal of native vegetation from the study area are provided below.

- 0.036 general habitat units and must include the following offset attribute requirements:
 - Minimum strategic biodiversity value (SBV) of 0.416.
 - One large tree.
 - Occur within the North Central CMA boundary or the Mount Alexander municipal district.

Under the Guidelines all offsets must be secured prior to the removal of native vegetation.

5.4.6. Offset statement

The offset target for the current proposal will be achieved via a third-party offset.

An online search of the *Native Vegetation Credit Register* (NVCR) has shown that the required offset is currently available for purchase from a native vegetation credit owner (DELWP 2020e).

Evidence that the required offset is available is provided in Appendix 8. The required offset would be secured following approval of the application to remove native vegetation.

5.5. Planting recommendations

The current planting list of CDA Design Group as outlined in the Landscape Plan utilises a range of species indigenous to the EVCs identified on-site and the larger Goldfields bioregion. This is the recommended approach when restoring and enhancing the site's ecological values. Overstorey, mid-layer shrubs and understorey species are identified within the plan to provide structural diversity which has potential to provide habitat for a range of fauna species.

It should be noted that Wallangarra White Gum and Dwarf Brittle Gum are non-indigenous to the region. We are instructed the landscape architect has selected these smooth barked species for defensible space / bushfire safety considerations, however these could preferably be substituted with River Red-gum or Waxy Yellow Gum, as these eucalypts are indigenous to the site and also largely smooth barked.

5.6. Fauna assessment

The fauna habitats of the study area have been accurately described in the Abzeco (2020) report. I concur with their findings. Notably, the proposed development avoids most areas of valuable fauna habitat, which will be retained. The Swift Parrot and Powerful Owl, two listed threatened species that may occasionally occur in retained, treed habitats on the site are not expected to occur regularly and habitat in the study area is not critical to their local or regional populations. Therefore, the proposed project will

not adversely affect these two species, both of which are adapted to utilising treed habitats in urban areas.

6. References

- Abzeco 2020, *Biodiversity Assessment Report: 83-85 Blakeley Road, Castlemaine* - Report No. 20030 (1.0), Abzeco Pty Ltd, Eltham, consultant report prepared for The Planning Professionals.
- DELWP 2017a, *Guidelines for the removal, destruction or lopping of native vegetation*, Department of Environment, Land, Water and Planning, East Melbourne.
- DELWP 2017b, *Flora and Fauna Guarantee Act 1988 - Protected Flora List, June 2017*, Department of Environment, Land, Water and Planning, East Melbourne.
- DELWP 2018a, *Assessor's Handbook – Applications to remove, destroy or lop native vegetation* (Version 1.1, dated October 2018), Department of Environment, Land, Water and Planning, East Melbourne.
- DELWP 2018b, *Flora and Fauna Guarantee Act 1988 – Threatened List, April 2018*, Department of Environment, Land, Water and Planning, East Melbourne.
- DELWP 2020a, *NatureKit*, Department of Environment, Land, Water and Planning, East Melbourne, Victoria, <https://www.environment.vic.gov.au/biodiversity/naturekit>.
- DELWP 2020b, *MapShareVic*, Department of Environment, Land, Water and Planning, East Melbourne, Victoria, <https://www2.delwp.vic.gov.au/maps/maps-and-services/interactive-maps>.
- DELWP 2020c, *Native Vegetation Information Management system*, Department of Environment, Land, Water and Planning, East Melbourne, Victoria, <https://nvim.delwp.vic.gov.au/>.
- DELWP 2020d, *Victorian Biodiversity Atlas 3.2.5*, Department of Environment, Land, Water and Planning, East Melbourne, Victoria, <https://vba.dse.vic.gov.au>.
- DELWP 2020e, *Online Search of the Native Vegetation Credit Register*, Department of Environment, Land, Water and Planning, East Melbourne, <https://nvcr.delwp.vic.gov.au>.
- Parkes D, Newell G, & Cheal D 2003, 'Assessing the Quality of Native Vegetation: The 'habitat hectares' approach', *Ecological Management and Restoration* 4:29–38.

Appendix 1: Details of the assessment process in accordance with the Guidelines for the removal, destruction or lopping of native vegetation (DELWP 2017a)

Purpose and objective

Policies and strategies relating to the protection and management of native vegetation in Victoria are defined in the State Planning Policy Framework (SPPF). The objective identified in Clause 12.01 of all Victorian Planning Schemes is 'To ensure that there is no net loss to biodiversity as a result of the removal, destruction or lopping of native vegetation'.

This is to be achieved through the following three-step approach, as detailed in the Guidelines:

1. Avoid the removal, destruction or lopping of native vegetation.
2. Minimise impacts from the removal, destruction or lopping of native vegetation that cannot be avoided.
3. Provide an offset to compensate for the biodiversity impact from the removal, destruction or lopping of native vegetation.

Note: While a planning permit may still be required, if native vegetation does not meet the definition of either a patch or a scattered tree, an offset under the Guidelines is not required.

Assessment pathways

The first step in determining the type of assessment required for any site in Victoria is to determine the assessment pathway for the proposed native vegetation removal. The three possible assessment pathways for applications to remove native vegetation in Victoria are:

- Basic;
- Intermediate; or
- Detailed.

This assessment pathway is determined by two factors:

- **Location Category**, as determined using the states' Location Map. The location category indicates the potential risk to biodiversity from removing a small amount of native vegetation. The three location categories are defined as:
 - **Location 1** – shown in light blue-green on the Location Map; occurring over most of Victoria.
 - **Location 2** – shown in dark blue-green on the Location Map; includes areas mapped as endangered EVCs and/or sensitive wetlands and coastal areas.
 - **Location 3** – shown in brown on the Location Map; includes areas where the removal of less than 0.5 hectares of native vegetation could have a significant impact on habitat for rare and threatened species.
- **Extent of native vegetation** – The extent of any patches and scattered trees proposed to be removed (as well as the extent of any past native vegetation removal), with consideration as to whether the proposed removal includes any large trees. Extent of native vegetation is determined as follows:
 - **Patch** – the area of the patch in hectares.
 - **Scattered Tree** – the extent of a scattered tree is dependent on whether the scattered tree is small or large. A tree is considered to be a large tree if it is greater or equal to the large tree benchmark diameter at breast height (DBH) for the relevant bioregional EVC. Any scattered

tree that is not a large tree is a small scattered tree. The extent of large and small scattered trees is determined as follows:

- **Large scattered tree** – the area of a circle with a 15-metre radius, with the trunk of the tree at the centre.
- **Small scattered tree** – the area of a circle with a ten-metre radius, with the trunk of the tree at the centre.

The assessment pathway for assessing an application to remove native vegetation is then determined as detailed in the following matrix table:

Extent of native vegetation	Location Category		
	Location 1	Location 2	Location 3
< 0.5 hectares and not including any large trees	Basic	Intermediate	Detailed
< 0.5 hectares and including one or more large trees	Intermediate	Intermediate	Detailed
≥ 0.5 hectares	Detailed	Detailed	Detailed

Note: If the native vegetation to be removed includes more than one location category, the higher location category is used to determine the assessment pathway.

Landscape scale information – strategic biodiversity value

The strategic biodiversity value (SBV) is a measure of a location's importance to Victoria's biodiversity, relative to other locations across the state. It is represented as a score between 0 and 1 and determined from the Strategic biodiversity value map, available from *NVIM* (DELWP 2020c).

Landscape scale information – habitat for rare or threatened species

Habitat importance for rare or threatened species is a measure of the importance of a location in the landscape as habitat for a particular rare or threatened species, in relation to other habitat available for that species. It is represented as a score between 0 and 1 and is determined from the Habitat importance maps, administered by DELWP.

This includes two groups of habitat:

- **Highly localised habitats** – Limited in area and considered to be equally important, therefore having the same habitat importance score.
- **Dispersed habitats** – Less limited in are and based on habitat distribution models.

Habitat for rare or threatened species is used to determine the type of offset required in the detailed assessment pathway.

Biodiversity value

A combination of site-based and landscape scale information is used to calculate the biodiversity value of native vegetation to be removed. Biodiversity value is represented by a general or species habitat score, detailed as follows.

Firstly, the extent and condition of native vegetation to be removed are combined to determine the habitat hectares as follows:

Habitat hectares = extent of native vegetation x condition score

Secondly, the habitat hectare score is combined with a landscape factor to obtain an overall measure of biodiversity value. Two landscape factors exist as follows:

- **General landscape factor** – determined using an adjusted strategic biodiversity score, and relevant when no habitat importance scores are applicable;
- **Species landscape factor** – determined using an adjusted habitat importance score for each rare or threatened species habitat mapped at a site in the Habitat importance map.

These factors are then used as follows to determine the biodiversity value of a site:

General habitat score = habitat hectares x general landscape factor

Species habitat score = habitat hectares x species landscape factor

Offset requirements

A native vegetation offset is required for the approved removal of native vegetation. Offsets conform to one of two types and each type incorporates a multiplier to address the risk of offset:

- A **general offset** is required when the removal of native vegetation does not have a significant impact on any habitat for rare or threatened species (i.e. the proportional impact is below the species offset threshold). In this case a multiplier of 1.5 applies to determine the general offset amount.

General offset (amount of general habitat units) = general habitat score x 1.5

- A **species offset** is required when the removal of native vegetation has a significant impact on habitat for a rare or threatened species (i.e. the proportional impact is above the species offset threshold). In this case a multiplier of 2 applies to determine the species offset amount.

Species offset (amount of species habitat units) = Species habitat score x 2

Note: if native vegetation does not meet the definition of either a patch or scattered tree an offset is not required.

Offset attributes

Offsets must meet the following attribute requirements, as relevant:

- General offsets
 - **Offset amount** – general offset = general habitat score x 1.5

- **Strategic biodiversity value (SBV)** – the offset has at least 80% of the SBV of the native vegetation removed
- **Vicinity** – the offset is in the same CMA boundary or municipal district as the native vegetation removed
- Habitat for rare and threatened species – N/A
- **Large trees** – the offset include the protection of at least one large tree for every large tree to be removed
- Species offsets
 - **Offset amount** – species offset = species habitat score x 2
 - Strategic biodiversity value (SBV): N/A
 - Vicinity: N/A
 - **Habitat for rare and threatened species** – the offset comprises mapped habitat according to the Habitat importance map for the relevant species
 - **Large trees** – the offset include the protection of at least one large tree for every large tree to be removed

Appendix 2: Detailed habitat hectare assessment results

Habitat Zone			A
Bioregion			Gold
EVC Number			61
Total area of Habitat Zone (ha)			0.111
Site Condition	Large Old Trees	/10	9
	No. large trees in habitat zone		2
	Tree Canopy Cover	/5	4
	Lack of Weeds	/15	9
	Understorey	/25	5
	Recruitment	/10	3
	Organic Matter	/5	5
	Logs	/5	0
	Site condition standardising multiplier*		1.00
	Site Condition subtotal		35
Landscape Context	Patch Size	/10	1
	Neighbourhood	/10	2
	Distance to Core	/5	3
Total Condition Score		/100	41

* Modified approach to habitat scoring - refer to Table 14 of DELWP's Vegetation Quality Assessment Manual (DSE, 2004).

Appendix 3: Large trees in patches and scattered trees recorded in the study area

Tree no.	Common Name	Scientific Name	DBH (cm)	Habitat Category	Radius of TPZ (m)	Remove/Retain	Notes
1	Grey Box	<i>Eucalyptus microcarpa</i>	71	LGST	8.52	Remove	
2	Yellow Gum	<i>Eucalyptus leucoxylon</i>	50	SMST	6	Retain	
3	Grey Box	<i>Eucalyptus microcarpa</i>	39	SMST	4.68	Remove	
4	N/A	<i>Eucalyptus sp.</i>	Unknown	LGPatch	Unknown	Retain	Dead
5	Yellow Gum	<i>Eucalyptus leucoxylon</i>	Unknown	LGPatch	Unknown	Retain	Beehive present

Notes: DBH = Diameter at breast height (130 cm from the ground); **TPZ** = Tree Protection Zone.

Appendix 4: Flora species recorded in the study area

Origin	Common Name	Scientific Name	EPBC	FFG-T	FFG-P	CaLP Act
	Gold-dust Wattle	<i>Acacia acinacea</i>			P	
*	Early Black-wattle	<i>Acacia decurrens</i>				
	Sheep's Burr	<i>Acaena echinate</i>				
*	Capeweed	<i>Arctotheca calendula</i>				
	Rush Sedge	<i>Carex tereticaulis</i>				
	Sifton Bush	<i>Cassinia sifton</i>				
*	Spear-thistle	<i>Cirsium vulgare</i>				C
*	Water-button	<i>Cotula coronopifolia</i>				
*	Drain Flat-sedge	<i>Cyperus eragrostis</i>				
*	Cocksfoot	<i>Dactylis glomerata</i>				
*	Annual Veldt Grass	<i>Ehrharta longiflora</i>				
	Ruby Saltbush	<i>Enchylaena tomentosa</i>				
*	Big Heron's-bill	<i>Erodium botrys</i>				
	River Red Gum	<i>Eucalyptus camaldulensis</i>				
	Buxton Gum	<i>Eucalyptus crenulata</i>				
	Yellow Gum	<i>Eucalyptus leucoxydon</i>				
	Grey Box	<i>Eucalyptus microcarpa</i>				
*	Caper Spurge	<i>Euphorbia lathyris</i>				
	Naked Crane's-bill	<i>Geranium sp. 5</i>				
	Hakea	<i>Hakea sp.</i>				
*	Flatweed	<i>Hypochaeris radicata</i>				
	Native Rush	<i>Juncus sp.</i>				
*	Prickly Lettuce	<i>Lactuca serriola</i>				
*	African Peppergrass	<i>Lepidium africanum</i>				
*	Lesser Loosestrife	<i>Lythrum hyssopifolia</i>				
*	Horehound	<i>Marrubium vulgare</i>				C
	Weeping Grass	<i>Microlaena stipoides</i>				
*	Soursob	<i>Oxalis pes-caprae</i>				
	Grey Everlasting	<i>Ozothamnus obcordatus</i>				
*	Buck's-horn Plantain	<i>Plantago coronopus</i>				
*	Ribwort	<i>Plantago lanceolata</i>				
*	Onion Grass	<i>Romulea rosea</i>				
*	Briar Rose	<i>Rosa rubiginosa</i>				C
*	Blackberry	<i>Rubus fruticosus spp. Agg.</i>				C
	Slender Dock	<i>Rumex brownii</i>				
*	Dock	<i>Rumex sp.</i>				
	Wallaby Grass	<i>Rytidosperma spp.</i>				

	Cottony Fireweed	<i>Senecio quadridentatus</i>				
	Slender Fireweed	<i>Senecio tenuiflorus</i>				
*	Sow-thistle	<i>Sonchus oleraceus</i>				
*	Capetown Grass	<i>Tribolium obliterum</i>				
*	Subterranean Clover	<i>Trifolium subterraneum</i>				
*	Gorse	<i>Ulex europaeus</i>				C

Notes: EPBC = threatened species status under the EPBC Act (EX = presumed extinct in the wild; CR = critically endangered; EN = endangered; VU = vulnerable); FFG-T = listed as threatened (L) under the FFG Act; FFG-P: listed as protected (P) under the FFG Act; CaLP Act: declared noxious weeds under the CaLP Act (S = State Prohibited Weeds [any infestations are to be reported to DELWP. DELWP is responsible for control of State Prohibited Weeds]; P = Regionally Prohibited Weeds [Land owners must take all reasonable steps to eradicate regionally prohibited weeds on their land]; C = Regionally Controlled Weeds [Land owners have the responsibility to take all reasonable steps to prevent the growth and spread of Regionally controlled weeds on their land]; R = Restricted Weeds [Trade in these weeds and their propagules, either as plants, seeds or contaminants in other materials is prohibited].

* = introduced to Victoria

= Victorian native taxa occurring outside their natural range

Appendix 5: Photographs of native vegetation proposed for removal



Photo 1: Scalped land with one large scattered Grey Box present in the foreground.



Photo 2: A drainage channel with significant Gorse infestation and interspersed Native Rush.



Photo 3: A small dam fringed by Gorse, Native Rush and Sifton Bush.



Photo 4: A remnant patch of Box Ironbark Forest (EVC 61) present in the south-west corner of the site.

Appendix 6: EVC benchmarks

EVC/Bioregion Benchmark for Vegetation Quality Assessment

Goldfields bioregion

EVC 61: Box Ironbark Forest

Description:

Occurs in low rainfall areas on gently undulating rises, low hills and penneplains on infertile, often stony soils derived from a range of geologies. The open overstorey to 20 m tall consists of a variety of eucalypts, often including one of the Ironbark species. The mid storey often forms a dense to open small tree or shrub layer over an open ground layer ranging from a sparse to well-developed suite of herbs and grasses.

Large trees:

Species	DBH(cm)	#/ha
<i>Eucalyptus</i> spp.	70 cm	15 / ha

Tree Canopy Cover:

%cover	Character Species	Common Name
30%	<i>Eucalyptus microcarpa</i>	Grey Box
	<i>Eucalyptus tricarpa</i>	Red Ironbark
	<i>Eucalyptus polyanthemos</i>	Red Box
	<i>Eucalyptus leucoxyton</i>	Yellow Gum

Understorey:

Life form	#Spp	%Cover	LF code
Immature Canopy Tree		5%	IT
Medium Shrub	7	25%	MS
Small Shrub	4	5%	SS
Prostrate Shrub	2	1%	PS
Medium Herb	9	20%	MH
Large Tufted Graminoid	1	1%	LTG
Medium to Small Tufted Graminoid	8	15%	MTG
Bryophytes/Lichens	na	10%	BL
Soil Crust	na	20%	S/C
Total understorey projective foliage cover		85%	

LF Code	Species typical of at least part of EVC range	Common Name
MS	<i>Acacia pycnantha</i>	Golden Wattle
MS	<i>Cassinia arcuata</i>	Drooping Cassinia
MS	<i>Acacia genistifolia</i>	Spreading Wattle
MS	<i>Acacia acinacea s.l.</i>	Gold-dust Wattle
SS	<i>Hibbertia exutiacies</i>	Spiky Guinea-flower
SS	<i>Pultenaea largiflorens</i>	Twiggy Bush-pea
PS	<i>Astroloma humifusum</i>	Cranberry Heath
MH	<i>Senecio tenuiflorus</i>	Slender Fireweed
MH	<i>Xerochrysum viscosum</i>	Shiny Everlasting
MH	<i>Gonocarpus tetragynus</i>	Common Raspwort
MH	<i>Veronica plebeia</i>	Trailing Speedwell
LTG	<i>Austrostipa mollis</i>	Supple Spear-grass
MTG	<i>Joycea pallida</i>	Silvertop Wallaby-grass
MTG	<i>Dianella revoluta s.l.</i>	Black-anther Flax-lily
MTG	<i>Lomandra filiformis</i>	Wattle Mat-rush
MTG	<i>Austrodanthonia setacea</i>	Bristly Wallaby-grass
MTG	<i>Poa sieberiana</i>	Grey Tussock-grass
SC	<i>Thysanotus patersonii</i>	Twining Fringe-lily

EVC 61: Box Ironbark Forest - Goldfields bioregion

Recruitment:

Continuous

Organic Litter:

20 % cover

Logs:

20 m/0.1 ha.

Weediness:

LF Code	Typical Weed Species	Common Name	Invasive	Impact
MH	<i>Hypochoeris glabra</i>	Smooth Cat's-ear	high	low
MH	<i>Hypochoeris radicata</i>	Cat's Ear	high	low
MTG	<i>Briza maxima</i>	Large Quaking-grass	high	low
MTG	<i>Vulpia bromoides</i>	Squirrel-tail Fescue	high	low
MNG	<i>Aira elegantissima</i>	Delicate Hair-grass	high	low
MH	<i>Petrorhagia velutina</i>	Hairy Pink	high	low

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EVC/Bioregion Benchmark for Vegetation Quality Assessment

Goldfields bioregion

EVC 67: Alluvial Terraces Herb-rich Woodland

Description:

Open woodland to 15 m tall on broad alluvial plains and along ephemeral drainage lines. Soils are generally poorly drained duplex soils with sandy loam overlying a heavier clay subsoil. Understorey consists of few, if any shrubs with the striking feature of this EVC being the high species-richness of the ground-layer and the low biomass of this cover, particularly in summer.

Large trees:

Species	DBH(cm)	#/ha
<i>Eucalyptus</i> spp.	70 cm	8 / ha
<i>Allocasuarina</i> spp.	50 cm	

Tree Canopy Cover:

%cover	Character Species	Common Name
15%	<i>Eucalyptus microcarpa</i>	Grey Box
	<i>Eucalyptus melliodora</i>	Yellow Box
	<i>Eucalyptus leucoxyton</i>	Yellow Gum
	<i>Allocasuarina luehmannii</i>	Buloke

Understorey:

Life form	#Spp	%Cover	LF code
Immature Canopy Tree		5%	IT
Understorey Tree or Large Shrub	1	5%	T
Medium Shrub	3	5%	MS
Small Shrub	3	5%	SS
Prostrate Shrub	1	1%	PS
Large Herb	3	5%	LH
Medium Herb	15	30%	MH
Small or Prostrate Herb	5	10%	SH
Large Tufted Graminoid	1	1%	LTG
Medium to Small Tufted Graminoid	12	30%	MTG
Medium to Tiny Non-tufted Graminoid	2	5%	MNG
Ground Fern	1	1%	GF
Bryophytes/Lichens	na	10%	BL
Soil Crust	na	10%	S/C

Recruitment:

Continuous

Organic Litter:

10 % cover

Logs:

15 m/0.1 ha.

EVC 67: Alluvial Terraces Herb-rich Woodland - Goldfields bioregion

LF Code	Species typical of at least part of EVC range	Common Name
MS	<i>Acacia pycnantha</i>	Golden Wattle
MS	<i>Acacia acinacea s.l.</i>	Gold-dust Wattle
MS	<i>Acacia paradoxa</i>	Hedge Wattle
MS	<i>Acacia genistifolia</i>	Spreading Wattle
SS	<i>Lissanthe strigosa ssp. subulata</i>	Peach Heath
SS	<i>Pimelea humilis</i>	Common Rice-flower
SS	<i>Dillwynia cinerascens s.l.</i>	Grey Parrot-pea
PS	<i>Astroloma humifusum</i>	Cranberry Heath
PS	<i>Acrotriche serrulata</i>	Honey-pots
LH	<i>Senecio quadridentatus</i>	Cotton Fireweed
LH	<i>Senecio tenuiflorus</i>	Slender Fireweed
MH	<i>Cynoglossum suaveolens</i>	Sweet Hound's-tongue
MH	<i>Oxalis perennans</i>	Grassland Wood-sorrel
MH	<i>Daucus glochidiatus</i>	Australian Carrot
MH	<i>Cymbonotus preissianus</i>	Austral Bear's-ears
SH	<i>Hydrocotyle laxiflora</i>	Stinking Pennywort
SH	<i>Solenogyne dominii</i>	Smooth Solenogyne
SH	<i>Drosera whittakeri ssp. aberrans</i>	Scented Sundew
SH	<i>Cymbonotus preissianus</i>	Austral Bear's-ear
LTG	<i>Austrostipa mollis</i>	Supple Spear-grass
MTG	<i>Lomandra filiformis</i>	Wattle Mat-rush
MTG	<i>Elymus scaber var. scaber</i>	Common Wheat-grass
MTG	<i>Dianella revoluta s.l.</i>	Black-anther Flax-lily
MTG	<i>Austrostipa scabra</i>	Rough Spear-grass
MNG	<i>Microlaena stipoides var. stipoides</i>	Weeping Grass
TTG	<i>Centrolepis strigosa ssp. strigosa</i>	Hairy Centrolepis
TTG	<i>Centrolepis aristata</i>	Pointed Centrolepis
GF	<i>Cheilanthes austrotenuifolia</i>	Green Rock-fern
SC	<i>Thysanotus patersonii</i>	Twining Fringe-lily

Weediness:

LF Code	Typical Weed Species	Common Name	Invasive	Impact
LH	<i>Sonchus oleraceus</i>	Common Sow-thistle	high	low
LH	<i>Sonchus asper s.l.</i>	Rough Sow-thistle	high	low
MH	<i>Hypochoeris radicata</i>	Cat's Ear	high	low
MH	<i>Hypochoeris glabra</i>	Smooth Cat's-ear	high	low
MH	<i>Arctotheca calendula</i>	Cape Weed	high	low
MH	<i>Anagallis arvensis</i>	Pimpernel	high	low
MH	<i>Trifolium campestre var. campestre</i>	Hop Clover	high	low
MH	<i>Cicendia quadrangularis</i>	Square Cicendia	high	low
MH	<i>Cerastium glomeratum s.l.</i>	Common Mouse-ear Chickweed	high	low
MH	<i>Galium murale</i>	Small Goosegrass	high	low
MH	<i>Petrorhagia velutina</i>	Velvety Pink	high	low
MH	<i>Centaurium erythraea</i>	Common Centaury	high	low
MH	<i>Galium divaricatum</i>	Slender Bedstraw	high	low
LNG	<i>Holcus lanatus</i>	Yorkshire Fog	high	high
MTG	<i>Briza minor</i>	Lesser Quaking-grass	high	low
MTG	<i>Briza maxima</i>	Large Quaking-grass	high	low
MNG	<i>Aira elegantissima</i>	Delicate Hair-grass	high	low
MNG	<i>Juncus capitatus</i>	Capitate Rush	high	low
MNG	<i>Vulpia myuros</i>	Rat's-tail Fescue	high	low
MNG	<i>Vulpia ciliata</i>	Fringed Fescue	high	low
TTG	<i>Cyperus tenellus</i>	Tiny Flat-sedge	high	low

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EVC/Bioregion Benchmark for Vegetation Quality Assessment

Goldfields bioregion

EVC 68: Creekline Grassy Woodland

Description:

Eucalypt-dominated woodland to 15 m tall with occasional scattered shrub layer over a mostly grassy/sedgy to herbaceous ground-layer. Occurs on low-gradient ephemeral to intermittent drainage lines, typically on fertile colluvial/alluvial soils, on a wide range of suitably fertile geological substrates. These minor drainage lines can include a range of graminoid and herbaceous species tolerant of waterlogged soils, and are presumed to have sometimes resembled a linear wetland or system of interconnected small ponds.

Large trees:

Species	DBH(cm)	#/ha
<i>Eucalyptus</i> spp.	80 cm	15 / ha

Tree Canopy Cover:

%cover	Character Species	Common Name
15%	<i>Eucalyptus camaldulensis</i>	River Red-gum
	<i>Eucalyptus microcarpa</i>	Grey Box
	<i>Eucalyptus melliodora</i>	Yellow Box

Understorey:

Life form	#Spp	%Cover	LF code
Immature Canopy Tree		5%	IT
Medium Shrub	4	10%	MS
Small Shrub	3	5%	SS
Large Herb	2	5%	LH
Medium Herb	9	15%	MH
Small Herb	3	5%	SH
Large Tufted Graminoid	2	5%	LTG
Medium to Small Tufted Graminoid	16	40%	MTG
Medium to Tiny Non-tufted Graminoid	3	5%	MNG
Bryophytes/Lichens	na	10%	BL

LF Code

Species typical of at least part of EVC range

Common Name

MS	<i>Acacia pycnantha</i>	Golden Wattle
MS	<i>Daviesia ulicifolia</i>	Gorse Bitter-pea
MS	<i>Cassinia arcuata</i>	Drooping Cassinia
SS	<i>Pimelea humilis</i>	Common Rice-flower
SS	<i>Pultenaea largiflorens</i>	Twiggy Bush-pea
PS	<i>Astroloma humifusum</i>	Cranberry Heath
LH	<i>Senecio tenuiflorus</i>	Slender Fireweed
MH	<i>Xerochrysum viscosum</i>	Shiny Everlasting
MH	<i>Gonocarpus tetragynus</i>	Common Raspwort
MH	<i>Hypericum gramineum</i>	Small St John's Wort
SH	<i>Hydrocotyle laxiflora</i>	Stinking Pennywort
LTG	<i>Austrostipa rudis</i>	Veined Spear-grass
LTG	<i>Carex tereticaulis</i>	Rush Sedge
MTG	<i>Poa labillardierei</i>	Common Tussock-grass
MTG	<i>Elymus scaber</i> var. <i>scaber</i>	Common Wheat-grass
MTG	<i>Austrodanthonia setacea</i>	Bristly Wallaby-grass
MTG	<i>Juncus remotiflorus</i>	Diffuse Rush
MTG	<i>Carex appressa</i>	Tall Sedge
MNG	<i>Microlaena stipoides</i> var. <i>stipoides</i>	Weeping Grass
SC	<i>Thysanotus patersonii</i>	Twining Fringe-lily

EVC 68: Creekline Grassy Woodland - Goldfields bioregion

Recruitment:

Continuous

Organic Litter:

40 % cover

Logs:

30 m/0.1 ha.

Weediness:

LF Code	Typical Weed Species	Common Name	Invasive	Impact
LH	<i>Cirsium vulgare</i>	Spear Thistle	high	high
LH	<i>Sonchus oleraceus</i>	Common Sow-thistle	high	low
MH	<i>Hypochoeris radicata</i>	Cat's Ear	high	low
MH	<i>Anagallis arvensis</i>	Pimpernel	high	low
MH	<i>Hypochoeris glabra</i>	Smooth Cat's-ear	high	low
MH	<i>Galium murale</i>	Small Goosegrass	high	low
MH	<i>Oxalis pes-caprae</i>	Soursob	high	high
LTG	<i>Juncus acutus</i>	Spiny Rush	high	high
LTG	<i>Phalaris aquatica</i>	Toowoomba Canary-grass	high	high
MTG	<i>Briza maxima</i>	Large Quaking-grass	high	low
MTG	<i>Briza minor</i>	Lesser Quaking-grass	high	low
MTG	<i>Romulea rosea</i>	Onion Grass	high	low
MTG	<i>Vulpia bromoides</i>	Squirrel-tail Fescue	high	low
MTG	<i>Bromus hordeaceus</i> ssp. <i>hordeaceus</i>	Soft Brome	high	low
MNG	<i>Aira elegantissima</i>	Delicate Hair-grass	high	low
MNG	<i>Vulpia muralis</i>	Wall Fescue	high	low
MNG	<i>Bromus madritensis</i>	Madrid Brome	high	low

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[Appendix 7: Native Vegetation Removal \(NVR\) report](#)

Scenario test – native vegetation removal

This report provides offset requirements for internal testing of different proposals to remove native vegetation. **This report DOES NOT support an application to remove, destroy or lop native vegetation under Clause 52.16 or 52.17 of planning schemes in Victoria.** A report must be obtained from the Department of Environment, Land, Water and Planning (DELWP).

Date of issue: 04/10/2021
Time of issue: 3:10 pm

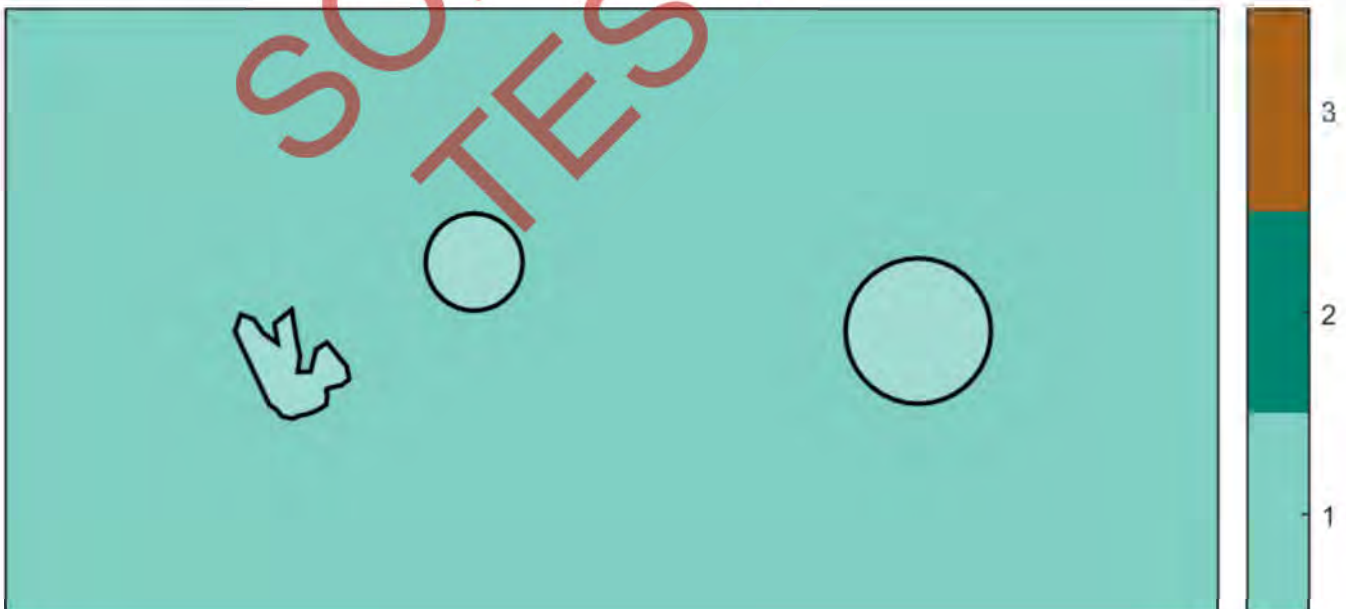
Report ID: Scenario Testing

Project ID 21202_83to85_BlakelyRd_Castlemaine_Removal_210927

Assessment pathway

Assessment pathway	Intermediate Assessment Pathway
Extent including past and proposed	0.128 ha
Extent of past removal	0.000 ha
Extent of proposed removal	0.128 ha
No. Large trees proposed to be removed	1
Location category of proposed removal	Location 1 The native vegetation is not in an area mapped as an endangered Ecological Vegetation Class (as per the statewide EVC map), sensitive wetland or coastal area. Removal of less than 0.5 hectares in this location will not have a significant impact on any habitat for a rare or threatened species

1. Location map



Scenario test – native vegetation removal

Offset requirements if a permit is granted

Any approval granted will include a condition to obtain an offset that meets the following requirements:

General offset amount¹	0.036 general habitat units
Vicinity	North Central Catchment Management Authority (CMA) or Mount Alexander Shire Council
Minimum strategic biodiversity value score ²	0.416
Large trees	1 large tree

NB: values within tables in this document may not add to the totals shown above due to rounding

Appendix 1 includes information about the native vegetation to be removed

Appendix 2 includes information about the rare or threatened species mapped at the site.

Appendix 3 includes maps showing native vegetation to be removed and extracts of relevant species habitat importance maps

SCENARIO TESTING

¹ The general offset amount required is the sum of all general habitat units in Appendix 1.

² Minimum strategic biodiversity score is 80 per cent of the weighted average score across habitat zones where a general offset is required

Scenario test – native vegetation removal

Next steps

Any proposal to remove native vegetation must meet the application requirements of the Intermediate Assessment Pathway and it will be assessed under the Intermediate Assessment Pathway.

This report DOES NOT support an application to remove, destroy or lop native vegetation under Clause 52.16 or 52.17 of planning schemes in Victoria.

If you wish to remove the mapped native vegetation you must submit the related shapefiles to the Department of Environment, Land, Water and Planning (DELWP) for processing, by email to ensymnvrtool.support@delwp.vic.gov.au. DELWP will provide a *Native vegetation removal report* that is required to meet the permit application requirements in accordance with *Guidelines for the removal, destruction or lopping of native vegetation* (Guidelines).

SCENARIO
TESTING

Appendix 1: Description of native vegetation to be removed

All zones require a general offset, the general habitat units each zone is calculated by the following equation in accordance with the Guidelines:

$$\text{General habitat units} = \text{extent} \times \text{condition} \times \text{general landscape factor} \times 1.5, \text{ where the general landscape factor} = 0.5 + (\text{strategic biodiversity value score}/2)$$

The general offset amount required is the sum of all general habitat units per zone.

Native vegetation to be removed

Information provided by or on behalf of the applicant in a GIS file							Information calculated by EnSym					
Zone	Type	BioEVC	BioEVC conservation status	Large tree(s)	Partial removal	Condition score	Polygon Extent	Extent without overlap	SBV score	HI score	Habitat units	Offset type
1-3	Scattered Tree	gold0061	Depleted	0	no	0.200	0.031	0.031	0.520		0.007	General
1-A	Patch	gold0061	Depleted	0	no	0.410	0.027	0.027	0.520		0.012	General
1-1	Scattered Tree	gold0061	Depleted	1	no	0.200	0.070	0.070	0.520		0.016	General

SCENARIO TESTING

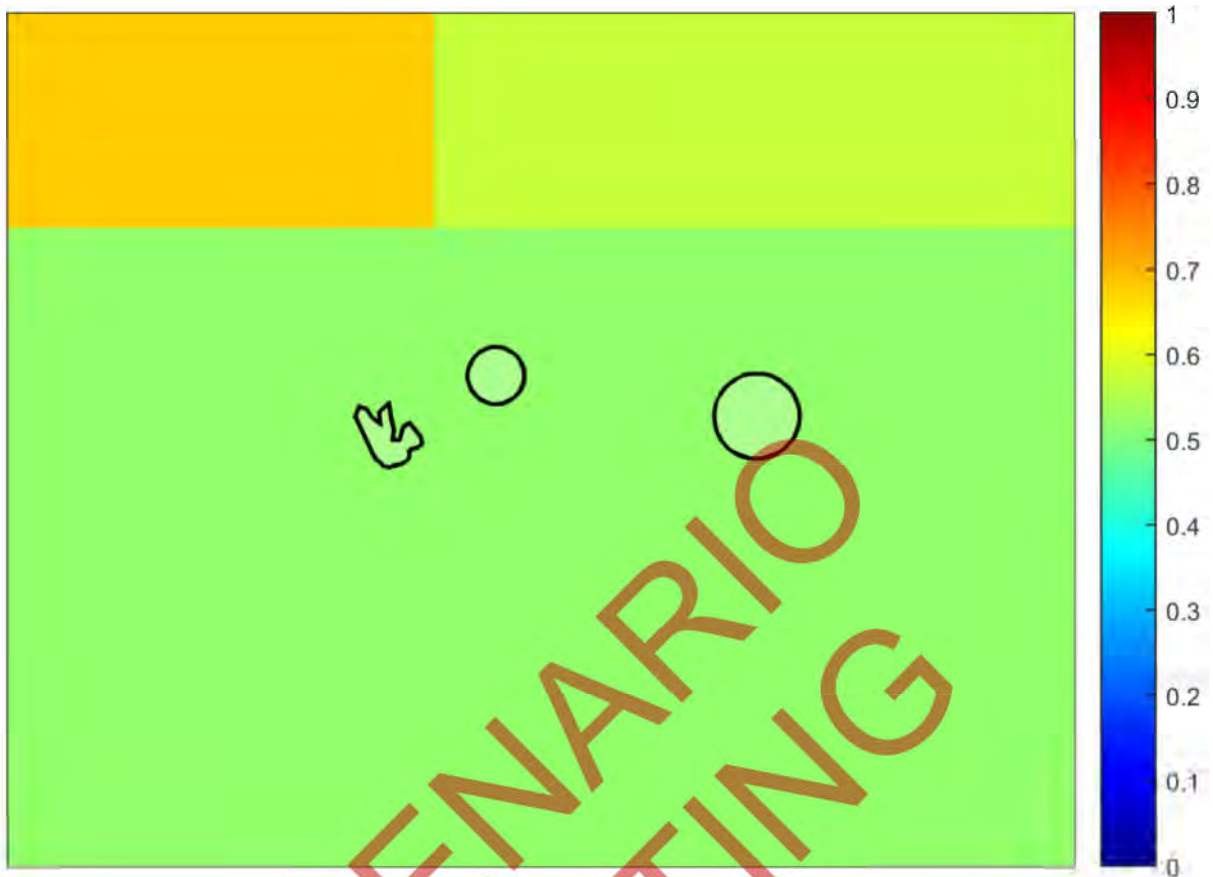
Appendix 2: Information about impacts to rare or threatened species' habitats on site

This is not applicable in the Intermediate Assessment Pathway.

SCENARIO TESTING

Appendix 3 – Images of mapped native vegetation

2. Strategic biodiversity values map



Appendix 8: Evidence that native vegetation offset requirement is available

Report of available native vegetation credits

This report lists native vegetation credits available to purchase through the Native Vegetation Credit Register.

This report is **not evidence** that an offset has been secured. An offset is only secured when the units have been purchased and allocated to a permit or other approval and an allocated credit extract is provided by the Native Vegetation Credit Register.

Date and time: 04/10/2021 04:10

Report ID: 11255

What was searched for?

General offset

General habitat units	Strategic biodiversity value	Large trees	Vicinity (Catchment Management Authority or Municipal district)	
0.036	0.416	1	CMA	North Central

Details of available native vegetation credits on 04 October 2021 04:10

These sites meet your requirements for general offsets.

Credit Site ID	GHU	LT	CMA	LGA	Land owner	Trader	Fixed price	Broker(s)
BBA-0074	0.088	1	North Central	Northern Grampians Shire	Yes	Yes	No	VegLink
BBA-0737	0.192	16	North Central	Northern Grampians Shire	Yes	Yes	No	Bio Offsets
BBA-0771	0.212	1	North Central	Loddon Shire	Yes	Yes	No	VegLink
BBA-1053	4.267	33	North Central	Gannawarra Shire	Yes	Yes	No	Contact NVOR
BBA-2389	0.177	3	North Central	Loddon Shire	Yes	Yes	No	VegLink
BBA-2606	0.112	12	North Central	Campaspe Shire	Yes	Yes	No	VegLink
BBA-3006	18.750	3	North Central	Greater Bendigo City	No	Yes	No	Ethos
BBA-3006	18.750	3	North Central	Greater Bendigo City	No	Yes	No	Contact NVOR
BBA-3031	8.852	174	North Central	Pyrenees Shire	Yes	Yes	No	VegLink
BBA-3052_01	12.981	275	North Central	Northern Grampians Shire	Yes	Yes	No	VegLink
TFN-C1640	0.854	3	North Central	Hepburn Shire	Yes	Yes	No	VegLink
TFN-C1702	16.952	16	North Central	Gannawarra Shire	Yes	Yes	No	TFN
VC_CFL-3071_01	3.299	148	North Central	Loddon Shire	Yes	Yes	No	VegLink
VC_CFL-3076_01	9.378	49	North Central	Pyrenees Shire	Yes	Yes	No	Bio Offsets
VC_CLO-2451_01	15.714	138	North Central	Greater Bendigo City	No	Yes	No	Contact NVOR
VC_CLO-3046_01	1.296	95	North Central	Greater Bendigo City	No	Yes	No	Contact NVOR

These sites meet your requirements using alternative arrangements for general offsets.

Credit Site ID	GHU	LT	CMA	LGA	Land owner	Trader	Fixed price	Broker(s)
----------------	-----	----	-----	-----	------------	--------	-------------	-----------

There are no sites listed in the Native Vegetation Credit Register that meet your offset requirements when applying the alternative arrangements as listed in section 11.2 of the Guidelines for the removal, destruction or lopping of native vegetation.

These potential sites are not yet available, land owners may finalise them once a buyer is confirmed.

Credit Site ID	GHU	LT	CMA	LGA	Land owner	Trader	Fixed price	Broker(s)
VC_CFL-0771_03	8.345	19	North Central	Loddon Shire	Yes	Yes	No	Contact NVOR
VC_CFL-3701_01	10.574	18	Goulburn Broken, North Central	Greater Bendigo City	Yes	Yes	No	Bio Offsets

LT - Large Trees

CMA - Catchment Management Authority

LGA - Municipal District or Local Government Authority

Next steps

If applying for approval to remove native vegetation

Attach this report to an application to remove native vegetation as evidence that your offset requirement is currently available.

If you have approval to remove native vegetation

Below are the contact details for all brokers. Contact the broker(s) listed for the credit site(s) that meet your offset requirements. These are shown in the above tables. If more than one broker or site is listed, you should get more than one quote before deciding which offset to secure.

Broker contact details

Broker Abbreviation	Broker Name	Phone	Email	Website
Abezco	Abzeco Pty. Ltd.	(03) 9431 5444	offsets@abzeco.com.au	www.abzeco.com.au
Baw Baw SC	Baw Baw Shire Council	(03) 5624 2411	bawbaw@bawbawshire.vic.gov.au	www.bawbawshire.vic.gov.au
Bio Offsets	Biodiversity Offsets Victoria	0452 161 013	info@offsetsvictoria.com.au	www.offsetsvictoria.com.au
Contact NVOR	Native Vegetation Offset Register	136 186	nativevegetation.offsetregister@delwp.vic.gov.au	www.environment.vic.gov.au/native-vegetation
Ecocentric	Ecocentric Environmental Consulting	0410 564 139	ecocentric@me.com	Not available
Ethos	Ethos NRM Pty Ltd	(03) 5153 0037	offsets@ethosnrm.com.au	www.ethosnrm.com.au
Nillumbik SC	Nillumbik Shire Council	(03) 9433 3316	offsets@nillumbik.vic.gov.au	www.nillumbik.vic.gov.au
TFN	Trust for Nature	8631 5888	offsets@tfn.org.au	www.trustfornature.org.au
VegLink	Vegetation Link Pty Ltd	(03) 8578 4250 or 1300 834 546	offsets@vegetationlink.com.au	www.vegetationlink.com.au
Yarra Ranges SC	Yarra Ranges Shire Council	1300 368 333	biodiversityoffsets@yarraranges.vic.gov.au	www.yarraranges.vic.gov.au

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For more information contact the DELWP Customer Service Centre 136 186 or the Native Vegetation Credit Register at nativevegetation.offsetregister@delwp.vic.gov.au

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Appendix 9: Curricula Vitae of Brett Lane & Arend Kwak

Brett Lane

Managing Director

Profile

Brett Lane has over 40 years' experience in ecological research and management. Specialising in birds, wind farms, wetlands and coastal ecosystems, and development impact assessment, he has over 30 years' experience as an ecological consultant to industry, government and private clients. He has worked on projects ranging from large metropolitan road projects, broadacre property development and wind farms to powerlines and small private subdivisions. He understands the legislation and planning policies that developers must respond to for successful projects and has facilitated development assessments for hundreds of projects. He has extensive experience as an expert witness in courts, tribunals and planning panels.

He has been principal consultant and sole director of the former Brett Lane & Associates Pty Ltd, now Nature Advisory Pty Ltd. His technical and personal leadership, combined with the hard work of those around him, has built one of the country's leading ecological consulting teams. This team brings a refreshing approach to development assessment that combines a commitment to good scientific investigations that reliably inform decision-makers while understanding the commercial and compliance concerns of clients.

Biography

Brett's 40 years of experience started studying Orange-bellied Parrots between study years at university, followed by work for the predecessor of Birdlife Australia for seven years, coordinating a citizen-science project to gather information on the numbers and distribution of shorebirds in Australia. This culminated in the publication of the book *Shorebirds in Australia*. This was followed by work in his own consulting practice throughout eastern Australia in the 1980's. After this, he worked for the predecessor to Wetlands International - Asia Pacific in Kuala Lumpur as Assistant Director for East Asia, building a multi-country wetland conservation program that worked with local communities to conserve wetlands. On return to Australia in 1993, he held positions as principal ecological consultant with consultancies in Brisbane and Melbourne before establishing Brett Lane & Associates Pty Ltd in January 2001. In 2019, this became Nature Advisory and he continues to lead the company's technical, professional and commercial development.

Qualifications

B.A (Zoology & Physical Geography), Monash University

Key skills

- Technical team leadership
- Ecological Impact Assessment
- Ecological Monitoring

- Specialist threatened species investigations
- Bird and bat studies for wind farm impact assessment
- Biodiversity regulations
- Wetland and coastal ecology
- Marine birds
- Shorebirds
- Aerial wildlife surveys
- Expert Witness work

Project examples

Renewable Energy

Golden Plains Wind Farm, Victoria - Project director for a major 800MW wind farm project west of Geelong in Victoria, involving initial advice on regulatory requirements and strategy, preparation of detailed biodiversity assessment and Brolga Impact Assessment in accordance with government guidelines for an Environment Effects Statement then preparation of post-approval, pre-construction compliance plans.

Capital Wind Farm, NSW - Prepared the operational phase bird and bat adaptive management plan for this large wind farm in the southern highlands of NSW, then implemented the plan. This involved over 4 years' of work including designing the bird and bat impact monitoring program, approval of this by NSW Office of Environment and Heritage (OEH), implementation of monitoring and periodic reporting to OEH. Contingency plans and responses for potential for significant impacts, including on Eastern Bentwing Bat and Wedge-tailed Eagle.

Property Development

Modeina, Burnside, Victoria - Coordinated ecological assessments and approvals for a greenfields property development in Melbourne's west that faced complex and challenging ecological issues. This involved high level advice on issues and risks for the project, permits for native vegetation removal, Commonwealth Environment Protection and Biodiversity Conservation Act Referrals Assessment and Approval, and post-approval planning and compliance.

Eynesbury Town Development, Victoria - Advised on and coordinated biodiversity assessments and approvals for an extensive staged greenfields property development west of Melbourne, including preparing and tendering the implementation of management plans for over 300 hectares of protected environmental reserves. The project won an award for environmental excellence from the Urban Development Institute of Australia and a commendation in the environment section of the Planning Institute of Australia awards.

Infrastructure

Port Phillip Bay channel-deepening project - Assessed the impacts of a major capital dredging project on coastal ecosystems and marine birds for a Victorian Environment Effects Statement, including detailed mapping and assessment of coastal vegetation and fauna habitats, assessment of impacts on listed rare and threatened coastal birds, and specific assessment of impacts on marine birds that use Port Phillip Bay. Subsequent work included reviewing implementation of the environmental management plan for the project, including updating regular risk assessments based on the periodic findings of the impact monitoring program.

Nagambie ByPass Flora and Fauna Assessment - This work involved coordinating a team of specialists to assess native vegetation and threatened flora and fauna along a number of route options for the Nagambie ByPass. A report on impacts on native vegetation, consistent with the requirements of the planning scheme enabled the project to avoid and minimise impacts on native vegetation and to obtain approval for the removal of a reduced, residual area of impacted native vegetation.

Outer Metropolitan Ring Road - Strategic Assessment - Undertook detailed collation of existing native vegetation and threatened flora and fauna mapping along alternative routes for this 72-kilometre outer metropolitan freeway to Melbourne's west and north. This resulted in a report that accompanied the impact assessment for the EPBC Act Melbourne Strategic Assessment, which included Melbourne's growth areas, the Regional Rail Link and this project.

Ecosystem Monitoring and Management

Wind Farm bird and bat impact monitoring - Brett has provided technical leadership and regulator liaison for the design, implementation and reporting of wind farm bird and bat impact studies. This has involved working with statisticians to develop robust sampling designs for carcass searches, and scavenger and observer efficiency trials, collating and analysing the results to estimate bird and bat mortality rates at wind farms, and reporting the findings to the regulator. Occasionally, impact events trigger a contingency response and Brett has coordinated such responses and liaised with the regulator to keep them informed and, with project owners, proposed solutions to problems as they arose.

River Red-gum condition monitoring - In response to an urgent need for objective data on the condition of riparian vegetation in the lower Murray River, Brett developed a rapid assessment method and sampling design to monitor River Red-gum condition in areas subject to long term drought due to water diversion. This laid a foundation for subsequent monitoring programs and lead to the establishment of regular environmental watering programs along the lower Murray River. Since this time, the scale and scope of monitoring and environmental watering has improved substantially.



Arend Kwak

Botanist

Profile

Arend joined Nature Advisory (formerly Brett Lane and Associates) in 2021 as a Botanist and has assisted in a range of projects encompassing impacts on native habitats and their associated flora and fauna. Since commencing his role as a Botanist, Arend has gained diverse knowledge in field surveys, native vegetation management, bushfire planning assessment, report writing and the guidelines and legislation informing environmental decision-making. He utilises this experience to facilitate outcomes that both support best environmental practices and the developmental responsibilities of clients.

Biography

Arend commenced his formal training in 2015 at La Trobe University, where he pursued and subsequently completed a Bachelor of Biological Sciences with First Class Honors in Botany in 2019. His honors project was focused upon the investigation of the role of genes thought to be linked to plant hormone regulation. During this time, he also volunteered in research projects ranging from responses to bushfire in the Otways, to bird surveying in the Mallee. Upon graduating, Arend worked for two years within the bushland restoration industry- which provided invaluable foundational knowledge in plant identification and conservation practices. Working at Nature Advisory has further cultivated his passion for conservation and deepened associated knowledge. Arend has also maintained a personal interest in ecology, plant identification and birdwatching.

Arend holds a Construction Industry White Card and is certified in First Aid Level 2.

Key Skills

Plant identification

Vegetation mapping

Bushfire planning assessments

Land management

Report writing

Bird identification

Knowledge of environmental legislation and guidelines



Project examples

Property development

Vegetation and Growling Grass Frog habitat mapping – Sunbury, VIC (2021)

Weed management planning – Mt Atkinson, Truganina, VIC (2021)

Kangaroo surveying – Mt Atkinson, Truganina, VIC (2021)

Spiny Rice-flower surveying – Burnside, VIC (2021)

Vegetation mapping and habitat hectare assessment – Keysborough, VIC (2021)

Bushfire Attack Level assessments – Truganina, VIC (2021), Warrenheip, VIC (2021)

Traffix Group

Traffic Engineering Assessment

Proposed Place of Assembly
83 Blakeley Road, Castlemaine

Prepared for
The Trustee of Castlemaine Gospel Trust

April 2023

G32927R-01D

Document Control

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1. Introduction

Traffic Group has been engaged by The Trustee of Castlemaine Gospel Trust to undertake a traffic engineering assessment for a proposed place of assembly at 83 Blakeley Road, Castlemaine.

2. Proposal and Background

2.1. Background

A VCAT hearing regarding this development took place on October 18th, 2021. It was deemed that the plans amended for VCAT exhibited significant changes compared to the existing application and the hearing was abandoned.

These VCAT plans are now being re-lodged under a new application at the town planning stage, that we are assessing.

The proposal is for a place of assembly development on the site as set out in the following table. A copy of the development plans (originally VCAT plans) prepared by Orbit Architecture (dated 1st September, 2021) are attached at Appendix A.

2.2. Proposal

The proposal is to develop a place of worship with an approximate building area of 760m² on the site. Permission is sought for up to 466 people at the church.

The table below details the types of events proposed, and the typical associated attendance. The congregation that will attend the church has members in Castlemaine (95), Bendigo (185) and Kyneton (155). The smaller events at the church represent the local Castlemaine congregation. The larger services with up to 466 people represent all three communities coming together. These services would only take place in Castlemaine once every three weeks, with these large services rotating between Castlemaine, Bendigo and Kyneton.

Table 1: Proposed Service Schedule & Expected Attendances

Day	Service Type	Service Duration	Operating Hours (Typical)	Attendees (Typical)	Attendees (Maximum)	Service Frequency
Monday	Prayer Meeting	45mins	6:00pm-8:30pm	45 to 50	Up to 50	Weekly
Saturday	Bible teaching	1 hr	10:00am-1:00pm	450-466	Up to 466	Once per 3 weeks
Sunday	Communion	1 hrs	7:00am-9:00am	45 to 50	Up to 50	Weekly
	Bible teaching	1 hrs	9:00am-1:00pm	450-466	Up to 466	Once per 3 weeks

There are a variety of services throughout a typical week with a maximum attendance of up to 466 patrons expected. 50 is to be the maximum regular patronage within the site at any one time.

A total of 139 car spaces, including three disabled spaces and 4 mini-bus spaces, are proposed to be provided on-site.

The main carpark will comprise 111 car spaces (including 3 DDA spaces), and will be accessed via a two-way crossover to Blakeley Road at the site's southern boundary. The outer accessway of the carpark will generally operate in a one-way arrangements in a clockwise direction.

There will also be a secondary carpark comprising 28 car spaces (including 4 mini-bus spaces) and will be accessed via a two-way crossover to Blakeley Road.

3. Existing Conditions

3.1. Subject Site

The subject site is 83 Blakeley Road, Castlemaine. The table below summarises the key characteristics of the subject site.

Table 2: Subject Site Description

Characteristic	Description
Address	83 Blakeley Road, Castlemaine
Area	25,781m ²
Frontages	160m to Blakeley Road
Zoning	Low Density Residential - LDRZ
Current use of site	Vacant
Vehicle access	Two separate crossovers to Blakeley Road
On-street parking along site frontage	No formal carparking at the site's frontage to Blakeley Road

A locality plan, aerial photograph and land use zoning map is provided at Figure 1 to Figure 4.

Significant nearby land uses include:

- **Castlemaine Church of Christ** located 240m south of the site.
- **Castlemaine Secondary College** located 1.2km south of the site.

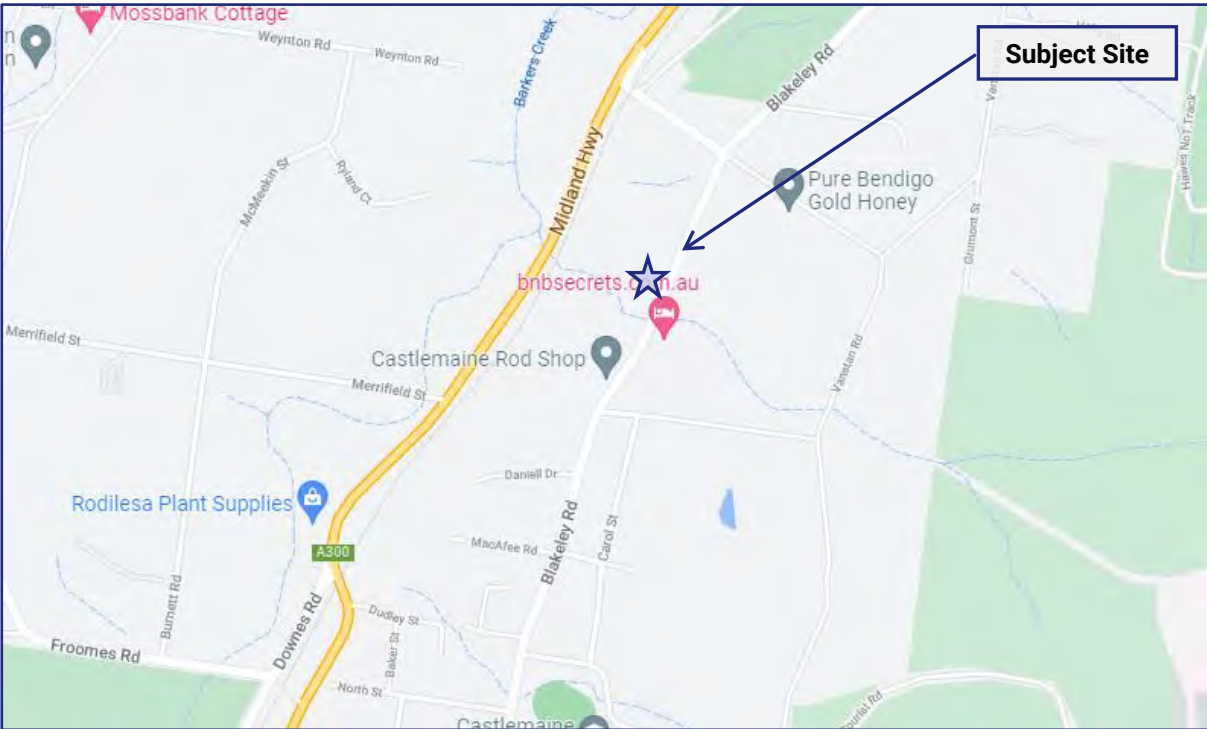


Figure 1: Locality Plan (Source: Google Maps)



Figure 2: Aerial Photograph (Source: Nearmap)



Figure 3: Site Frontage (Blakeley Road)

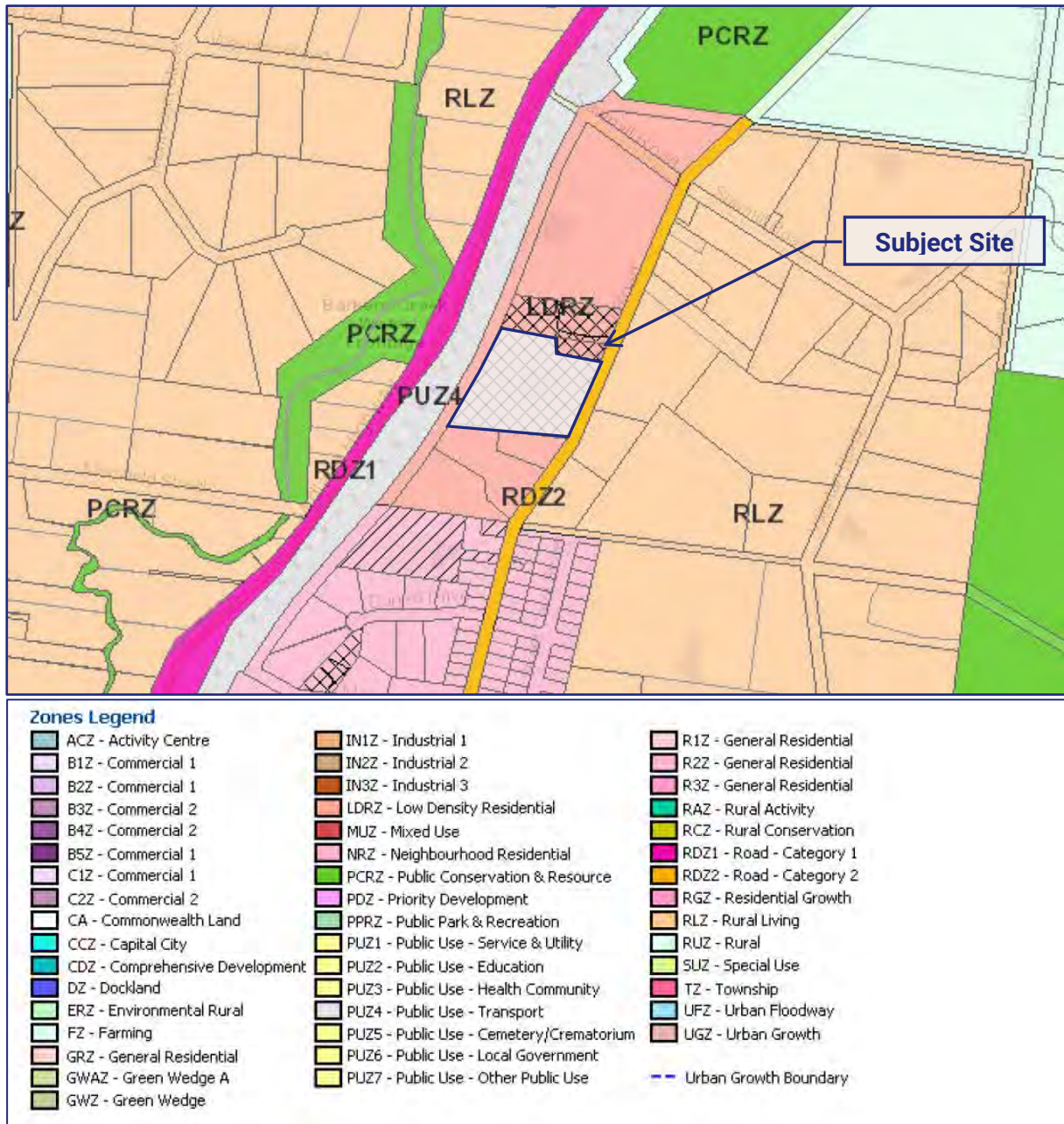


Figure 4: Land Use Zoning Map (Source: VicPlan)

3.2. Transport Network

3.2.1. Road Network

Blakeley Road is a Council operated Collector Road¹ and Road Zone 2 which extends between Myring Street to the south and Specimen Gully Road to the north. In the vicinity of the subject site, Blakeley Road has a sealed carriageway of 6.9m which accommodates a single lane of through traffic in each direction.

A posted speed limit of 70km/h applies to Blakeley Road adjacent to the site, noting that it is 50km/h approximately 50m south of the southern boundary of the subject site.

Sawmill Road is a Council operated Minor Road¹ which extends between Blakeley Road to the east and Midland Highway to the west. In the vicinity of the subject site, including over the bridge, Sawmill Road has a sealed carriageway of approximately 6.0m in width which accommodates a single lane of through traffic in each direction.

At the bend of Sawmill Road on the west side of the bridge, the radii of the bend is relatively tight and sightlines are assisted by a mirror. Between the bridge on and the approach to Midlands Highway, Sawmill Road narrows to approximately 5m in width, which is adequate for low-speed vehicle passing.

The intersection between Sawmill Road and Midland Highway is a standard T-intersection with a stop sign located on the Sawmill Road leg. A default speed limit of 50km/h applies to Sawmill Road in the vicinity of the site.

There is generally limited opportunity for kerbside parking along either Blakeley Road or Sawmill Road, with a solid white line extending along the length of Blakeley Road prohibiting parking, and although Blakeley Road technically does not prohibit parking (as there is no line marking or signage controlling parking), in practice on-street parking does not appear to be a frequent occurrence on this road in the vicinity of the site.

Photographs depicting the local road network are presented in Figure 5 to Figure 8.

¹ As reference in the Mount Alexander Shire Council Road Register (dated April, 2008)



Figure 5: Blakeley Road – view north



Figure 6: Blakeley Road – view south



Figure 7: Sawmill Road – view east



Figure 8: Sawmill Road – view west

3.2.2. Existing Traffic Conditions

Tube Count Results

Traffix Group commissioned traffic counts of Blakeley Road, Sawmill Road and Midland Highway, at the locations shown in Figure 9 below.



Figure 9: Traffic Count Locations

The detailed survey results are attached at Appendix B of this report.

The counts were completed between Friday 10th September, 2021 and Thursday 16th September, 2021. These counts were undertaken while Metropolitan Melbourne was in lockdown as a result of Covid-19. This lockdown restricted travel to/from Melbourne outside of essential travel.

Importantly, in rural areas schools were open, retail was open (with density limits), and offices were operating with limited capacity. Farming activities were unaffected by the lockdown, given that farming is defined as an essential industry.

Accordingly, we are satisfied that the data collected over this period is generally representative of relatively normal conditions for the immediate area.

The results of these tube counts are shown in Table 3 and Table 4 below.

Table 3: Daily Traffic Volumes (Two-Way) in 2021

Road	Daily Traffic Volumes (veh/day)						
	Mon 13/9	Tue 14/9	Wed 15/9	Thu 16/9	Fri 10/9	Sat 11/9	Sun 12/9
Midland Highway	9,374	9,760	9,986	10,066	11,129	8,052	5,771
Sawmill Road	272	282	273	274	292	208	162
Blakeley Road	431	420	418	463	522	348	274

Table 4: Peak Hour Traffic Volumes (Two-Way) in 2021

Road	Weekdays				Weekend			
	AM Peak Hour	AM Peak Hour Volume	PM Peak Hour	PM Peak Hour Volume	Sat Peak Hour	Sat Peak Hour Volume	Sun Peak Hour	Sun Peak Hour Volume
Midland Highway	8am-9am	753	3pm-4pm	986	11am-12noon	865	11am-12noon	607
Sawmill Road	8am-9am	34	3pm-4pm	31	11am-12noon	16	11am-12noon	16
Blakeley Road	8am-9am	42	3pm-4pm	49	11am-12noon	27	11am-12noon	28

These counts demonstrate that Sawmill Road and Blakeley Road carry a modest level of traffic, which is consistent with the local road function.

Midland Highway is an arterial road and consequently carries a higher level of traffic. However, this level of traffic is modest for an arterial road. Midland Highway carries a two-way traffic volume of up to 1,000 vehicles per hour on a weekday and the theoretical mid-block capacity of a rural two-lane arterial road is in the order of 2,400 vehicles per hour.

Finally, to test the validity of the data, we have compared the historical SCATS data from Sunday 12th September, 2021 to Sunday 15th September, 2019 (i.e. pre-COVID time) of the nearby signalised intersection of Midland Highway and Forest Street (in central Castlemaine) and found that during the Sunday peak hour period, traffic volumes were similar in the 2021 surveys compared to pre-CV19 levels in 2019. The 2019 data was approximately 5% higher than 2021, which is within the range of day to day variation. Accordingly, we consider that the 2021 traffic data is not dissimilar from 'normal' conditions.

Turning Movement Counts

In addition to 7-day automatic tube counts, turning movement counts of the intersection between Midland Highway and Sawmill Road were also undertaken on Sunday 12th September, 2021 from 10am-2pm. This time coincides with the key Sunday service time. The peak hour period was found to be 11:45am-12:45pm.

As mentioned previously, it was observed from a SCATS data comparison before lockdown restrictions were imposed (i.e. 2019) and the day of survey that there was a 5% decrease in traffic when compared to pre-COVID levels. Although this is a modest difference (it is within the range of day-to-day variation), we have factored up the surveyed volumes by 5%.

A summary of the (factored) peak hour traffic counts is presented in the figure below.

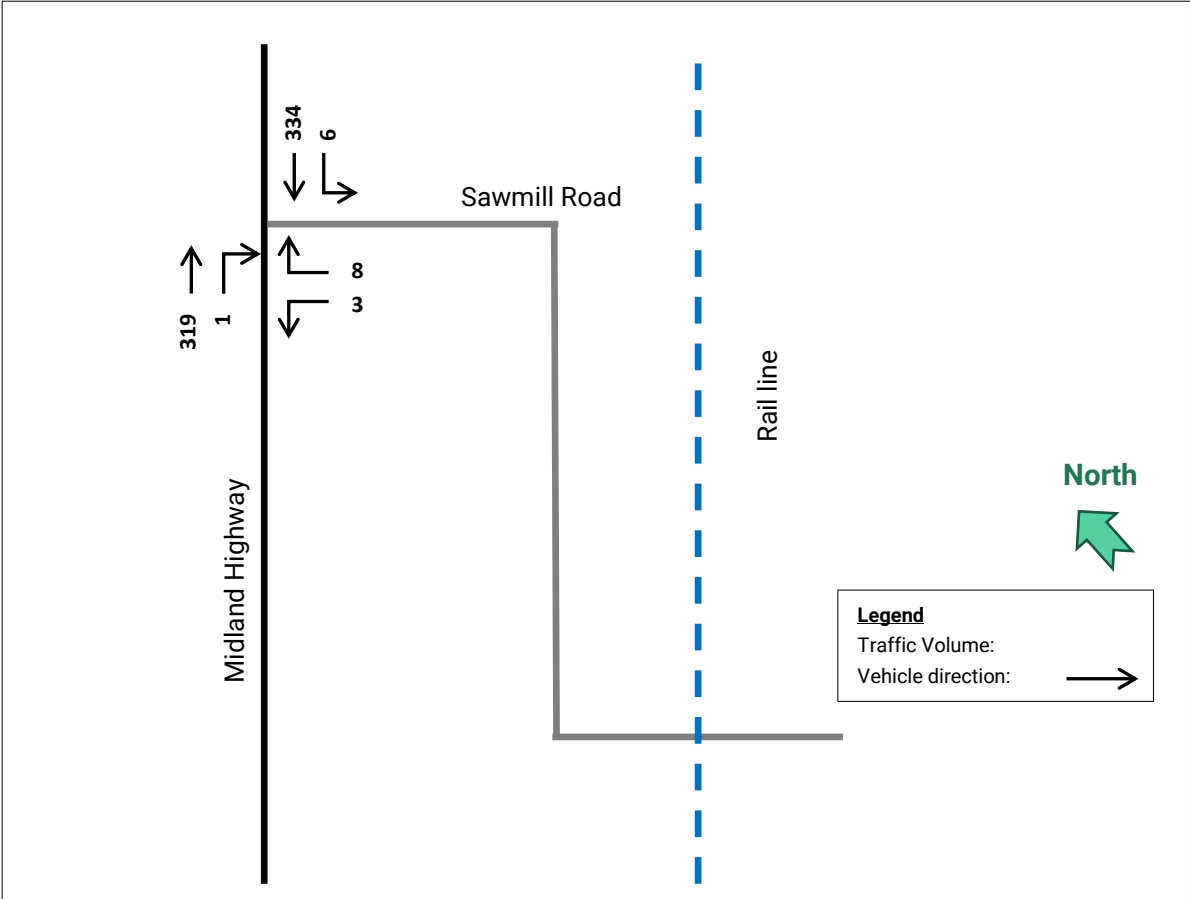


Figure 10: Sunday Peak Hour Traffic Volumes of Midland Highway / Sawmill Road intersection

3.2.3. Road Safety Review

A review of the State Road Accident Records (Crashstats) has been undertaken in the vicinity of the site for the past 5 years of available data (01/05/2015 to 30/04/2020)².

Table 5 details the locations of casualty crashes within the crash investigation area, which is shown in the figure below.

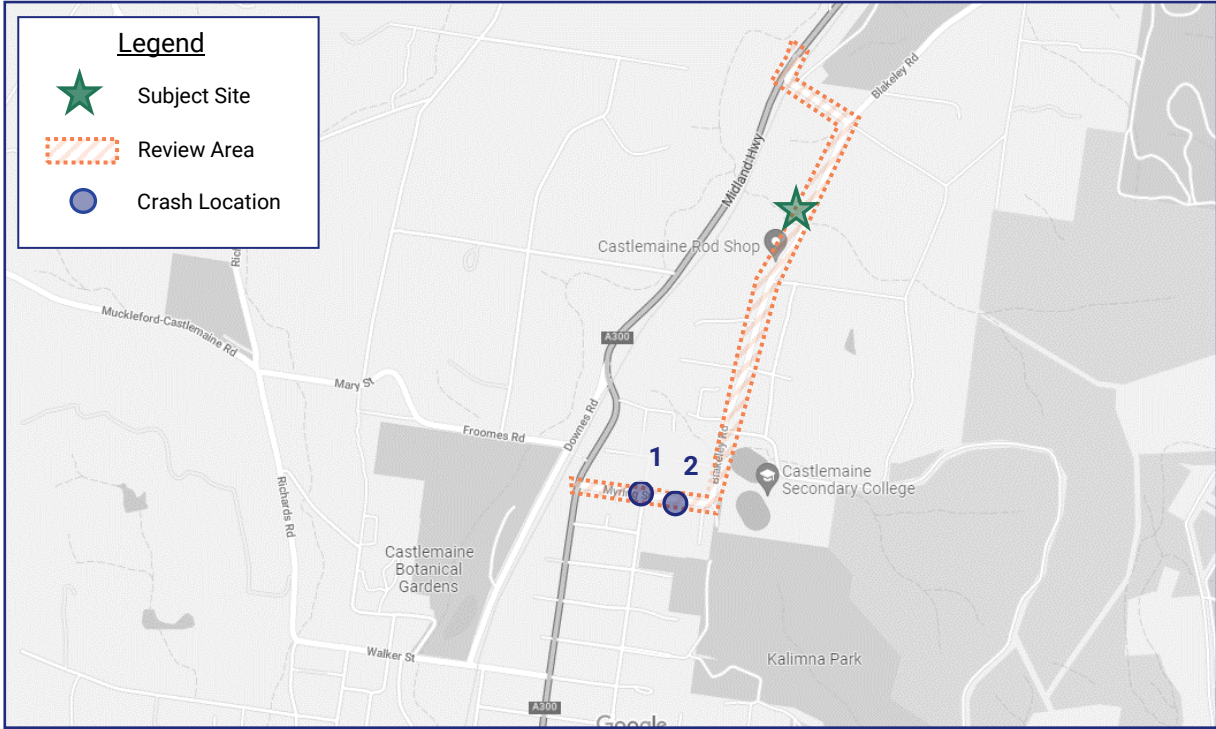


Figure 11: Crash History Investigation Area

² Casualty crash data is contained in the VicRoads' *Crashstats Internet Database* and includes all reported casualty crashes (i.e. injury crashes), which are classified into Fatal Injury, Serious Injury and Other Injury (i.e. minor injury) crashes. Property damage only or non-injury crashes are not included in the database.

Table 5: Casualty Crash History

No.	Location	Date	Time	Severity	Type (DCA Code)	Type of Accident
1	Hargreaves Street / Myring Street intersection	Saturday 04/03/2017	13:55	OI	110	Cross traffic (intersections only) involving a northbound and westbound vehicle.
2	Myring Street, 10m east of Hargreaves Street	Wednesday 07/08/2019	18:00	OI	115 (B)	Right/left far (intersections only) involving a westbound vehicle and northbound cyclist.
LEGEND: OI: Other Injury SI: Serious Injury F: Fatality (B): Bicyclist (M): Motorcyclist (P): Pedestrian (C): Bus/Coach (RT): Rigid Truck (ST): Semi-trailer						

The number of casualty crashes recorded is not significant. Both casualty crashes were of a different crash type, and occurred at different locations. Accordingly, we are satisfied that the local road network is not inherently unsafe.

3.3. Public Transport

The site has limited access to public transport services, which is consistent with its location on the fringe of a rural township.

The site has access to Bus Route 3 which operates along Midland Highway approximately 1.3km walking distance from the site (measured to the nearest stop). It provides a service between Harcourt and Castlemaine.

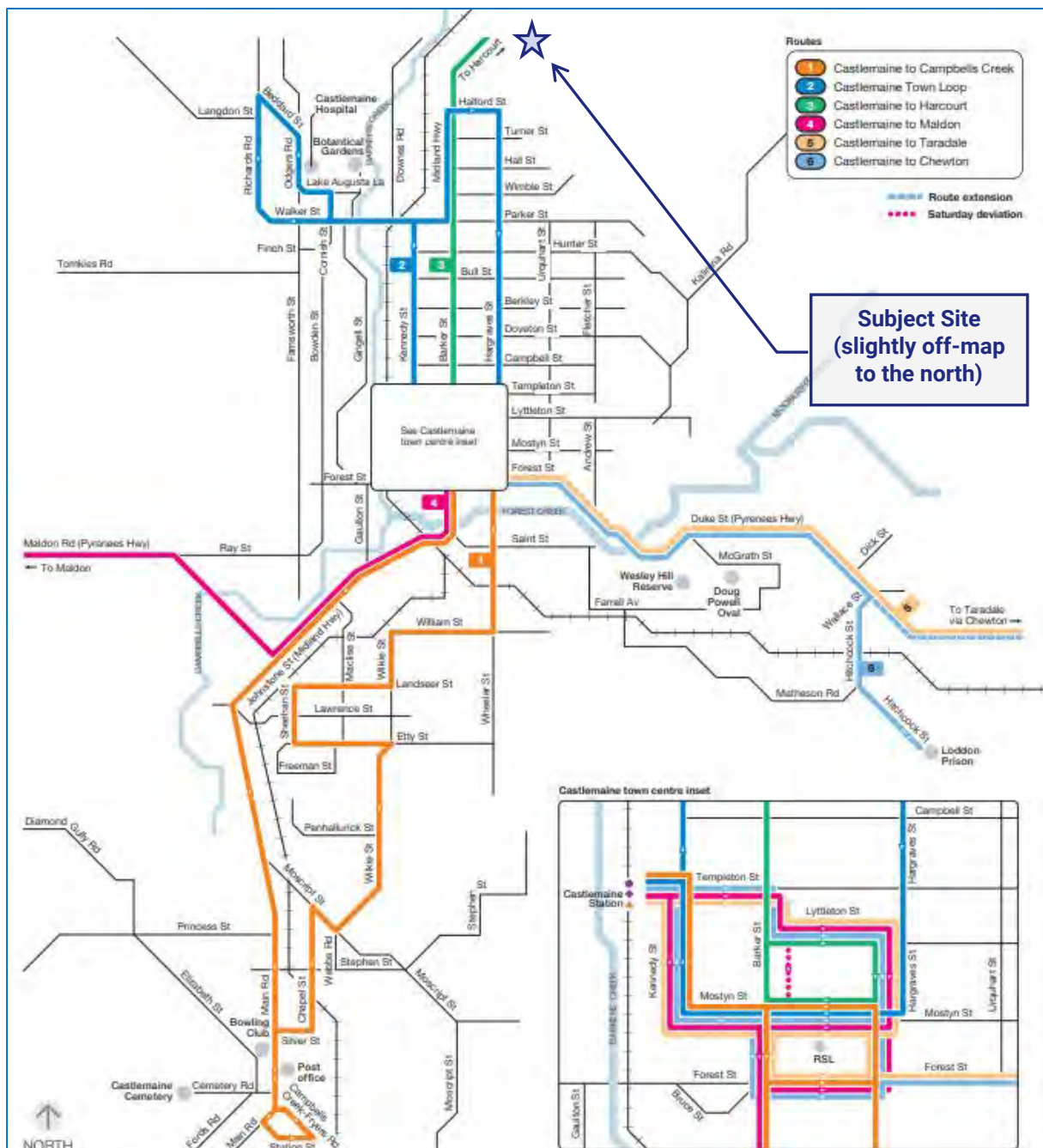


Figure 12: Public Transport Map of Castlemaine (Source: PTV)

4. Traffic Engineering Assessment

4.1. Statutory Car Parking Assessment

The proposed development falls under the land-use category of 'Place of assembly' under Clause 73.03 of the Planning Scheme. The Planning Scheme sets out the parking requirements for new developments under Clause 52.06. The purpose of Clause 52.06 is:

- *To ensure that car parking is provided in accordance with the Municipal Planning Strategy and the Planning Policy Framework.*
- *To ensure the provision of an appropriate number of car parking spaces having regard to the demand likely to be generated, the activities on the land and the nature of the locality.*
- *To support sustainable transport alternatives to the motor car.*
- *To promote the efficient use of car parking spaces through the consolidation of car parking facilities.*
- *To ensure that car parking does not adversely affect the amenity of the locality.*
- *To ensure that the design and location of car parking is of a high standard, creates a safe environment for users and enables easy and efficient use.*

The statutory parking requirements are set out at Clause 52.06-5 of the Planning Scheme. Clause 52.06-5 states:

Column A applies unless Column B applies.

Column B applies if:

- *any part of the land is identified as being within the Principal Public Transport Network Area as shown on the Principal Public Transport Network Area Maps (State Government of Victoria, 2018); or*
- *a schedule to the Parking Overlay or another provision of the planning scheme specifies that Column B applies.*

Given the site is not located with the PPTN, the Column A rates apply.

The statutory car parking assessment of the development is set out in Table 6 below.

Table 6: Statutory Car Parking Assessment – Clause 52.06

Proposed Use	No.	Statutory Parking Rate (Column A)	Car Parking Requirement (Note 1)	Car Parking Supply	Shortfall / Surplus (+/-)
Place of Assembly (Place of Worship)	466 patrons (weekly)	0.3 spaces per patron permitted	139	139	0

Note 1: Clause 52.06-5 specifies that where a car parking calculation results in a requirement that is not a whole number, the number of spaces should be rounded down to the nearest whole number.
 Note 2: Including site area includes 2,635m² on the ground floor and 460m² of upstairs mezzanine/bar area.

The proposed place of worship meets the statutory requirement for parking under Clause 52.06-5 and a car parking reduction is not required for the everyday use of the site.

In practice, the 466 patrons does not represent the number of patrons on-site at all times. Most activities at the church will have a typical attendance of up to 50 patrons.

4.2. Bicycle Parking Provision

Clause 52.34 of the Planning Scheme specifies the statutory bicycle parking requirements for new developments and changes in use. The table below details the statutory bicycle parking requirement of the proposal.

Table 7: Statutory Bicycle Parking Assessment – Clause 52.34

Proposed Use	Size	Statutory Bicycle Parking Rate		No. of Bicycle Spaces Required
		Employee	Patrons	
Place of Assembly	760m ² (Note 1)	1 per 1,500m ² of net floor area	2 plus 1 per 1,500m ² of net floor area	1 staff 3 patron
Total				4 spaces

Note 1: Based on the internal building dimensions of 21.7m x 35.0m illustrated on the plans.

The proposed development plans do not include any bicycle parking spaces. It is recommended that the provision for these 4 bicycle spaces be included as a condition of permit. This is easily achieved, with ample space around the site and building to accommodate 2 bicycle rails.

4.3. Review of Carpark Layout and Vehicle Access Arrangements

Traffix Group has provided design advice to the project architect to achieve a satisfactory carpark layout. The proposed parking layout has been assessed under the following guidelines:

- Clause 55.03-9 (Access Objective) and Clause 55.03-10 (Parking Location Objective), (residential only).
- Clause 52.06-9 of the Planning Scheme (Design Standards for car parking),
- AS2890.1-2004 – Part 1: Off-Street Car Parking (where relevant), and
- AS2890.6-2009 – Part 6: Off-Street Car Parking for People with Disabilities.
- The relevant standards of Clauses 56.06-2, 56.06-4, 56.06-5, 56.06-7 and 56.06-8 for residential developments with accessways longer than 60 metres or serving 16 or more dwellings.
- Any other matter specified in a schedule to the Parking Overlay. Discuss if applicable.

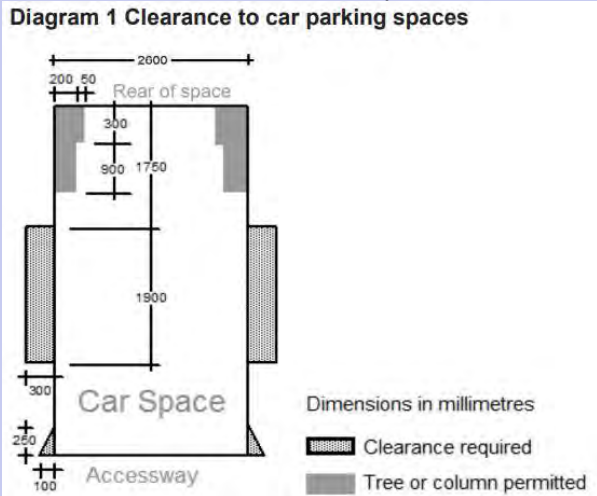
An assessment against the relevant design standards of the Planning Scheme and Australian Standards (where relevant) is provided in the table below.

Table 8: Carpark Layout and Access Assessment

Requirement	Assessment	Design Response
Clause 52.06-9 Design Standard 1 – Accessways		
Must be at least 3m wide	✓	Accessways are greater than 3m in width
Have an internal radius of at least 4m at changes of direction or intersection or be at least 4.2m wide.	o	B99 design car can navigate all bends. Objective achieved.
Allow vehicles parked in the last space of a dead-end accessway in public car parks to exit in a forwards direction with one manoeuvre.	✓	Complies.
Provide at least 2.1m headroom beneath overhead obstructions, calculated for a vehicle with a wheel base of 2.8m.	✓	Complies.
If the accessway serves four or more car spaces or connects to a road in a Transport Zone 2 or Transport Zone 3, the accessway must be designed so that cars can exit the site in a forward direction.	✓	Complies.

Requirement	Assessment	Design Response
Provide a passing area at the entrance at least 6.1m wide and 7m long if the accessway serves ten or more car parking spaces and is either more than 50m long or connects to a road in a Transport Zone 2 or Transport Zone 3.	✓	Passing area provided.
Have a corner splay or area at least 50% clear of visual obstructions extending at least 2m along the frontage road from the edge of an exit lane and 2.5m along the exit lane from the frontage, to provide a clear view of pedestrians on the footpath of the frontage road. The area clear of visual obstructions may include an adjacent entry or exit lane where more than one lane is provided, or adjacent landscaped areas, provided the landscaping in those areas is less than 900mm in height.	o	Areas are free of visual obstruction. Objective Achieved.
If an accessway to four or more car parking spaces is from land in a Transport Zone 2 or Transport Zone 3, the access to the car spaces must be at least 6m from the road carriageway.	✓	Complies.
If entry to the car space is from a road, the width of the accessway may include the road.	✓	Not applicable
Clause 52.06-9 Design Standard 2 – Car Parking Spaces		

Requirement	Assessment	Design Response																														
<p>Car parking spaces and accessways must have the minimum dimensions as outlined in Table 2 under Clause 52.06-9.</p> <table border="1"> <thead> <tr> <th>Angle of car spaces to accessway</th> <th>Accessway width</th> <th>Car park width</th> <th>Car park length</th> </tr> </thead> <tbody> <tr> <td>Parallel</td> <td>3.6 m</td> <td>2.3 m</td> <td>6.7 m</td> </tr> <tr> <td>45°</td> <td>3.5 m</td> <td>2.6 m</td> <td>4.9 m</td> </tr> <tr> <td>60°</td> <td>4.9 m</td> <td>2.6 m</td> <td>4.9 m</td> </tr> <tr> <td rowspan="3">90°</td> <td>6.4 m</td> <td>2.6 m</td> <td>4.9 m</td> </tr> <tr> <td>5.8 m</td> <td>2.8 m</td> <td>4.9 m</td> </tr> <tr> <td>5.2 m</td> <td>3.0 m</td> <td>4.9 m</td> </tr> <tr> <td></td> <td>4.8 m</td> <td>3.2 m</td> <td>4.9 m</td> </tr> </tbody> </table> <p><i>Note to Table 2: Some dimensions in Table 2 vary from those shown in the Australian Standard AS2890.1-2004 (off street). The dimensions shown in Table 2 allocate more space to aisle widths and less to marked spaces to provide improved operation and access. The dimensions in Table 2 are to be used in preference to the Australian Standard AS2890.1-2004 (off street) except for disabled spaces which must achieve Australian Standard AS2890.6-2009 (disabled).</i></p>	Angle of car spaces to accessway	Accessway width	Car park width	Car park length	Parallel	3.6 m	2.3 m	6.7 m	45°	3.5 m	2.6 m	4.9 m	60°	4.9 m	2.6 m	4.9 m	90°	6.4 m	2.6 m	4.9 m	5.8 m	2.8 m	4.9 m	5.2 m	3.0 m	4.9 m		4.8 m	3.2 m	4.9 m	<p>✓</p>	<p>Standard car spaces are 2.6m wide x 4.9m with a 6.4m wide access aisle.</p> <p>The two parallel car spaces are provided as 2.6m wide x 6.0m long, with splays provided on each side. Although this is shorter than the Planning Scheme requirements (6.7m length required), given that there are only two car spaces provided via these arrangements (i.e. both spaces are effectively 'end spaces') with splays provided to each, these car spaces are readily accessible.</p> <p>Swept path diagrams demonstrating access to these spaces utilising the B85 Design Car (referenced in AS2890.1-2004) are shown at Appendix C.</p>
Angle of car spaces to accessway	Accessway width	Car park width	Car park length																													
Parallel	3.6 m	2.3 m	6.7 m																													
45°	3.5 m	2.6 m	4.9 m																													
60°	4.9 m	2.6 m	4.9 m																													
90°	6.4 m	2.6 m	4.9 m																													
	5.8 m	2.8 m	4.9 m																													
	5.2 m	3.0 m	4.9 m																													
	4.8 m	3.2 m	4.9 m																													

Requirement	Assessment	Design Response
<p>A wall, fence, column, tree, tree guard or any other structure that abuts a car space must not encroach into the area marked 'clearance required' on Diagram 1, other than:</p> <ul style="list-style-type: none"> A column, tree or tree guard, which may project into a space if it is within the area marked 'tree or column permitted' on Diagram 1. A structure, which may project into the space if it is at least 2.1 metres above the space. <p>Diagram 1 Clearance to car parking spaces</p>  <p>Dimensions in millimetres</p> <p>▨ Clearance required</p> <p>■ Tree or column permitted</p>	✓	Complies.
<p>Car spaces in garages/carports must be at least 6m long and 3.5m wide for a single space and 5.5m wide for a double space measured inside the garage/carport.</p>	N/A	No garages proposed.
<p>Where parking spaces are provided in tandem, an additional 0.5m in length must be provided between each space.</p>	N/A	No tandem car spaces.
<p>Where two or more car parking spaces are provided for a dwelling, at least one space must be under cover.</p>	N/A	Proposal is not a dwelling.
<p>Disabled car parking spaces must be designed in accordance with AS2890.6-2009 and the Building Code of Australia. Disabled car parking spaces may encroach into an accessway width specified in Table 2 by 0.5m. A minimum headroom of 2.5m is to be provided above the disabled car space in accordance with AS2890.6-2009.</p>	✓	Complies.

Requirement	Assessment	Design Response													
Clause 52.06-9 Design Standard 3 - Gradients															
<p>Accessway grades must not be steeper than 1:10 (10 per cent) within 5 metres of the frontage to ensure safety for pedestrians and vehicles. The design must have regard to the wheelbase of the vehicle being designed for; pedestrian and vehicular traffic volumes; the nature of the car park; and the slope and configuration of the vehicle crossover at the site frontage. This does not apply to accessways serving three dwellings or less.</p>	✓	The carpark area will be graded at 1:20 overall.													
<p>Ramps (except within 5 metres of the frontage) must have the maximum grades as outlined in Table 3 and be designed for vehicles travelling in a forward direction.</p> <table border="1"> <thead> <tr> <th>Type of car park</th> <th>Length of ramp</th> <th>Maximum grade</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Public car parks</td> <td>20 metres or less</td> <td>1:5 (20%)</td> </tr> <tr> <td>longer than 20 metres</td> <td>1:6 (16.7%)</td> </tr> <tr> <td rowspan="2">Private or residential car parks</td> <td>20 metres or less</td> <td>1:4 (25%)</td> </tr> <tr> <td>longer than 20 metres</td> <td>1:5 (20%)</td> </tr> </tbody> </table>	Type of car park	Length of ramp	Maximum grade	Public car parks	20 metres or less	1:5 (20%)	longer than 20 metres	1:6 (16.7%)	Private or residential car parks	20 metres or less	1:4 (25%)	longer than 20 metres	1:5 (20%)	✓	Complies.
Type of car park	Length of ramp	Maximum grade													
Public car parks	20 metres or less	1:5 (20%)													
	longer than 20 metres	1:6 (16.7%)													
Private or residential car parks	20 metres or less	1:4 (25%)													
	longer than 20 metres	1:5 (20%)													
<p>Where the difference in grade between two sections of ramp or floor is greater than 1:8 (12.5 per cent) for a summit grade change, or greater than 1:6.7 (15 per cent) for a sag grade change, the ramp must include a transition section of at least 2 metres to prevent vehicles scraping or bottoming.</p>	✓	Complies.													
<p>Plans must include an assessment of grade changes of greater than 1:5.6 (18 per cent) or less than 3 metres apart for clearances, to the satisfaction of the responsible authority</p>	✓	Complies.													

4.3.1. Site Distance Assessment

Traffic Group has completed a sight distance assessment for the two site access points to Blakeley Road.

Recommended sight distance criteria are set out in Austroads Guide to Road Design Part 4A: Unsignalised and Signalised Intersections. Clause 3.2 of the Austroads Guidelines sets out that:

The types of sight distance that must be provided in the design of all intersections include:

- approach sight distance (ASD)
- safe intersection sight distance (SISD)
- minimum gap sight distance (MGSD)

Intersections should be designed to provide the more conservative value of SISD or MGSD for all vehicle movements that may be required to give way to other vehicles at the intersection.

The guidelines define the terms “Approach Sight Distance” (ASD), “Safe Intersection Sight Distance” (SISD) and “Minimum Gap Sight Distance” (MGSD) as follows:

ASD is defined as the distance travelled by a vehicle between the time when the driver receives a stimulus signifying a need to stop and the time the vehicle comes to rest.

ASD is the minimum requirement which should be met on each leg of an intersection.

SISD provides sufficient distance for a driver of a vehicle on the major road to observe a vehicle on a minor road approach moving into a collision situation and to decelerate to a stop before reaching the collision point. It allows for a 3 second observation time for a driver on the through leg of the intersection to detect the problem ahead, in addition to the ASD.

MGSD is based on distances corresponding to the critical acceptance gap that drivers are prepared to accept when undertaking a crossing or turning manoeuvre at intersections.

The more conservative value of MGSD or SISD should ideally be provided for all turning movements required to give way at intersections.

It is of note that a 50km/h speed limit applies 50m south of the southern boundary of the subject site (or 55m from the southern crossover), with a 70km/h speed limit applying north of this. This is shown in the aerial below.



Figure 13: Location of Speed Limit Change (Source: Nearmap)

Table 9 details the various minimum sight distance requirements for a 50km/h or 70km/h road.

Table 9: Minimum Sight Distance Values

Location	Speed Zone	Vehicle type	Austroads Guide to Road Design Part 4A		
			ASD	SISD	MGSD
Blakeley Road	70km/h	Car	92m (Rt 2.0 sec, d=0.36)	151m* (Rt 2.0 sec)	97m (5 sec gap)
	50km/h	Car	55m (Rt 2.0 sec, d=0.36)	97m (Rt 2.0 sec)	69m (5 sec gap)

Main Carpark Crossover

Sight distance to the north of the main carpark crossover is approximately 300m, as shown in Figure 14.



Figure 14: Sight Distance to the North of Main Carpark Crossover (Approx. 300m)

Sight distance to the south is limited by the crest of the road carriageway. There is also a power pole to the south of the sight, however this only partially obscures drivers' view, and drivers can stop in an appropriate position to ensure that the pole does not obscure the road carriageway.

Sight distance to the south is approximately 145m. This is shown in the figure below.



Figure 15: Sight Distance to the South of Main Carpark Crossover (145m, limited by the crest)

There are multiple sight distance tests, but the most relevant and stringent in this case is Safe Intersection Sight Distance (SISD), which for a 70km/h road is approximately 151m using a reaction time of 2 seconds.

This sight distance is adequately achieved to the north of the main carpark crossover, however, the southern crossover is just short of this distance (by 6m). However, the speed limit increases from 50km/h to 70km/h approximately 55m south of the proposed crossover, and when consider the SISD for a 50km/h speed zone a sight distance of 97m is required.

The traffic counts completed by Traffix Group found that the 85th percentile speed of vehicles passing the subject site is 59km/h, well under the 70km/h speed limit.

Based on the above, we are satisfied that the sightlines are acceptable in both directions from the main carpark entry.

Secondary Carpark Crossover

Sight distance to the north of the overflow carpark crossover is approximately 250m, as shown in Figure 14.



Figure 16: Sight Distance to the North of Overflow Carpark Crossover (Approx. 250m)

Sight distance to the south is approximately 155m. This is shown in the figure below.

Accordingly, adequate sight distance is available both directions for the secondary carpark.



Figure 17: Sight Distance to the South from the location of the Secondary Carpark Crossover (Approx. 155m)

4.3.2. Other Considerations – Proposed Gate

The landscaping plans by CDA Design propose a swing gate at the entrance to the main carpark.

The gate is shown at 7m wide when open. The vehicle accessway is 6.0m wide.

The swept paths located in Appendix C show the vehicle travel path staying within the 6m wide accessway, and therefore well clear of the gate.

We are satisfied that the proposal for a gate at the carpark entrance is acceptable from a traffic engineering perspective.

4.4. Loading and Waste Collection

Loading

Clause 65.01 of the Planning Scheme specifies that:

Before deciding on an application or approval of a plan, the responsible authority must consider, as appropriate:

- *The adequacy of loading and unloading facilities and any associated amenity, traffic flow and road safety impacts.*

Loading/delivery activities to the place of worship are unlikely to be a frequent event and would occur outside of larger services within the site. Whilst no dedicated loading dock is proposed, it is anticipated that any loading activities would occur within existing car parking (most likely within the two parallel spaces in the main carpark). The largest truck likely to visit the site would be a waste collection vehicle.

The main carpark crossover to the site has been shown with larger splays to facilitate access to and from the site by an 8.8m Medium Rigid Vehicle. This vehicle is equal to or larger than the minibuses, waste collection vehicles and fire appliances expected to visit the site.

Swept path diagrams demonstrating circulation of this vehicle is attached at Appendix C.

We are satisfied that these arrangements are acceptable in the context of the use proposed.

Waste Collection

Waste collection is proposed to be undertaken on-site via a private contractor. These would not occur during peak use times of the site. As a waste truck can readily access the on-site carpark, we are satisfied that there are no traffic engineering issues with waste collection.

4.5. Traffic Impacts

4.5.1. Traffic Generation

The proposal is for a place of worship with up to 466 patrons that are expected for various services throughout the week, either on weeknights or during the daytime on the weekend.

The maximum of 466 patrons only occurs approximately once per every 3 weeks when the Bendigo, Kyneton and Castlemaine congregations combine to meet at the proposed church.

Most events at the church are associated with the local congregation in Castlemaine, with attendances typically in the order of 45-50 patrons (maximum of 50 patrons).

The types of services and patron numbers are set out in Section 2.2.

Table 1 specifies typical and maximum event sizes. To be conservative while assessing the traffic impacts, we have always adopted the 'maximum' event size (rather than the 'typical' event size).

We have adopted the first principles approach that traffic generated by the site will be function of the number of parked cars on the site, which is a function of the parked cars per person (i.e. 0.3 vehicles per patron).

It is anticipated that each vehicle will generate one trip on arrival and one trip on departure (each parked car generates 2 vehicle trips per event) and that these trips occur in different hours.

Table 10 sets out the traffic volumes to be generated for each service type and by day of week.

Table 10: Proposed Service Schedule, Expected Attendances and Traffic Generation

Day	Service Type	Service Duration	Operating Hours (Typical)	Attendees (Maximum)	Service Frequency	Peak hour Traffic Generation (veh/hr)	Daily Traffic Generation (veh/day)
Monday	Prayer Meeting	45mins	6:00pm-8:30pm	Up to 50	Weekly	15	30
Saturday	Bible teaching	1 hr	10:00am-1:00pm	Up to 466	Once per 3 weeks	140	280
Sunday	Communion	1 hrs	7:00am-9:00am	Up to 50	Weekly	140	310*
	Bible teaching	1 hrs	9:00am-1:00pm	Up to 466	Once per 3 weeks		

*Note: This assumes that the 50 people at communion are not part of the bible teaching and that bible teaching does take place.

It is important to note that events up to 50 people represent the Castlemaine congregation. Events for 466 people present the communities of Castlemaine, Bendigo and Kyneton coming together. These larger events of 466 people will on average take place around once per every three weeks, with no more than 2 in any one week.

On weekdays, there will be a maximum of 15 peak hour vehicle trips and 30 daily vehicle trips, which will occur on Monday evenings, weekly at 6:00pm. Use of the site during the day on weekdays will be minimal.

Given that these trips will be limited to outside of the peak hour period, these trips are not critical to the overall road network.

On the weekend, Sunday is the busiest day overall with up to two events to be held that day (noting that some events are once every 3 weeks), resulting in a total of 310 vehicle trips over the day. In terms of peak impact in any one hour, Saturday represents the day of highest impact on the road network as Saturday traffic volumes on Midland Highway are higher on Saturday than on Sunday (see Section 3.2.2).

4.5.2. Daily Traffic Impacts

In terms of daily traffic generation, up to 310 vehicle trips are expected along Blakeley Road, which will then disperse through the road network. This would only occur on Sunday when multiple events occur and when the Castlemaine, Bendigo and Kyneton church members all gather at the subject site.

As discussed in Section 3.2.1, Blakeley Road is classified as a Collector Road under the Mount Alexander Road Register. This classification and the cross section of Blakeley Road most closely aligns with 'Connector Street – Level 1' under Clause 56.06 of the Planning Scheme. A Connector Street – Level 1, has an indicative environmental capacity of 3,000 vehicles per day.

Given the existing daily traffic volume on Blakeley Street on a Sunday (284 vehicles per day), it is expected that there is a post-development daily traffic volume of 594. This is well within the environmental capacity of the road, and we consider that the daily traffic impacts can be adequately accommodated by Blakeley Road and the surrounding road network.

4.5.3. Traffic Distribution

There are two types of weekly events:

- Local, Castlemaine events with up to 50 people, and
- Events that are shared with the congregations at Bendigo and Kyneton, with up to 466 people.

These three communities currently comprise the following approximate membership numbers:

- Castlemaine – 95 (22% of the total)
- Bendigo – 185 (43% of the total)
- Kyneton – 155 (35% of the total)

4.5.4. Castlemaine Congregation Events

Local, Castlemaine Congregation events will typically be attended by 45-50 patrons, with a maximum of 50 patrons. At 50 patrons, these events are expected to generate up to 15 vehicle trips immediately before and after events with patrons arriving and departing. This level of traffic is modest and limited to a couple of times per week.

Most patrons will arrive and depart to/from the south, towards Castlemaine and the weight of residential development that lies to the south. In the wider area, the nearest townships around Castlemaine are also accessed from to the south (e.g. Newstead, Campbell Creek, Chewton, and the road connecting to Maldon). Some patrons will naturally arrive from the north, from Harcourt and other nearby areas. A locality map detailing these nearby townships is shown below at Figure 18.

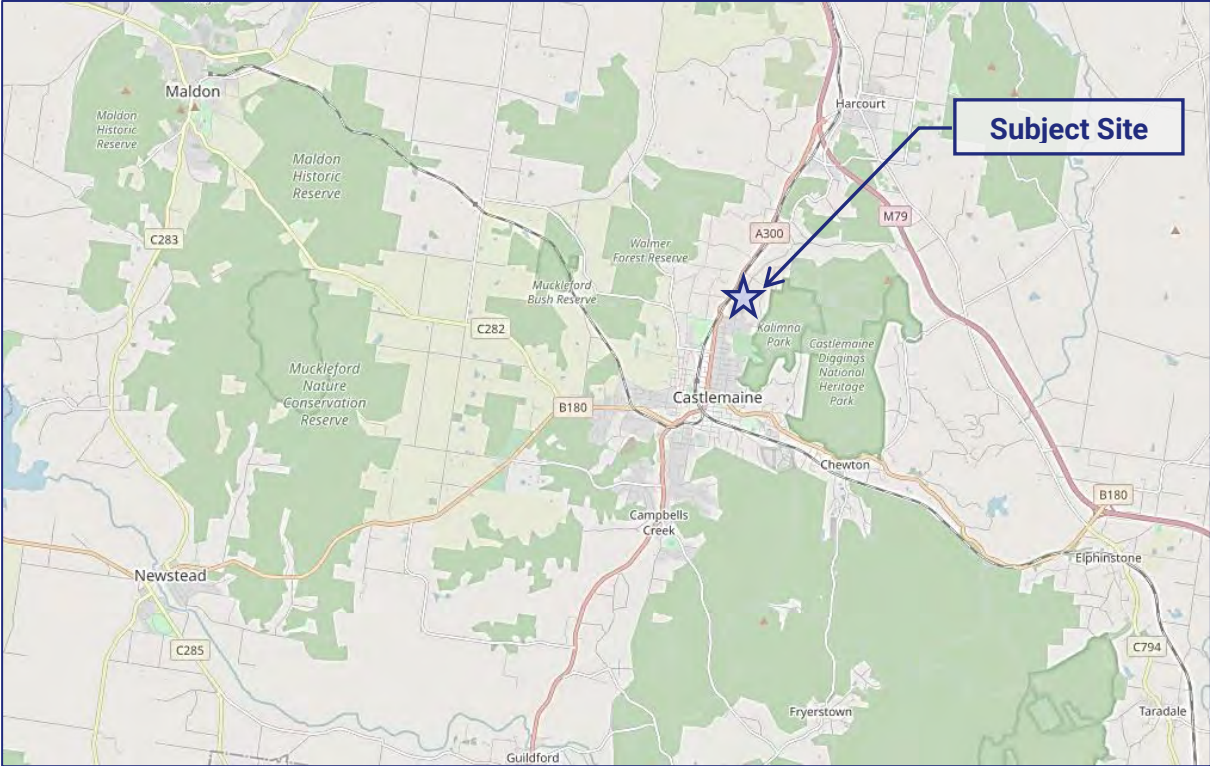


Figure 18: Local Towns Surrounding the Site (source: Google Maps)

Based on the location of towns in the nearby area, we consider that the majority of local traffic will be generated to/from the south, with only a small portion of traffic being generated to/from the north.

Traffic from within Castlemaine is expected to take the shortest/quickest route to the site, which from the centre of town would be along Hargreaves Street and Myring Street to Blakeley Road. This is shown below in a screenshot from Google Maps route planner below.

Based on this analysis, the Midland Highway and Sawmill Road intersection is expected to experience minimal traffic associated with use of the church by the local congregation.

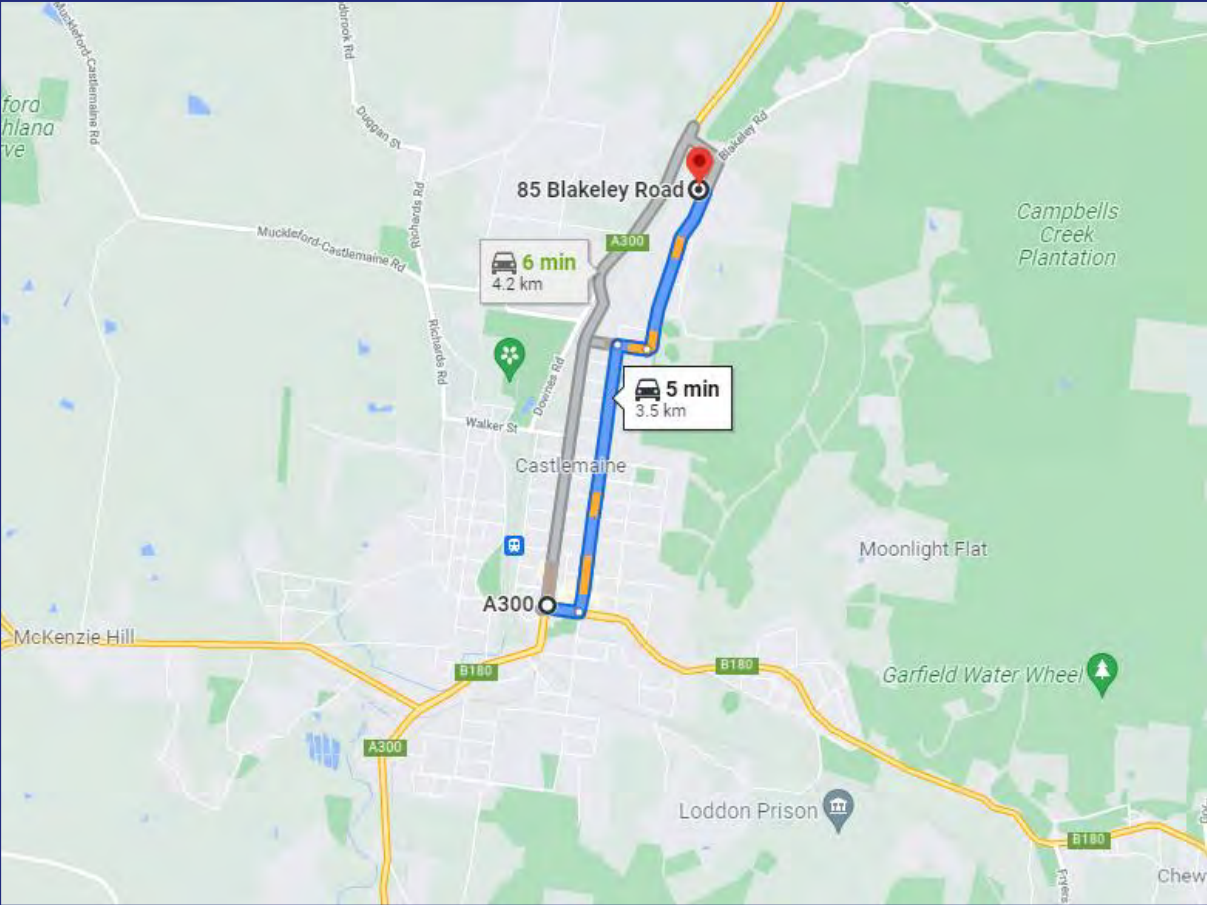


Figure 19: Expected Traffic Route from Centre of Castlemaine to Subject Site

4.5.5. Castlemaine, Bendigo and Kyneton Events

Larger events will encompass community members from the Castlemaine, Bendigo and Kyneton congregations. Accordingly, the arrival and departure distribution will be different for these events.

These events will accommodate 466 patrons and generate up to 140 vehicle trips before and after events.

The quickest route for patrons arriving from Bendigo and Kyneton is via Midland Highway to the north³. Approximately 75% of all patrons can therefore be expected to arrive via this route. The remaining 25% will arrive from the Castlemaine area to the south (mostly the local Castlemaine congregation members).

Based on the above, we anticipate the following traffic distribution:

- All traffic will arrive for the beginning of a service, and depart at its conclusion
- 75% of traffic will be generated to/from the north along Midland Highway and Sawmill Road to Blakeley Road
- 25% of traffic will be generated to/from the south. Of this traffic:
 - 20% of traffic will travel along Midland Highway and Sawmill Road to Blakeley Road
 - 80% of traffic will travel along Hargraves Street and Myring Street to Blakeley Road

Figure 20 below details the expected traffic volumes generated by the proposed place of assembly during the Saturday peak hour period. For diagrammatic purposes we have illustrated all traffic turning into the site at one location on Blakeley Road, while during the larger events, this will be split over the two carparks on Blakeley Road.

³ Google Maps indicates a 26-minute travel time from Kyneton to the site via Midland Highway to the north, and 31 minutes if a patron drove through Castlemaine to arrive from the south. Although some patrons may arrive from the south in any case, particularly if they visited other destinations in central Castlemaine.

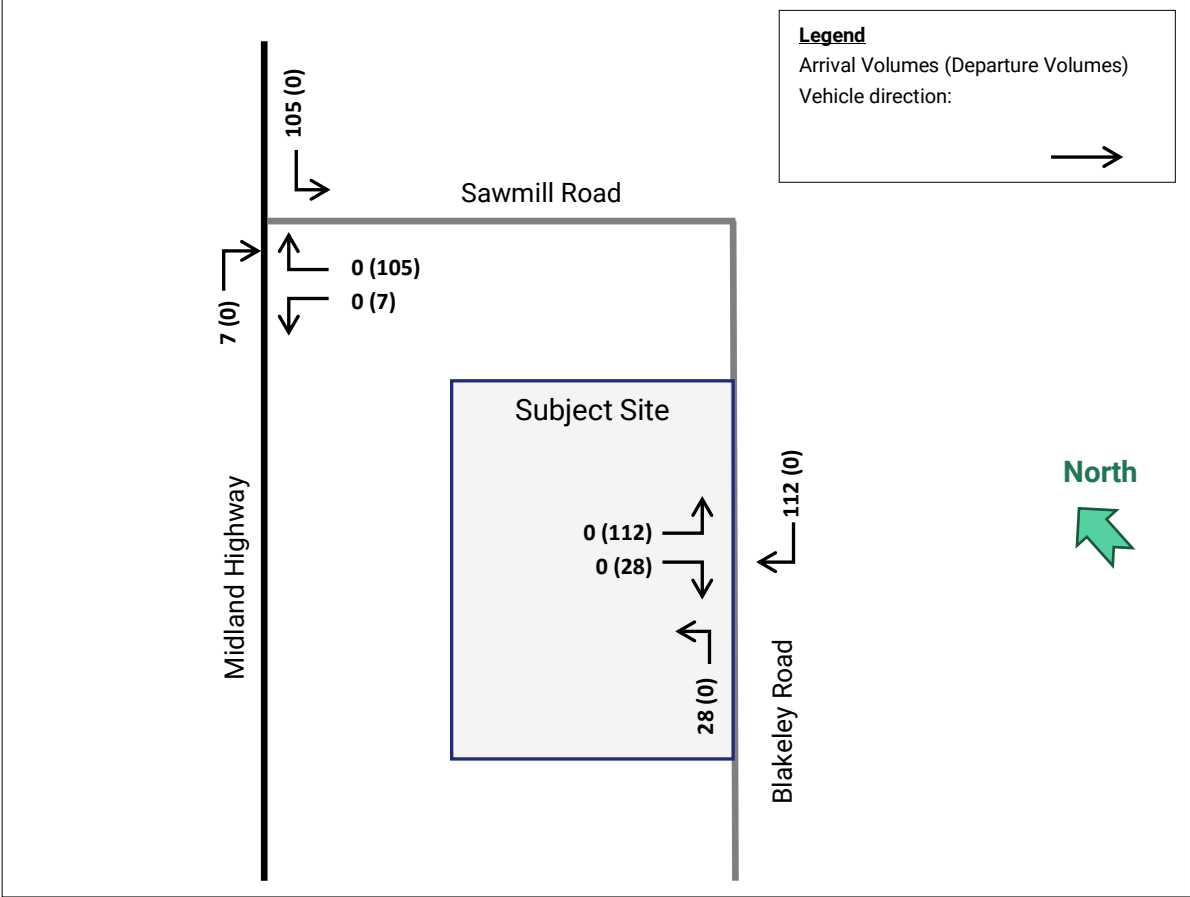


Figure 20: Site Traffic Volumes (Saturday peak hour)

The automatic traffic counts found that Midland Highway carried more traffic around 11am on the Saturday than it did on the Sunday. Two-way traffic volumes on Sawmill Road were the same on Saturday and Sunday (around 16 vehicles per hour).

Figure 22 presents the Saturday traffic volumes at 11am for both Midland Highway and Sawmill Road. Specifically:

- We have increased the volumes on Midland Highway by 5% from those recorded in the counts, the reflect the prevailing CV19 restrictions (see Section 3.2.2).
- We have adopted the same traffic volumes on Sawmill Road as recorded during the Sunday turning movement count (see Figure 10) on the basis that Sawmill Road carried the same two-way traffic volume on Saturday and Sunday at 11am.

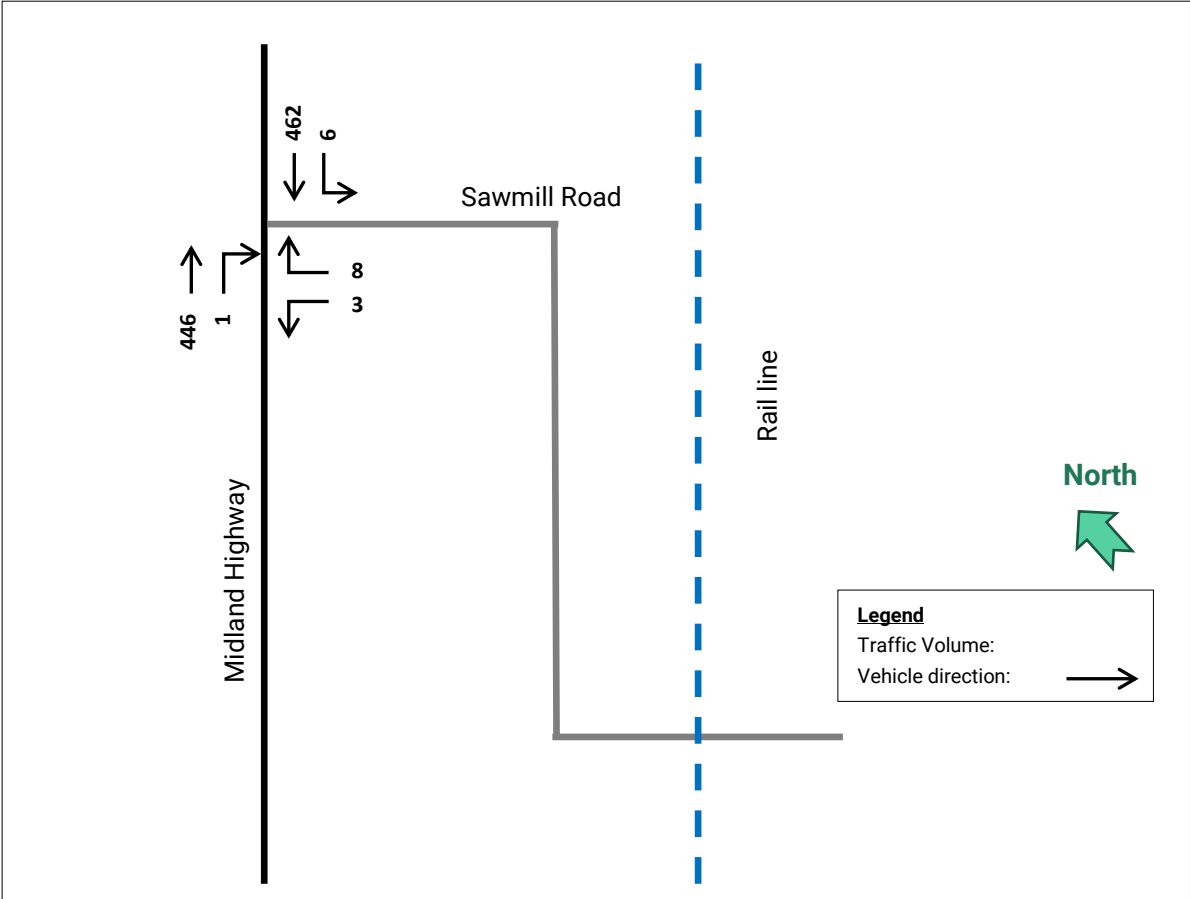


Figure 21: Saturday Peak Hour Traffic Volumes of Midland Highway / Sawmill Road intersection

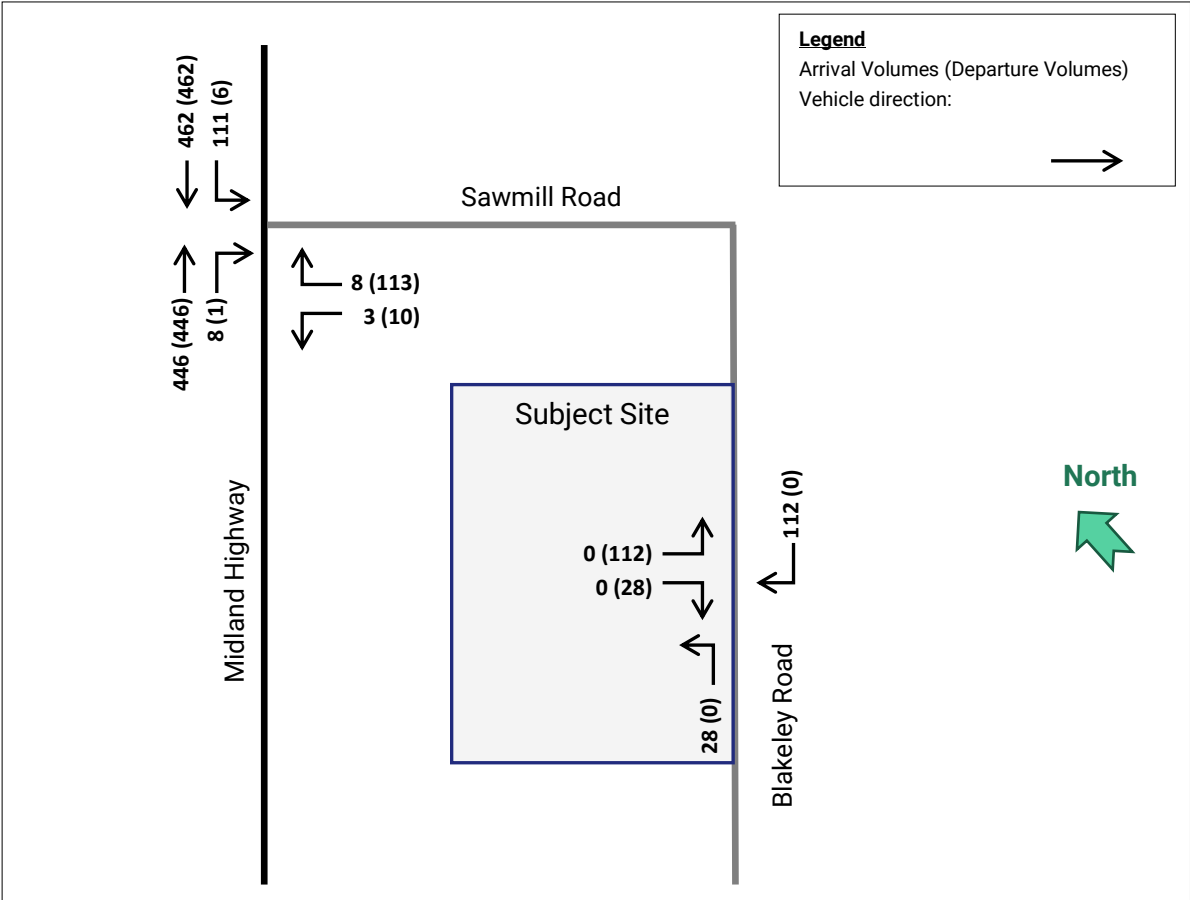


Figure 22: Traffic Volumes (Post-development)

An analysis of the peak hour traffic volumes on the critical intersection of Sawmill Road and Midland Highway is provided in Section 4.5.6.

4.5.6. SIDRA Assessment

SIDRA 9.0 has been used to assess the performance of the Midland Highway and Sawmill Road intersection, for both existing and post-development traffic volumes.

The intersection capacity analysis allows estimation of key operating parameters such as intersection Degree of Saturation (DoS), Level of Service (LoS) and 95th percentile queue, which are described below:

- **Degree of Saturation (DoS)** – measure of intersection performance expressed as a ratio of demand/capacity. A DOS greater than 0.95 is generally regarded as unsatisfactory for a signalised intersection, while a DOS greater than 0.90 is generally regarded as unsatisfactory for an unsignalised intersection. This is shown in the table below.
- **95th Percentile Queue** – this is the length of queue in vehicles or meters which is exceeded only 5% of the time over the analysis period (i.e. a peak hour).
- **Level of Service (LoS)** – the level of service is based on the average delay in this analysis.

Table 11: Description of Intersection Performance Levels

Level of Service		Intersection Degree of Saturation	
		Unsignalised Intersection	Signalised Intersection
A	Excellent	<= 0.60	<= 0.60
B	Very Good	0.60 – 0.70	0.60 – 0.70
C	Good	0.70 – 0.80	0.70 – 0.90
D	Acceptable	0.80 – 0.90	0.90 – 0.95
E	Poor	0.90 – 1.00	0.95 – 1.00
F	Very Poor	>= 1.0	>= 1.0

The SIDRA intersection diagram is presented in the figure below. It is a diagrammatic model and not to scale. The detailed SIDRA outputs are presented at Appendix D

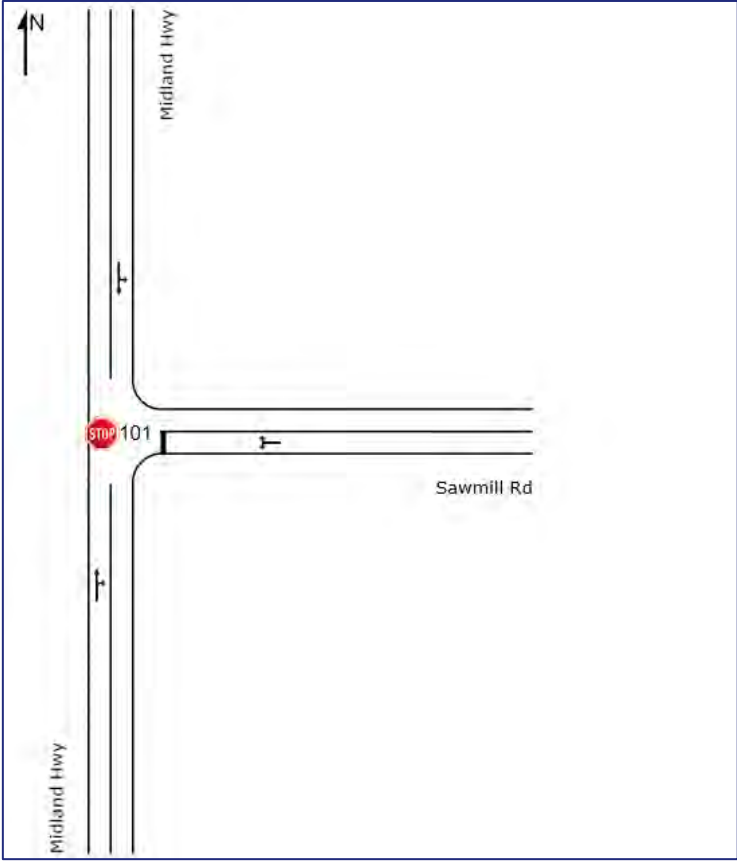


Figure 23: SIDRA Network Model

Table 12 summarises the change to each individual movement on each leg of the intersection under existing and post development conditions.

Importantly, the LoS does not change (i.e. does not get worse) for any leg of the intersection during post-development conditions, with the lowest LoS being C (for the eastern leg of Sawmill Road). Furthermore, delays and queuing lengths are also minimal.

Accordingly, we are satisfied that the Midland Highway / Sawmill Road intersection will operate to an acceptable level post-development and can accommodate the expected level of traffic always generated by the site.

Table 12: SIDRA Analysis – Midland Highway / Sawmill Road

Approach	Move- ment	Existing			Post-Development (Arrival)			Post-Development (Departure)		
		DoS	Av. Delay (s)	95% Queue (m)	DoS	Av. Delay (s)	95% Queue (m)	DoS	Av. Delay (s)	95% Queue (m)
Midland Hwy (S)	T	0.264	0	0.1	0.255	0.1	1.0	0.246	0.0	0.1
	R	0.264	9.4	0.1	0.255	10.5	1.0	0.246	9.4	0.1
Sawmill Rd (E)	L	0.028	10.0	0.6	0.031	10.0	0.7	0.356	11.8	9.9
	R	0.028	15.2	0.6	0.031	16.5	0.7	0.356	18.1	9.9
Midland Hwy (N)	L	0.258	7.0	0.0	0.319	7.1	0.0	0.258	7.0	0.0
	T	0.258	0	0.0	0.319	0.1	0.0	0.258	0.0	0.0

4.5.7. Other Issues – Sight distance at Midland Highway/Sawmill Road

At Section 4.3.1, we assessed the sight distance available at the site access points. Here we have assessed the sight distance available at the Midland Highway/Sawmill Road intersection.

There are no issues to the north of this location, with a sight distance in excess of 300m to the north available when exiting Sawmill Road. Sight distance to the south is more constrained by the curvature of Midland Highway as it passes through the cutting. In this direction, a sight distance of approximately 150m is available from Sawmill Road.

SISD for an 80km/h speed limit is 181m based on a reaction time of 2.0 seconds or 170m based on a reaction time of 1.5 seconds. On the approach to Sawmill Road from the south, there is a warning sign of the approaching intersection, and a lower reaction time would be reasonable to apply.

The SISD criteria set out above often cannot be obtained at accesses in constrained situations, including on roadways with tighter horizontal and vertical alignments, or where there is significant roadside vegetation. This is applicable in this case with Midland Highway passing through a cutting south of Sawmill Road.

In these situations, minimum sight distances should comply with SISD using values given under the extended design domain (EDD) criteria for intersections.

The values adopted under the EDD are values outside of the normal design domain (NDD) that through research and/or operating experience, particular road agencies have found to provide a suitable solution in constrained situations.

In the case of SISD under the EDD, the 'observation time' is permitted to be reduced based on the major road configuration and traffic volumes. Based on the type of intersection in this case, the observation time can be reduced to 2.0 seconds because the intersection satisfies the following criteria:

T-intersections on single carriageway roads (two-lane, two-way roads and one-way roads) that have a traffic volume ≥ 4000 veh/d

The relevant SISD requirements as set out within the EDD are presented in the table below.

Table 13: Minimum EDD Safe Intersection Sight Distance (SISD) Assessment – 80km/h

Situation	Austroads Guide to Road Design Part 4A (Appendix A – EDD)		Measurement	Satisfactory?
	Table A 9 Norm-Day SISD Observation Time 2.0 seconds			
	Reaction Time 1.5 Seconds	Reaction Time 2.0 Seconds		
Minor Road Approach (Sawmill Road)				
View to the south from site access	133m	144m	Approx. 150m	Yes
View to the north from site access			>300m	Yes
Major Road Approach (Waiting to turn into Sawmill Road)				
View to north while propped to turn right	133m	144m	>300m	Yes
View on approach to intersection to see propped vehicle			>200m	Yes

Accordingly, the Sawmill Road/Midland Highway intersection complies with the above requirements under Appendix A (Extended Design Domain) of Austroads Guide to Road Design Part 4A and we are satisfied that the sight distance available at this intersection will not present an unsafe situation that would pose a risk to turning or approaching vehicles.

4.6. Review of Department of Transport Conditions

When the previous application first went to VCAT on October 18th 2021, the conditions of permit by the Department of Transport required the following:

- A Channelised Right-turn Lane (CHR) on Midland Highway into Sawmill Road
- An Auxiliary Left-turn Lane (AUL) on Midland Highway into Sawmill Road
- A SIDRA analysis of the intersection
- A Functional Layout Plan of the intersection
- The preparation of a Road Safety Audit of the intersection.

The main works required is the provision of left and right turn lanes into Sawmill Road in Midlands Highway. The requirement for SIDRA analysis, a Functional Layout Plan and Road Safety Audit all stem from providing turn lanes.

The new application has reduced patron numbers, such that the regular maximum number of people on the site is only 50 and large events of 466 patrons are now limited to once every three weeks.

In reviewing whether turn lanes are required, we have had reference to the Austroads Guide to Traffic Management – Part 6 Intersections, Interchanges and Crossings Management (2020). However, it should be noted that the warrants for turn lanes under this standard are based on the construction of intersection on new public roads in greenfield areas.

This diagram provides three levels of increasing design standard for turning lane treatments (i.e. Basic Auxiliary Right < Channelised Right (Short) < Channelised Right). Importantly, there is no scenario where 'no turn lane treatment' is required by this diagram.

Based on the traffic volumes presented at Figure 22, the intersection of Midland Road / Sawmill Road meets the warrants for a channelised right turn lane (short) and auxiliary left turn lane. This is demonstrated in Figure 24 below⁴.

⁴ Figure 3.25 of Austroads Guide to Traffic Management – Part 6 Intersection, Interchanges and Crossing Management (2020)

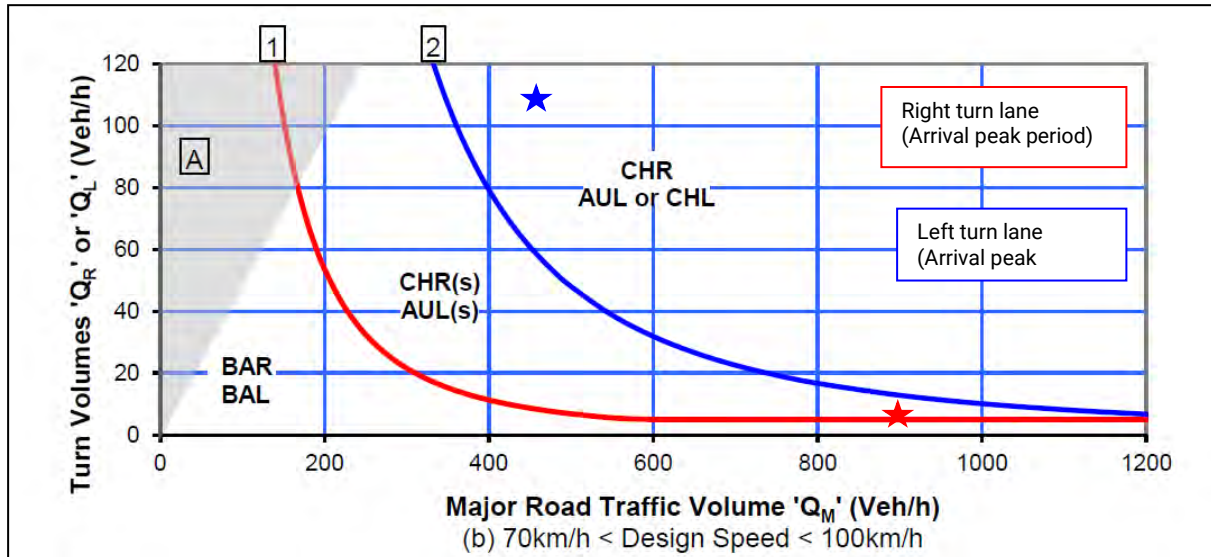


Figure 24: Warrants for Auxiliary Turn Lanes – Austroads

The Department of Transport conditions are not consistent with this diagram, specifically by requiring the highest design standard of left and right turn lanes at this intersection.

The Austroads Guides are engineering guidelines, and their application requires engineering judgement. In our view, left and right turning lanes are not required at the Midland Highway / Sawmill Road intersection for the following reasons:

- Compared to other uses such as supermarkets/other commercial uses or residential uses each of which generate traffic across the day, every day of the week, the traffic impacts of the development will be far more limited, with traffic only occurring at the beginning and end of services. Notably:
 - The regular, local services for the Castlemaine congregation will not generate a substantial number of trips through this intersection. These activities have also been limited to 50 people (down from 150 at the last VCAT application).
 - The larger services for the Castlemaine, Bendigo and Kyneton congregations occur approximately once every three weeks (rather than every weekend, as these services rotate between the three townships).
- The SIDRA analysis undertaken at Section 4.5.6 indicates that the intersection will operate to a satisfactory level post-development under its current form. There will be a minimal increase in delay and queuing on any leg of the intersection, including turning left and right into Sawmill Road.
- The Austroads Guidelines are intended for new intersections in greenfield locations, not brownfield site that is highly constrained (see following section). The guidelines do not include any situation where 'no treatment' is required. Particularly in situations where the intersection is an existing low-volume environment, we find Austroads Guidelines to be of limited assistance. The level of traffic expected to be generated by the site is relatively low and infrequent (it is not occurring everyday or for long periods of the day).

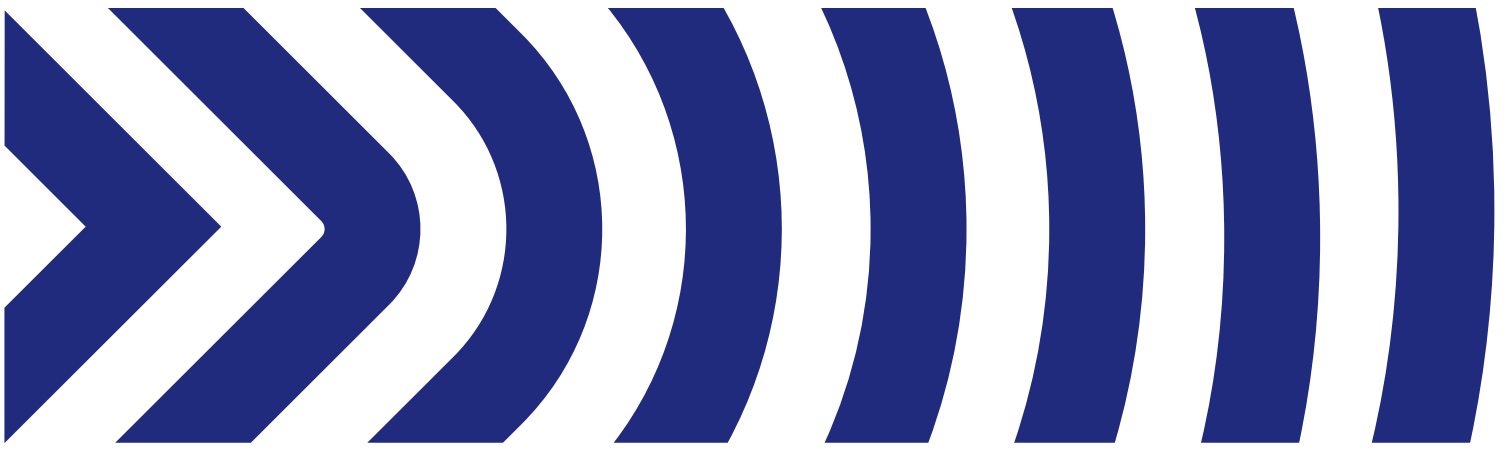
- There are significant practical constraints with providing turn lanes at the Midland Highway/Sawmill Road intersection, as described in the following section.
- There are no turning lanes provided to other local roads in the vicinity of the site from Midland Highway. Requiring turning lanes for this development would be inconsistent with the existing nearby road network profile.

Based on the above, we are satisfied that turning lanes are not warranted for a development of this scale.

5. Conclusions

Having undertaken a detailed traffic engineering assessment for the proposed place of assembly at 83-85 Blakeley Road, Castlemaine, we are of the opinion that:

- a) the proposed development has a statutory car parking requirement of 139 car spaces under Clause 52.06-5 for typical service operations (i.e. up to 466 patrons), which is met on-site,
- b) a total of 4 bicycle spaces are required under Clause 52.34 of the Planning Scheme and a condition of permit should be included requiring these to be provided,
- c) the access arrangements and car parking layout comply with the requirements of Clause 52.06-9, AS2890.1-2004 (where relevant) and AS2890.3-6-2009 and are appropriate,
- d) waste collection and loading activities will be undertaken within the on-site and are appropriate,
- e) the level of traffic generated as a result of the proposal can be adequately accommodated by the local road network without adversely impacting on the safety or operation of the nearby road network,
- f) turn lanes on Midland Highway at Sawmill Road are not required to accommodate the development traffic, and
- g) there are no traffic engineering reasons why a planning permit for the proposed place of assembly, should be refused, subject to appropriate conditions.



Appendix A

Development Plans

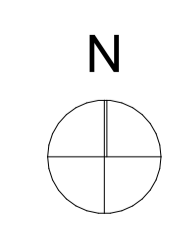


SITE PLAN PROPOSED

1:500



Rev	Date	Amendment
-	01/09/2021	VCAT



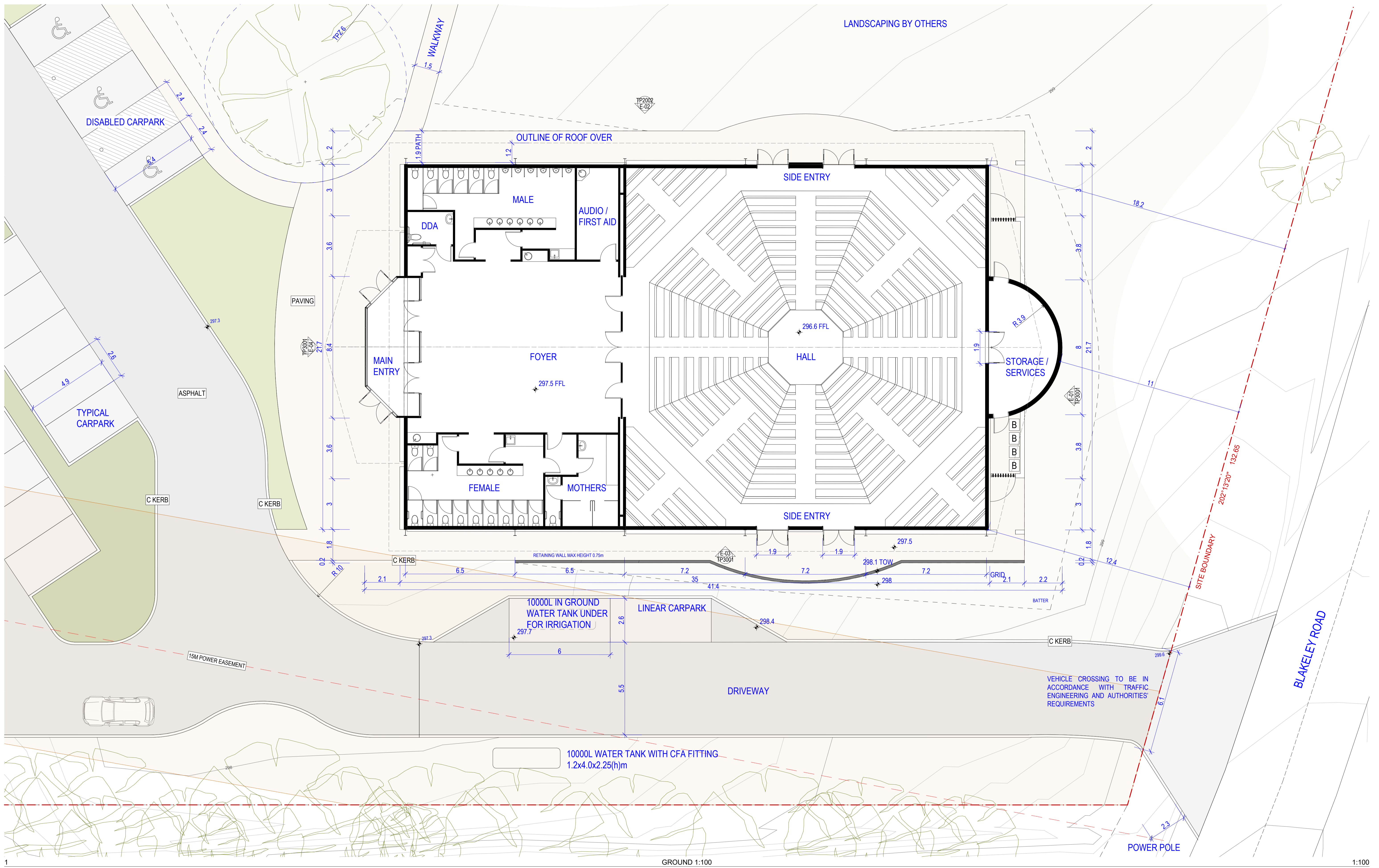
NOT FOR CONSTRUCTION



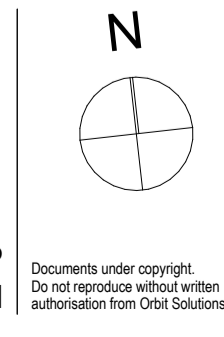
Project:
PLACE OF WORSHIP
At:
83 BLAKELEY RD
CASTLEMAINE VIC 3450
For:
CASTLEMAINE GOSPEL TRUST

Drawing Name:	SCALE
SITE PLAN PROPOSED	1:500 @ A1
PLAN - GENERAL ARRANGEMENT	1:1000 @ A3
Issue Date:	Architect:
01/09/2021	CG
Drawn:	Size:
HD	A1
Job No:	Issue:
A21002	-
TP2003	

BUSHFIRE MANAGEMENT
PLACE OF WORSHIP TO BE CONSTRUCTED TO BUSHFIRE ATTACK LEVEL BAL 29, WITH ASSOCIATED DEFENDABLE SPACE.
PROPOSED LOT 1 TO INCLUDE SETBACK REQUIREMENTS FOR FUTURE DWELLING, WITH ASSOCIATED DEFENDABLE SPACE.
NOTE: SEE TP5001 FOR PROPOSED SUBDIVISION LAYOUT AND PROPOSED PLACE OF WORSHIP PLANNING UNIT.

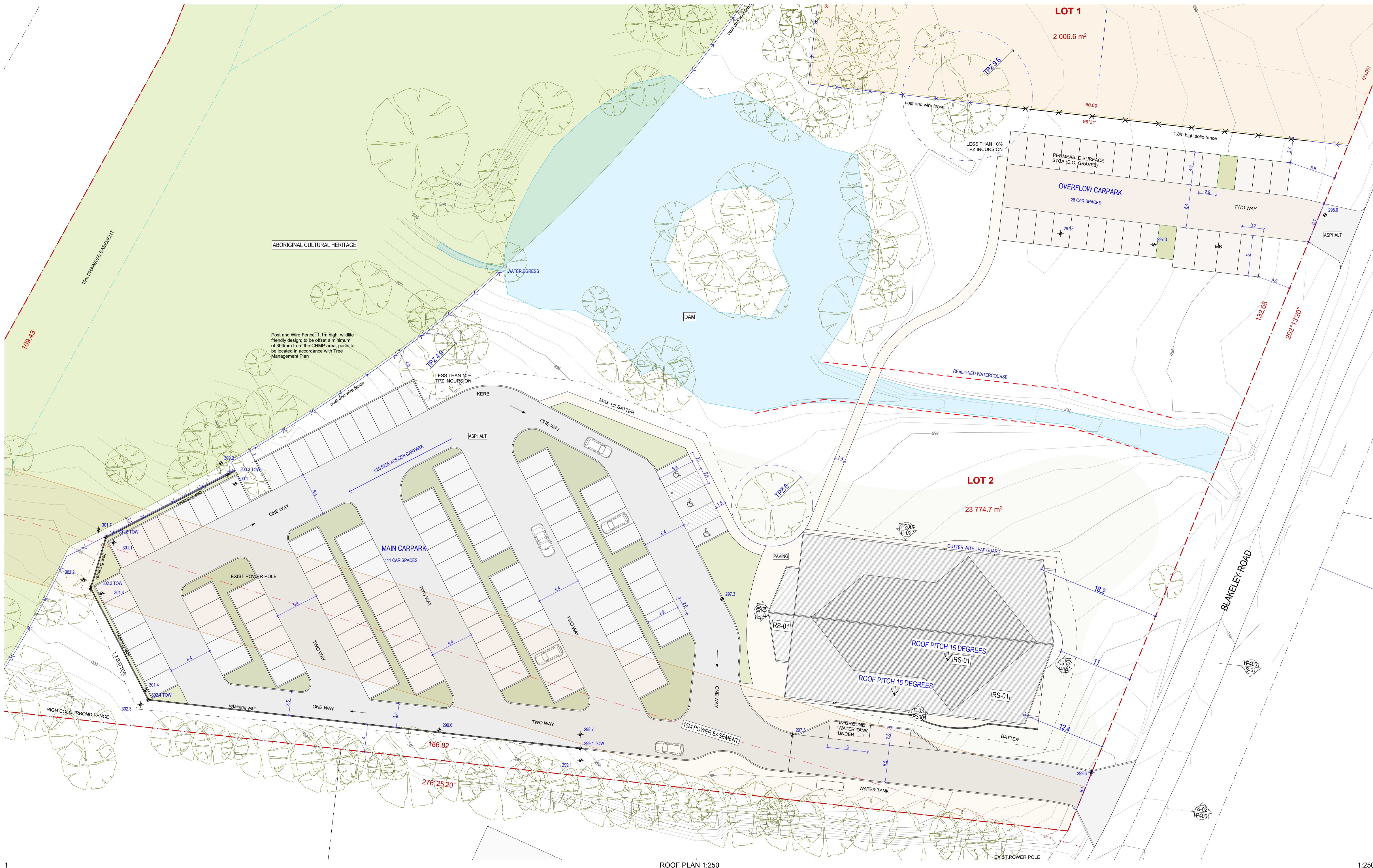


Rev	Date	Amendment
-	01/09/2021	VCAT



TP
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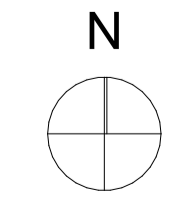
1

ROOF PLAN 1:250

1:250



Rev	Date	Amendment
-	01/09/2021	VCAT



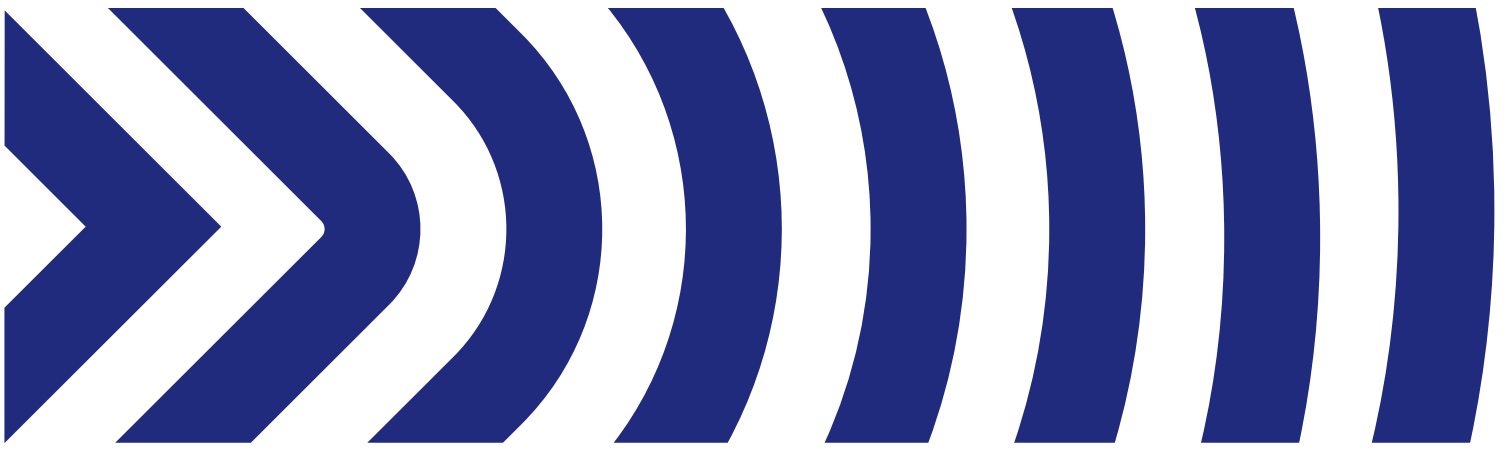
TP
NOT FOR CONSTRUCTION



Project: PLACE OF WORSHIP
At: 83 BLAKELEY RD
CASTLEMAINE VIC 3450
For: CASTLEMAINE GOSPEL TRUST

Job No: A21002

Drawing Name:	SCALE
ROOF PLAN	1:250 @ A1
PLAN - GENERAL ARRANGEMENT	1:500 @ A3
Issue Date:	Architect:
01/09/2021	CG
Drawing No.:	Drawn:
TP2005	HD
	Size:
	A1
	Issue:
	-



Appendix B

Traffic Counts

TRANS TRAFFIC SURVEY

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AUTOMATIC COUNT SUMMARY

Street Name :	Midland Hwy	Location :	North of Sawmill Rd
Suburb :	Castlemaine	Start Date :	00:00 Fri 10/September/2021
Metrocount ID	ME43MW13	Finish Date :	00:00 Fri 17/September/2021
Site ID Number :	11558	Speed Zone :	80 km/h
Prepared By :	Vo Son Binh	Email:	binh@trafficsurvey.com.au

GPS information	Lat	37° 2' 11.53 South	Direction of Travel		
	Long	144° 13' 42.47 East	Both directions	Northbound	Southbound
Traffic Volume : (Vehicles/Day)	Weekdays Average		10,062	5,045	5,017
	7 Day Average		9,164	4,599	4,565
Weekday	AM	08:00	753	312	441
Peak hour starts	PM	15:00	986	602	384
Speeds : (Km/Hr)	85th Percentile		82.0	81.7	82.4
	Average		76.4	76.2	76.7
Classification % :	Light Vehicles up to 5.5m		94.4%	94.7%	94.1%

Location

GPS Information [Load Google Map \(internet required\)](#)
(Latitude, Longitude) -37.036536, 144.228464



[Speed Data](#) [Speed Graph](#) [Speed Bin](#)
[Volume Data](#) [Volume Graph](#) [Classification](#)



QUALITY ASSURED COMPANY BY ISO 9001:2015
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ENVIRONMENT MANAGEMENT SYSTEM CERTIFIED TO ISO14001:2015

Status of movement – Covid 19

"Traffic behaviour is not the same as pre-pandemic (traditional morning/afternoon peak is much less pronounced and school start/finish times are much more pronounced), the current patterns are close enough to what probably is going to be a 'COVID normal' situation for at least the next year or two. Workplaces are currently not all yet open. These results should be used for indicative assessment only."



Site Midland Hwy

Direction

[Back to Site Summary Page](#)

Day	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	7 days		Weekday		Weekend	
	Date	13/09/2021	14/09/2021	15/09/2021	16/09/2021	10/09/2021	11/09/2021	12/09/2021	Total	Average	Total	Average	Total
AM Peak	08:00	08:00	08:00	08:00	11:00	11:00	11:00	N/A	11:00	N/A	08:00	N/A	11:00
PM Peak	15:00	15:00	15:00	16:00	15:00	13:00	14:00	N/A	15:00	N/A	15:00	12:00	12:00
00:00	15	87	76	71	72	59	21	401	57	321	64	80	40
01:00	8	16	11	13	18	19	8	93	13	66	13	27	14
02:00	9	11	15	14	9	5	15	78	11	58	12	20	10
03:00	25	22	26	28	19	8	6	134	19	120	24	14	7
04:00	139	130	127	126	118	31	22	693	99	640	128	53	27
05:00	248	244	257	266	211	84	31	1341	192	1226	245	115	58
06:00	360	373	394	374	352	133	81	2067	295	1853	371	214	107
07:00	611	634	597	662	586	232	110	3432	490	3090	618	342	171
08:00	718	782	759	746	758	366	173	4302	615	3763	753	539	270
09:00	593	623	614	629	712	594	388	4153	593	3171	634	982	491
10:00	582	594	571	590	801	768	490	4396	628	3138	628	1258	629
11:00	585	567	612	593	841	865	607	4670	667	3198	640	1472	736
12:00	634	604	622	595	794	810	618	4677	668	3249	650	1428	714
13:00	657	674	710	661	846	831	573	4952	707	3548	710	1404	702
14:00	888	840	882	898	989	730	638	5865	838	4497	899	1368	684
15:00	967	968	1015	947	1035	709	587	6228	890	4932	986	1296	648
16:00	806	944	863	957	981	623	445	5619	803	4551	910	1068	534
17:00	661	706	735	770	792	459	352	4475	639	3664	733	811	406
18:00	315	347	420	433	451	259	211	2436	348	1966	393	470	235
19:00	146	145	199	238	255	173	131	1287	184	983	197	304	152
20:00	111	115	123	134	152	87	94	816	117	635	127	181	91
21:00	63	81	98	81	105	72	49	549	78	428	86	121	61
22:00	99	120	121	114	135	79	81	749	107	589	118	160	80
23:00	134	133	139	126	97	56	40	725	104	629	126	96	48
Total	9374	9760	9986	10066	11129	8052	5771	64138	9162	50315	10065	13823	6915
% Heavy	6.89%	6.63%	6.59%	6.45%	5.35%	2.78%	3.02%	5.60%		6.35%		2.88%	

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AUTOMATIC COUNT SUMMARY

Street Name :	Sawmill Rd	Location :	Outside Property 1
Suburb :	Castlemaine	Start Date :	00:00 Fri 10/September/2021
Metrocount ID	MD722R32	Finish Date :	00:00 Fri 17/September/2021
Site ID Number :	11559	Speed Zone :	50 km/h
Prepared By :	Vo Son Binh	Email:	binh@trafficsurvey.com.au

GPS information		Direction of Travel		
Lat	37° 2' 18.90 South	Both directions	Westbound	Eastbound
Long	144° 13' 44.35 East			
Traffic Volume : (Vehicles/Day)	Weekdays Average	280	151	129
	7 Day Average	248	133	115
Weekday AM	08:00	34	18	15
Peak hour start PM	15:00	31	13	18
Speeds : (Km/Hr)	85th Percentile	48.0	53.1	44.3
	Average	43.5	47.1	40.4
Classification % :	Light Vehicles up to 5.5m	95.6%	96.3%	96.6%

Location

GPS Information [Load Google Map \(internet required\)](#)
(Latitude, Longitude: -37.038583, 144.228987)



[Speed Data](#) [Speed Graph](#) [Speed Bin](#)
[Volume Data](#) [Volume Graph](#) [Classification](#)



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Status of movement – Covid 19

"Traffic behaviour is not the same as pre-pandemic (traditional morning/afternoon peak is much less pronounced and school start/finish times are much more pronounced), the current patterns are close enough to what probably is going to be a 'COVID normal' situation for at least the next year or two. Workplaces are currently not all yet open. These results should be used for indicative assessment only."



Site Sawmill Rd

Direction

[Back to Site Summary Page](#)

Day	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	7 days		Weekday		Weekend	
	Date	Date	Date	Date	Date	Date	Date	Total	Average	Total	Average	Total	Average
AM Peak	08:00	08:00	08:00	08:00	08:00	11:00	11:00	N/A	08:00	N/A	08:00	N/A	11:00
PM Peak	15:00	15:00	15:00	15:00	15:00	14:00	12:00	N/A	15:00	N/A	15:00	N/A	14:00
00:00	0	1	4	1	0	1	1	8	1	6	1	2	1
01:00	0	0	0	0	0	1	1	2	0	0	0	2	1
02:00	1	1	1	1	2	0	0	6	1	6	1	0	0
03:00	0	0	0	0	0	0	1	1	0	0	0	1	1
04:00	2	2	1	2	0	0	0	7	1	7	1	0	0
05:00	4	9	3	7	4	2	0	29	4	27	5	2	1
06:00	10	6	14	8	12	6	1	57	8	50	10	7	4
07:00	16	9	7	12	13	10	3	70	10	57	11	13	7
08:00	37	33	33	36	29	9	7	184	26	168	34	16	8
09:00	16	16	27	29	21	13	13	135	19	109	22	26	13
10:00	12	26	15	10	16	11	9	99	14	79	16	20	10
11:00	15	19	17	18	17	16	16	118	17	86	17	32	16
12:00	21	15	15	18	21	24	18	132	19	90	18	42	21
13:00	20	22	22	19	28	23	17	151	22	111	22	40	20
14:00	24	20	19	20	26	27	17	153	22	109	22	44	22
15:00	28	31	34	25	37	13	13	181	26	155	31	26	13
16:00	19	27	19	19	20	19	10	133	19	104	21	29	15
17:00	18	22	26	21	18	18	12	135	19	105	21	30	15
18:00	15	17	7	12	12	7	8	78	11	63	13	15	8
19:00	5	3	5	9	5	6	10	43	6	27	5	16	8
20:00	4	0	0	2	4	0	2	12	2	10	2	2	1
21:00	4	2	3	3	4	1	1	18	3	16	3	2	1
22:00	1	0	0	2	2	1	1	7	1	5	1	2	1
23:00	0	1	1	0	1	0	1	4	1	3	1	1	1
Total	272	282	273	274	292	208	162	1763	252	1393	278	370	188
% Heavy	5.88%	6.38%	5.13%	6.20%	3.42%	1.44%	0.62%	4.48%		5.38%		1.08%	

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AUTOMATIC COUNT SUMMARY

Street Name :	Blakeley Rd	Location :	Outside Property 83
Suburb :	Castlemaine	Start Date :	00:00 Fri 10/September/2021
Metrocount ID	ME5662JV	Finish Date :	00:00 Fri 17/September/2021
Site ID Number :	11560	Speed Zone :	60 km/h
Prepared By :	Vo Son Binh	Email:	binh@trafficsurvey.com.au

GPS information	Lat 37° 2' 29.52 South	Direction of Travel		
	Long 144° 13' 43.36 East	Both directions	Northbound	Southbound
Traffic Volume : (Vehicles/Day)	Weekdays Average	451	217	234
	7 Day Average	412	198	214
Weekday AM	08:00	42	17	25
Peak hour starts PM	15:00	49	27	22
Speeds : (Km/Hr)	85th Percentile	59.4	58.2	61.6
	Average	53.4	51.9	55.2
Classification % :	Light Vehicles up to 5.5m	92.7%	92.4%	93.0%

Location

GPS Information [Load Google Map \(internet required\)](#)
(Latitude, Longitude: -37.041534, 144.228712)



[Speed Data](#) [Speed Graph](#) [Speed Bin](#)
[Volume Data](#) [Volume Graph](#) [Classification](#)



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ENVIRONMENT MANAGEMENT SYSTEM CERTIFIED TO ISO14001:2015

Status of movement – Covid 19

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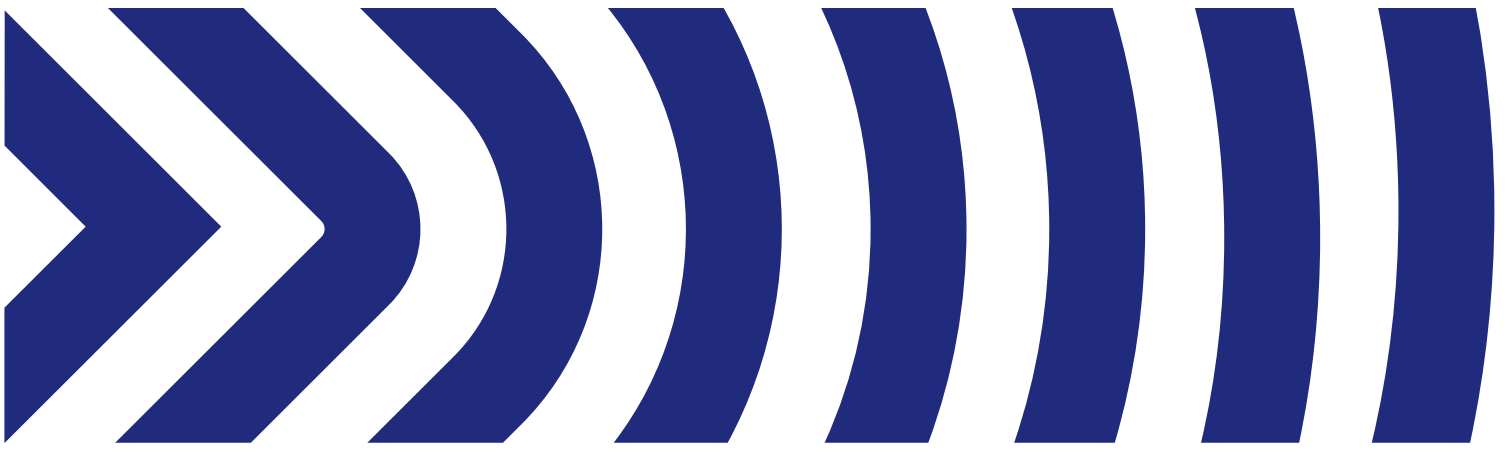


Site Blakeley Rd

Direction

[Back to Site Summary Page](#)

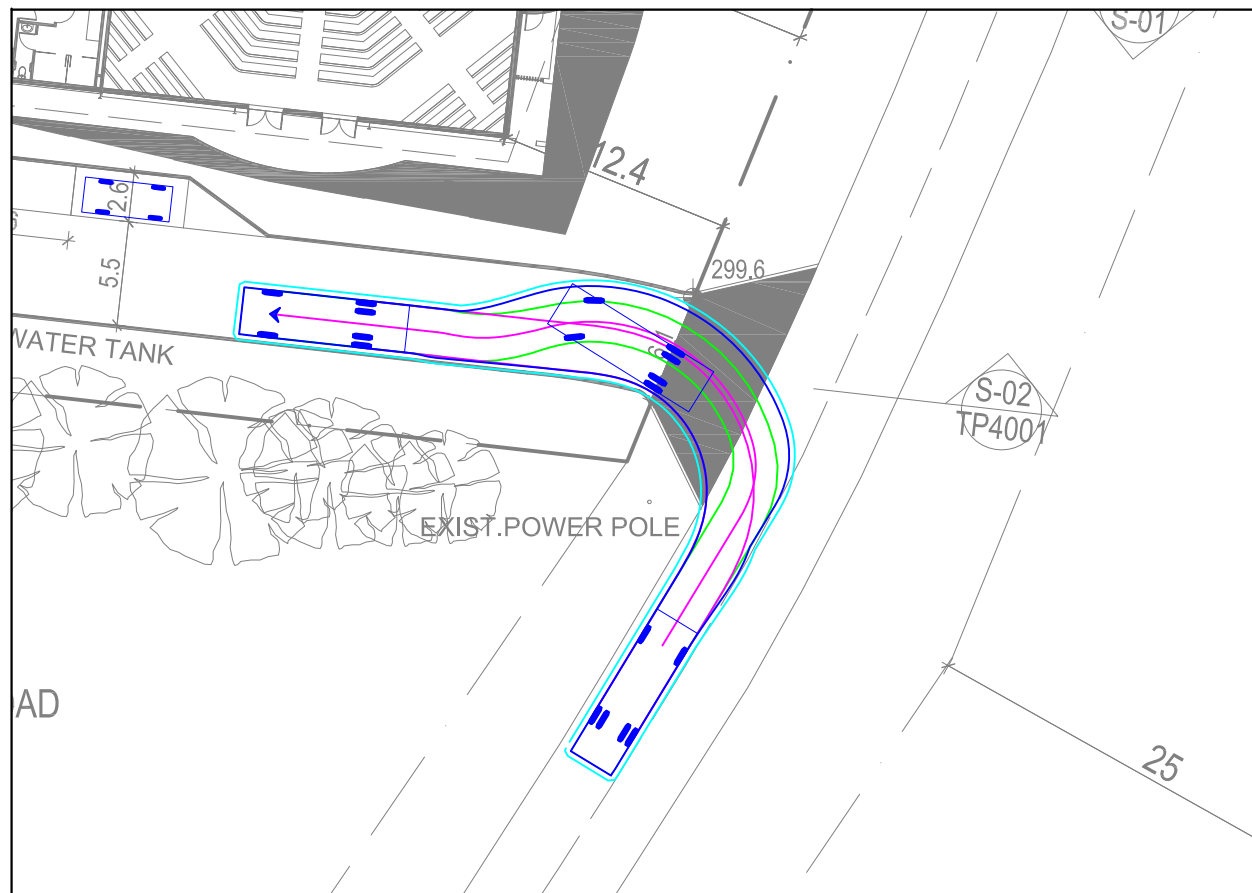
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	Date	Date	Date	Date	Date	Date	Date	Total	Average	Total	Average	Total	Average
AM Peak	08:00	08:00	08:00	08:00	11:00	10:00	10:00	N/A	08:00	N/A	08:00	N/A	10:00
PM Peak	12:00	16:00	15:00	15:00	15:00	14:00	13:00	N/A	15:00	N/A	15:00	N/A	13:00
00:00	0	1	3	2	0	2	1	9	1	6	1	3	2
01:00	0	0	1	0	0	1	1	3	0	1	0	2	1
02:00	1	1	1	1	2	0	0	6	1	6	1	0	0
03:00	0	0	0	0	0	0	1	1	0	0	0	1	1
04:00	2	2	1	2	0	0	0	7	1	7	1	0	0
05:00	4	11	4	7	4	1	0	31	4	30	6	1	1
06:00	11	10	13	11	14	8	0	67	10	59	12	8	4
07:00	31	14	16	18	20	7	6	112	16	99	20	13	7
08:00	40	40	47	43	41	12	12	235	34	211	42	24	12
09:00	32	25	35	40	40	21	20	213	30	172	34	41	21
10:00	30	35	26	22	32	27	28	200	29	145	29	55	28
11:00	28	29	27	39	44	27	28	222	32	167	33	55	28
12:00	46	26	22	37	43	42	26	242	35	174	35	68	34
13:00	35	38	32	31	43	41	36	256	37	179	36	77	39
14:00	20	26	32	38	40	47	24	227	32	156	31	71	36
15:00	41	43	54	51	58	21	17	285	41	247	49	38	19
16:00	29	46	32	37	36	29	24	233	33	180	36	53	27
17:00	37	44	40	43	47	34	19	264	38	211	42	53	27
18:00	20	23	18	19	32	12	13	137	20	112	22	25	13
19:00	8	4	8	12	9	7	12	60	9	41	8	19	10
20:00	7	0	1	2	5	3	3	21	3	15	3	6	3
21:00	8	2	5	6	9	4	0	34	5	30	6	4	2
22:00	1	0	0	1	2	2	2	8	1	4	1	4	2
23:00	0	0	0	1	1	0	1	3	0	2	0	1	1
Total	431	420	418	463	522	348	274	2876	412	2254	448	622	318
% Heavy	10.90%	10.00%	6.70%	6.91%	7.09%	5.17%	4.74%	7.55%		8.25%		4.98%	



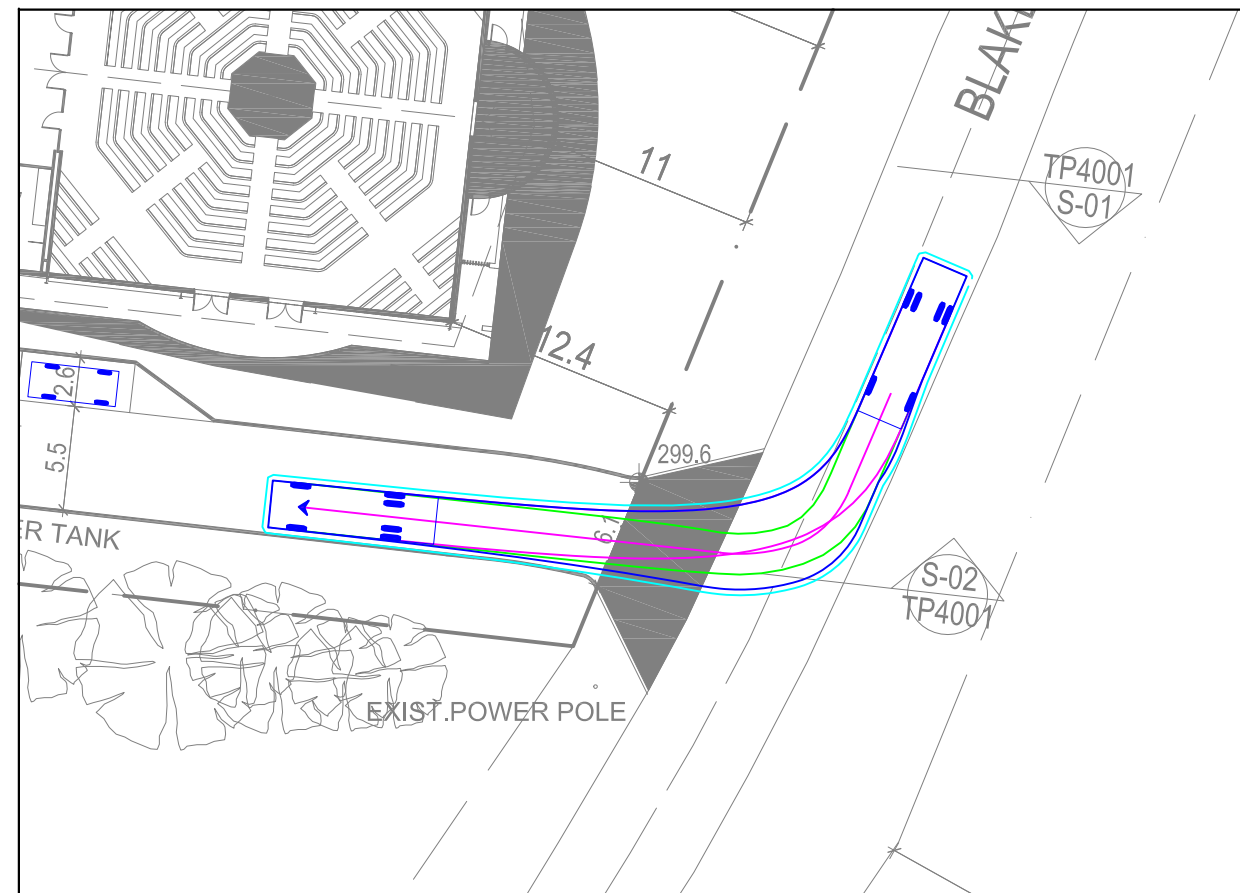
Appendix C

Swept Path Diagrams

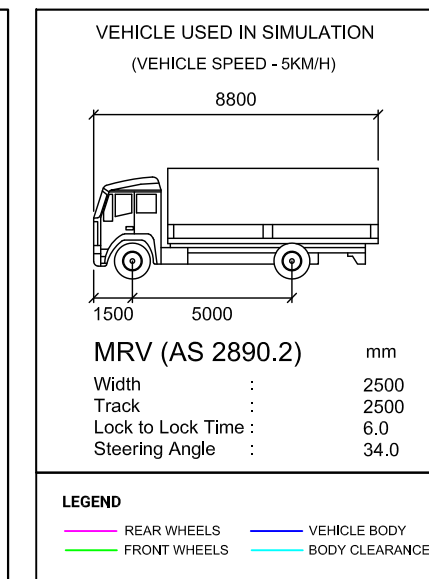
8.8m MRV - INGRESS FROM SOUTH



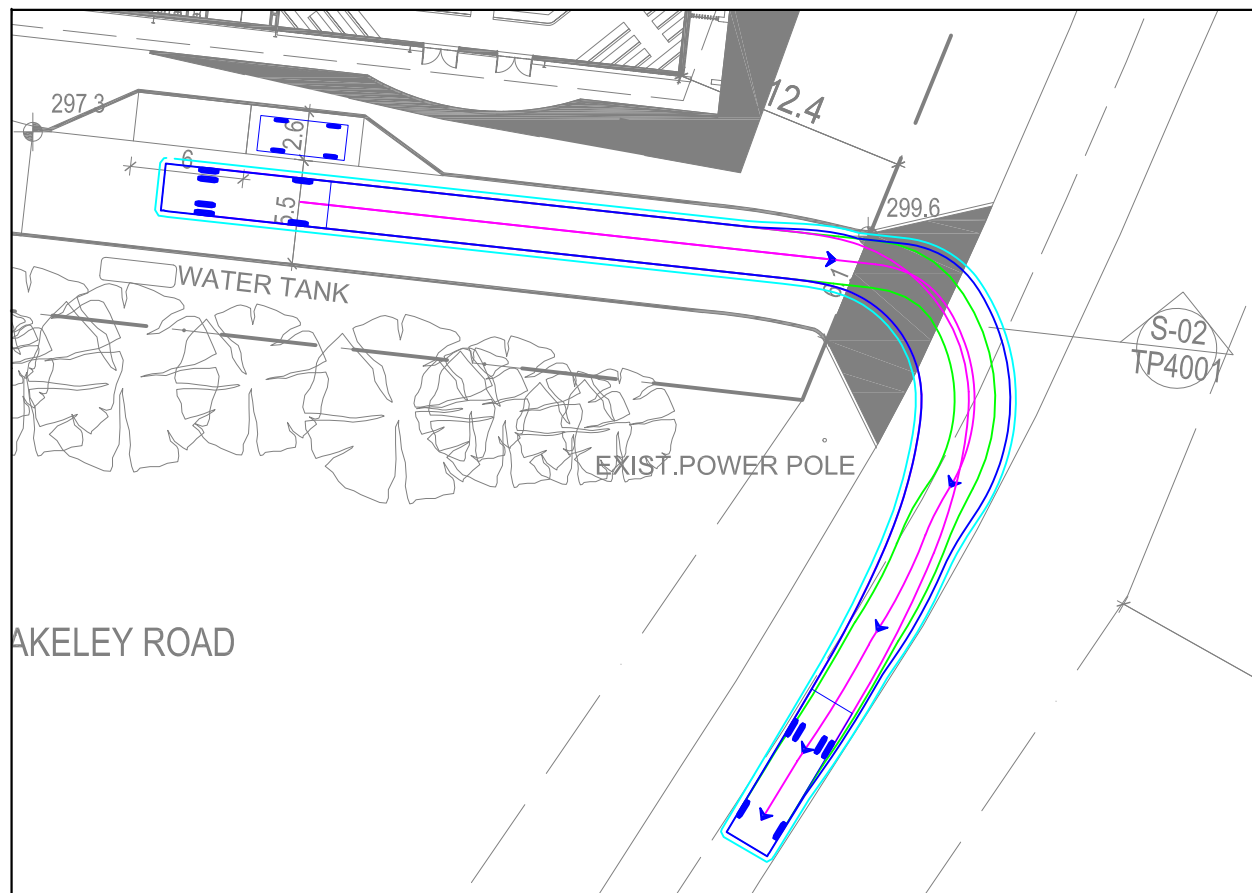
8.8m MRV - INGRESS FROM NORTH



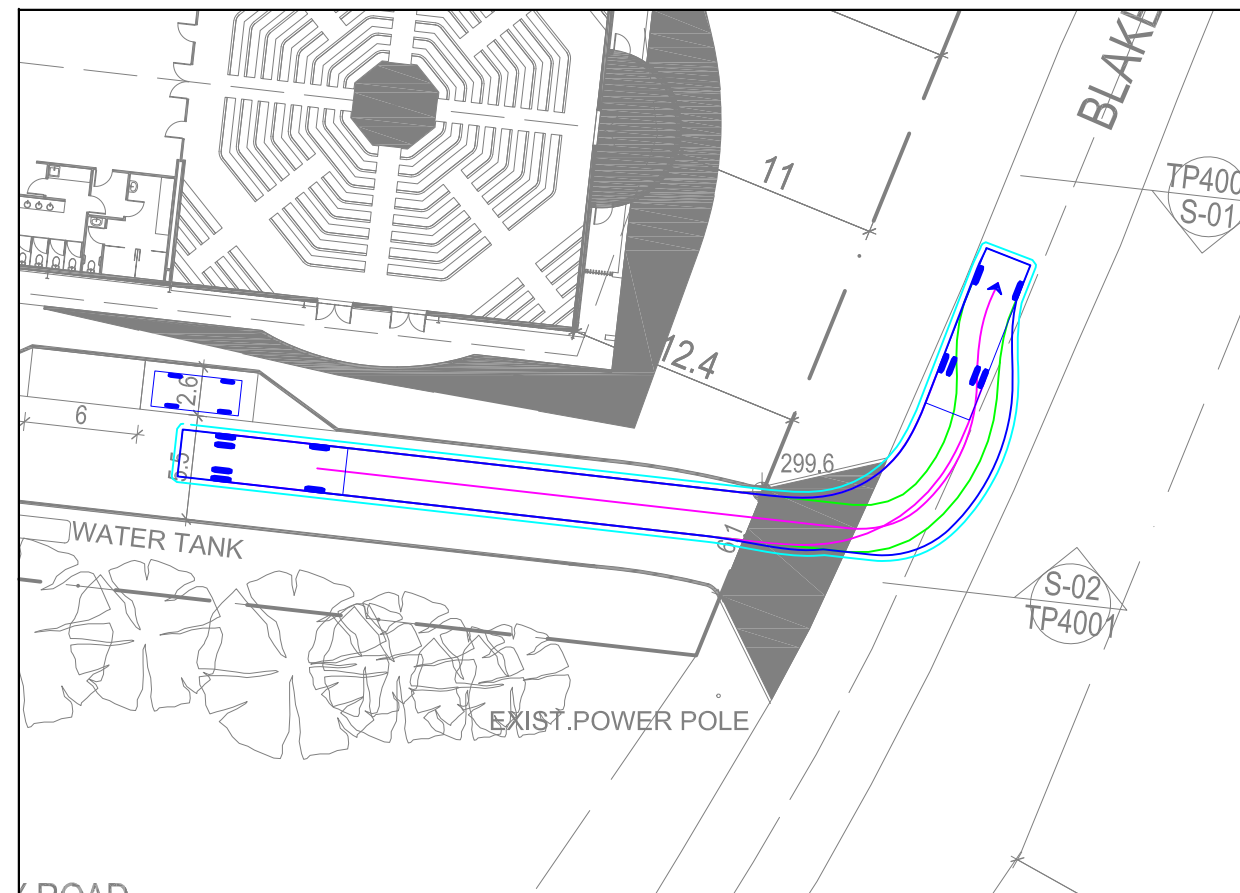
VEHICLE PROFILE



8.8m MRV - EGRESS TO SOUTH



8.8m MRV - EGRESS TO NORTH



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A	27/09/2021	VCAT ISSUE	K. BALLANTYNE	C. DUNSTAN

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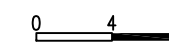
GENERAL NOTES:
BASE INFORMATION FROM DWG FILE 'A21002
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PREPARED BY ORBIT ARCHITECTURE

FILE NAME: G29990-01A
SHEET NO.: 01



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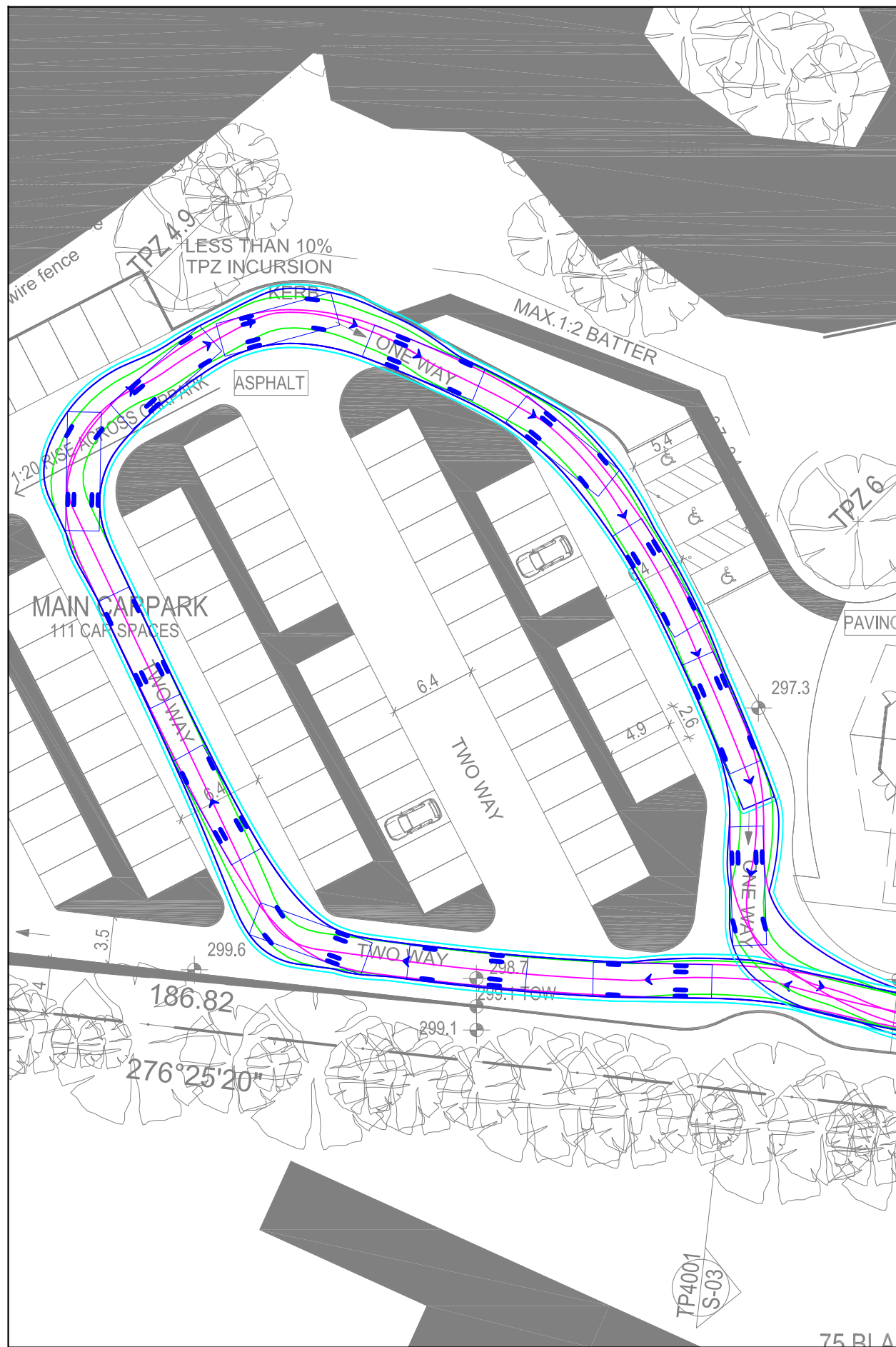
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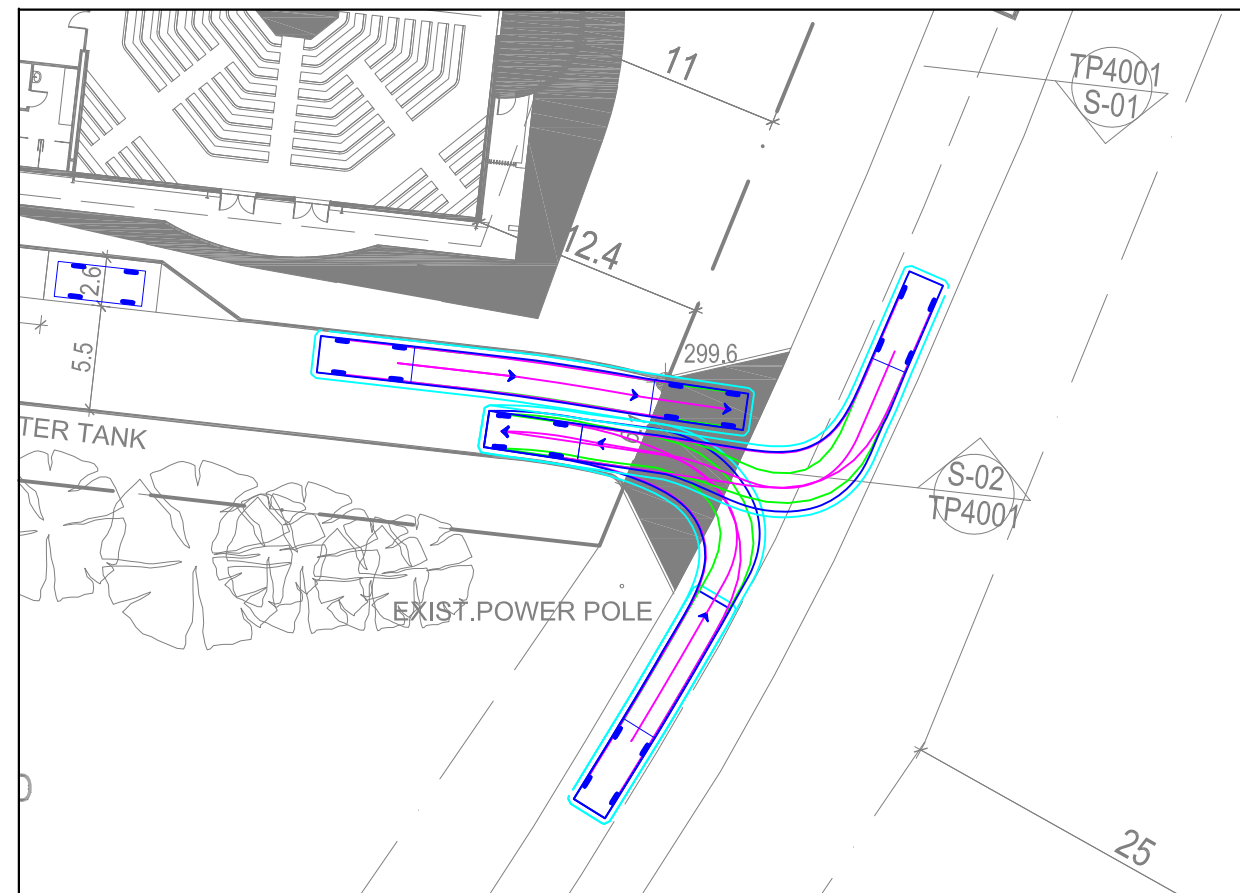
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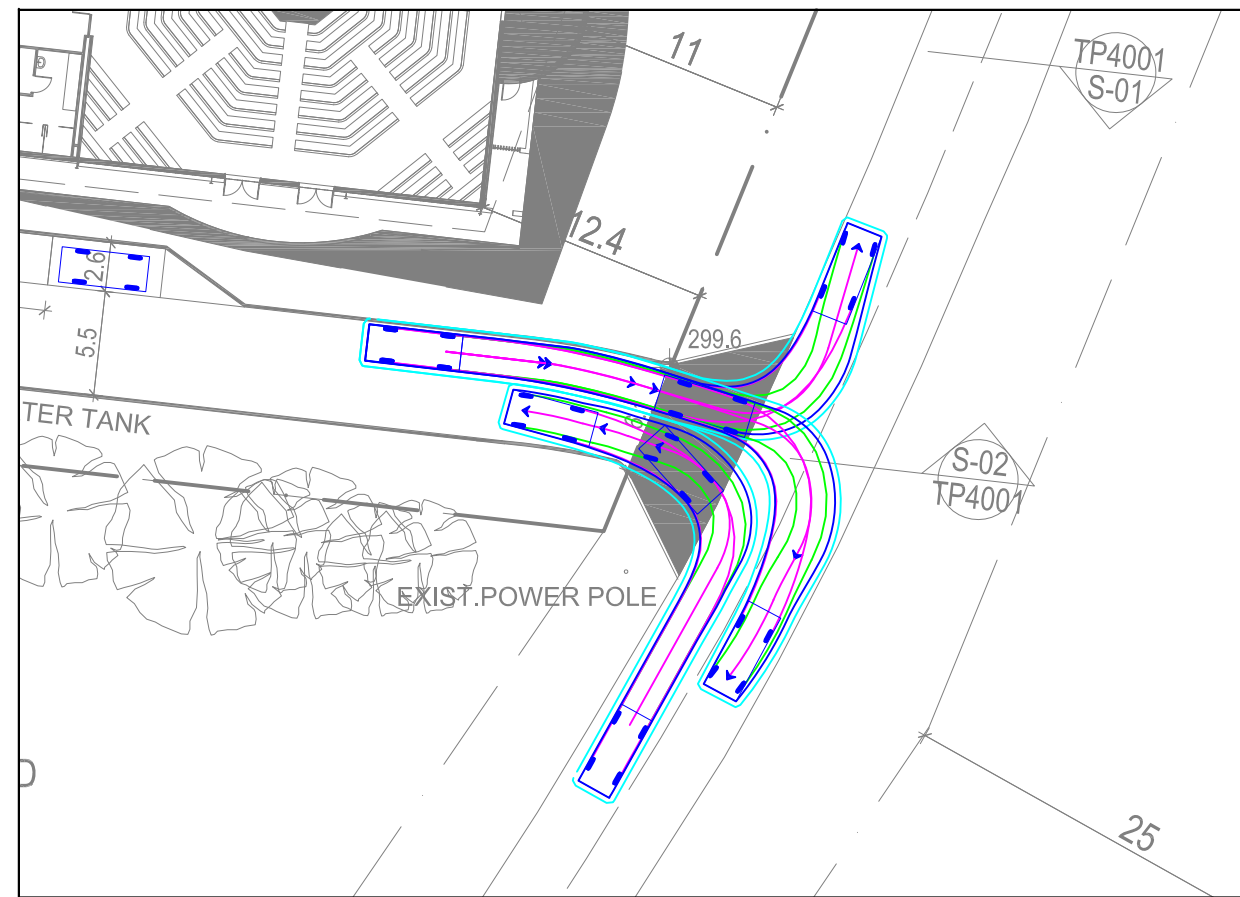
8.8m MRV CIRCULATING MAIN CARPARK



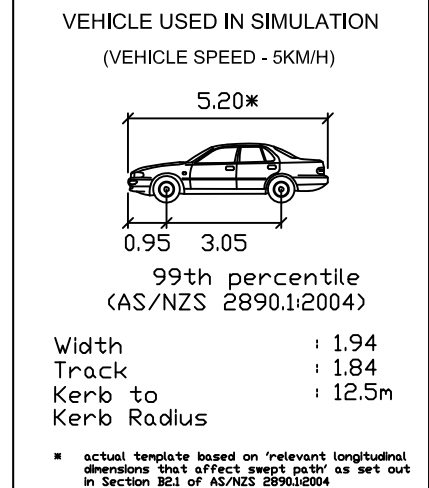
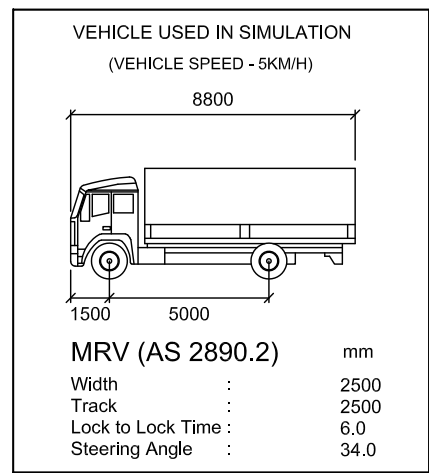
TWO-WAY PASSING AT MAIN CARPARK ENTRANCE BY B99 VEHICLES - INGRESS



TWO-WAY PASSING AT MAIN CARPARK ENTRANCE BY B99 VEHICLES - EGRESS



VEHICLE PROFILE

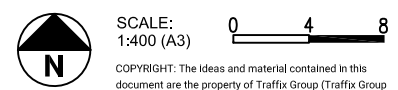


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SHEET NO.: 02



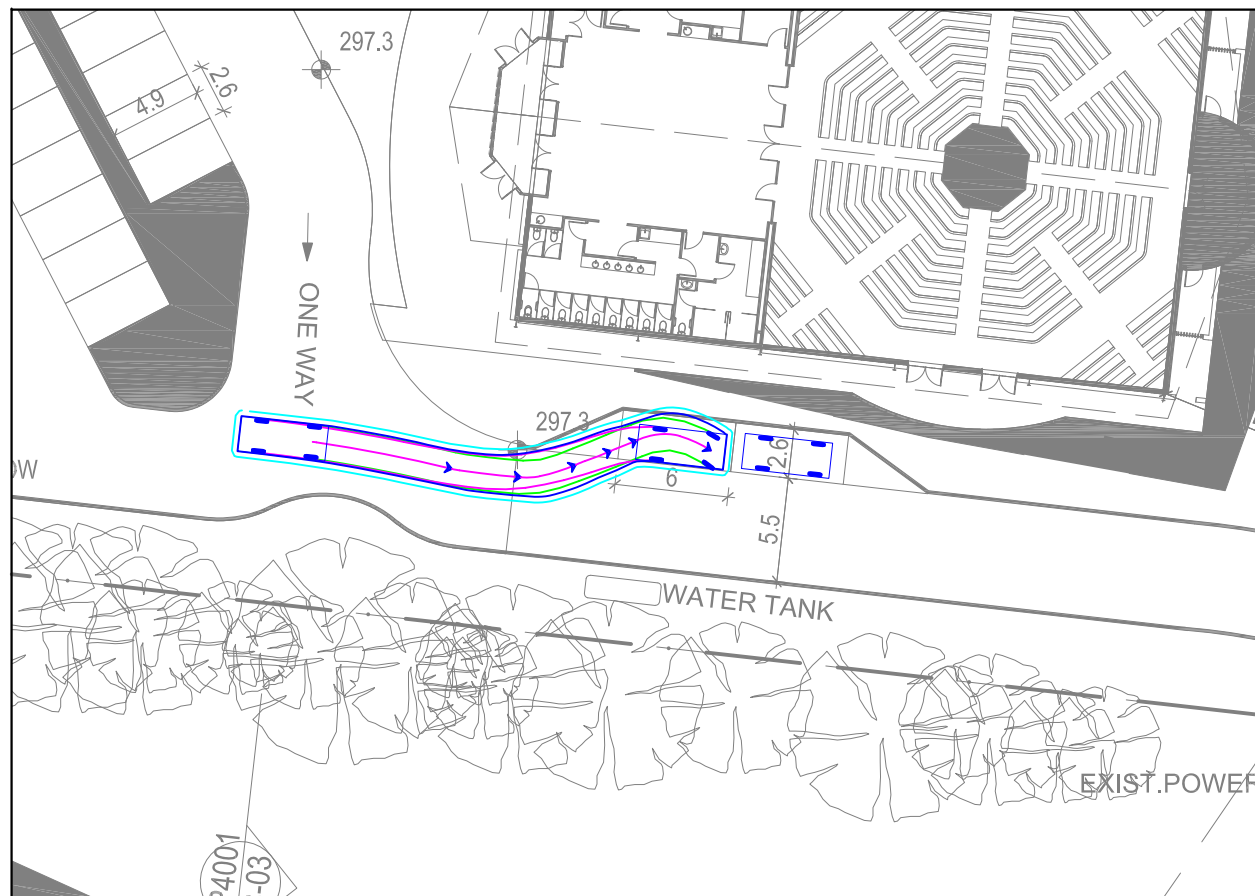
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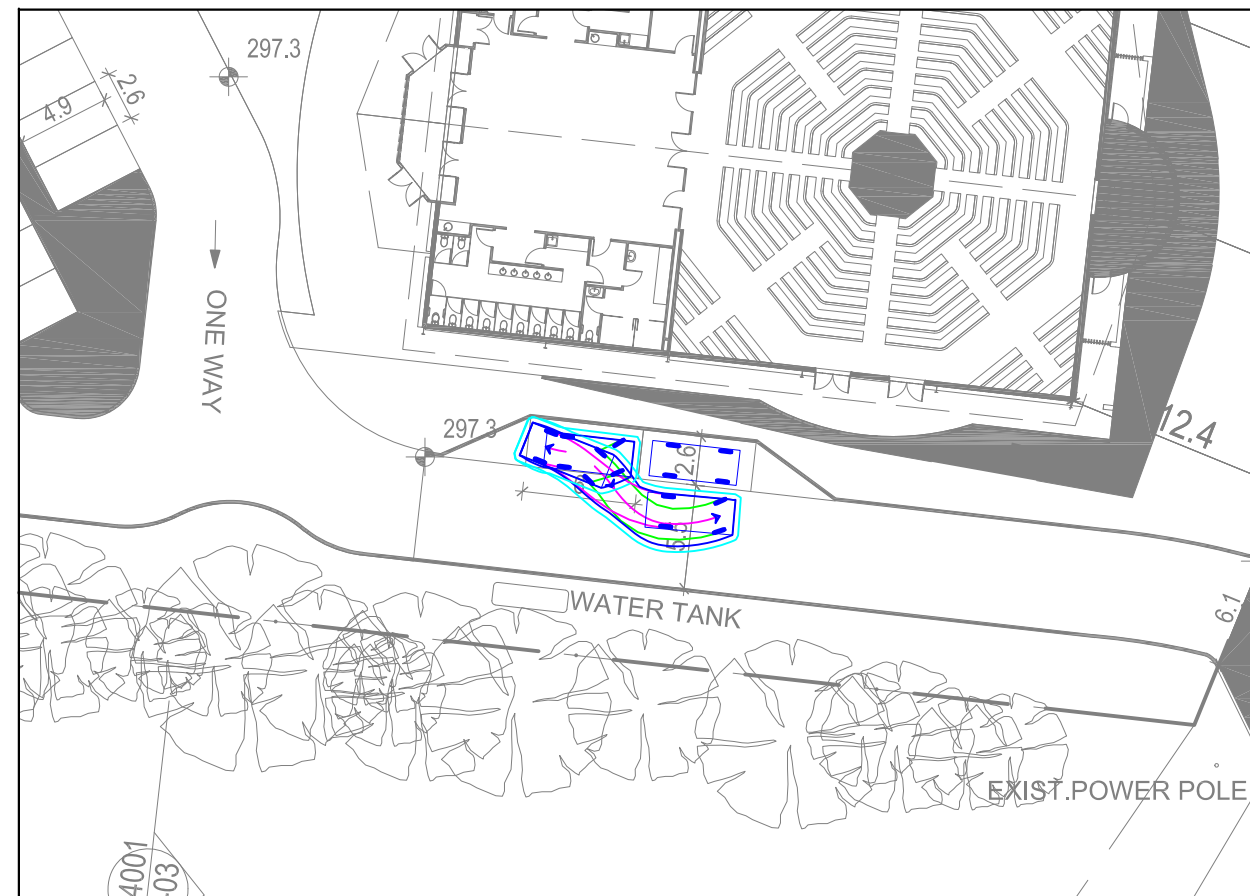
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MAIN CARPARK PARALLEL CAR SPACE 01 - INGRESS

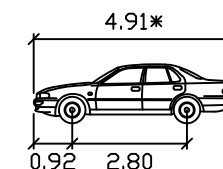


MAIN CARPARK PARALLEL CAR SPACE 01 - EGRESS



VEHICLE PROFILE

VEHICLE USED IN SIMULATION
(VEHICLE SPEED - 5KM/H)

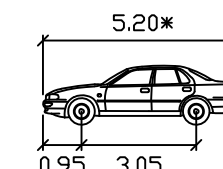


85th percentile
(AS/NZS 2890.1:2004)

Width : 1.87m
Track : 1.77m
Kerb to : 11.5m
Kerb Radius

actual template based on 'relevant longitudinal dimensions that affect swept path' as set out in Section B2.1 of AS/NZS 2890.1:2004

VEHICLE USED IN SIMULATION
(VEHICLE SPEED - 5KM/H)



99th percentile
(AS/NZS 2890.1:2004)

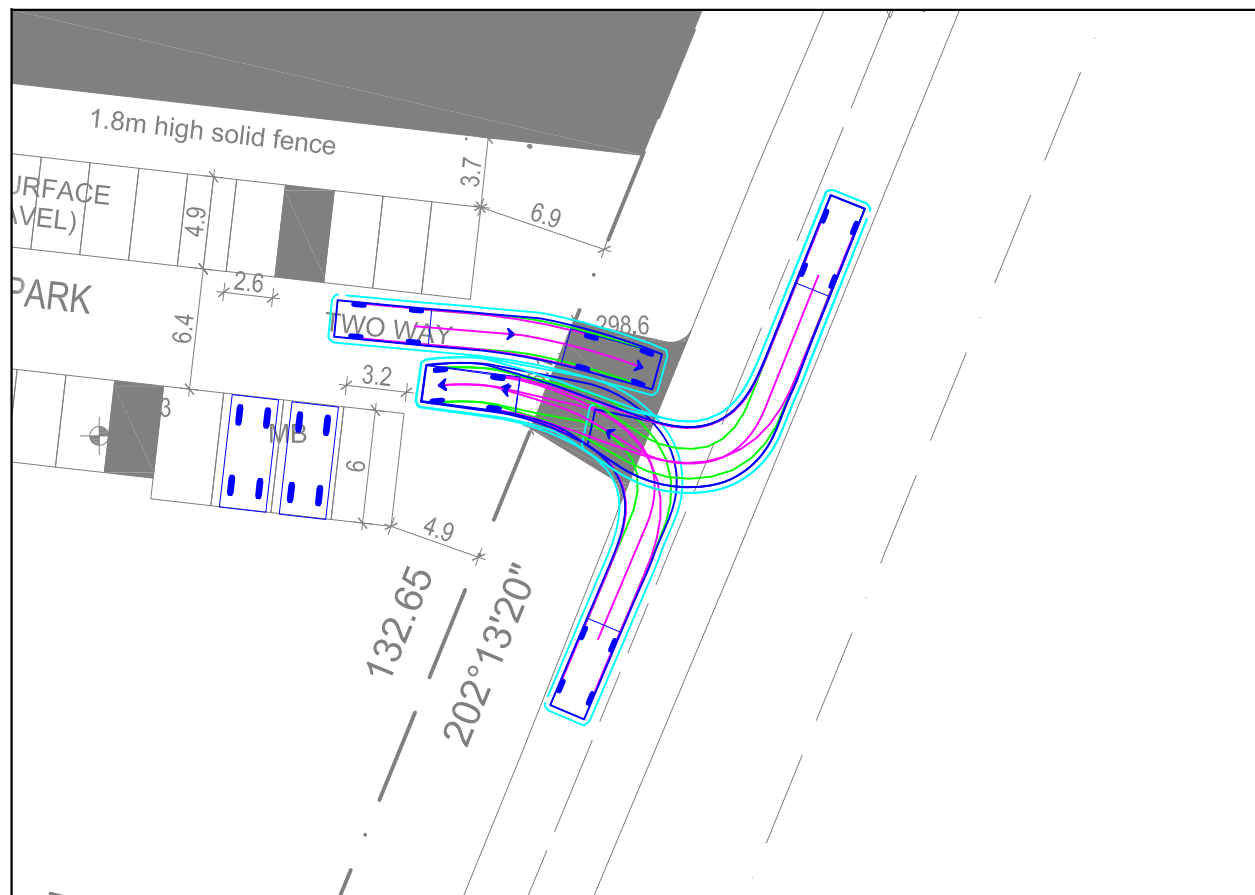
Width : 1.94
Track : 1.84
Kerb to : 12.5m
Kerb Radius

actual template based on 'relevant longitudinal dimensions that affect swept path' as set out in Section B2.1 of AS/NZS 2890.1:2004

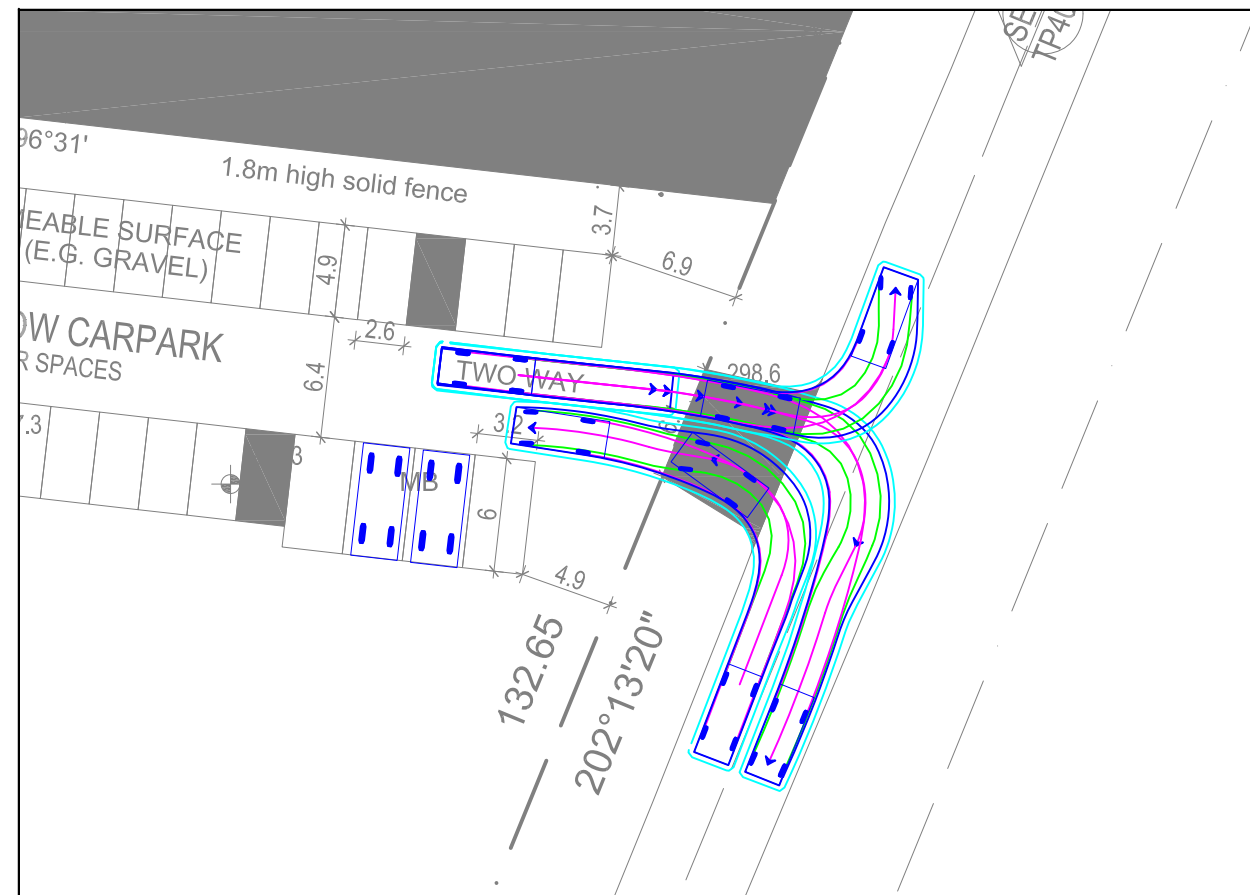
LEGEND

- REAR WHEELS
- FRONT WHEELS
- VEHICLE BODY
- BODY CLEARANCE

TWO-WAY PASSING AT OVERFLOW CARPARK ENTRANCE BY B99 VEHICLES - INGRESS



TWO-WAY PASSING AT OVERFLOW CARPARK ENTRANCE BY B99 VEHICLES - EGRESS



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83-85 BLAKELEY ROAD, CASTLEMAINE
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FILE NAME: G29990-01A
SHEET NO.: 03

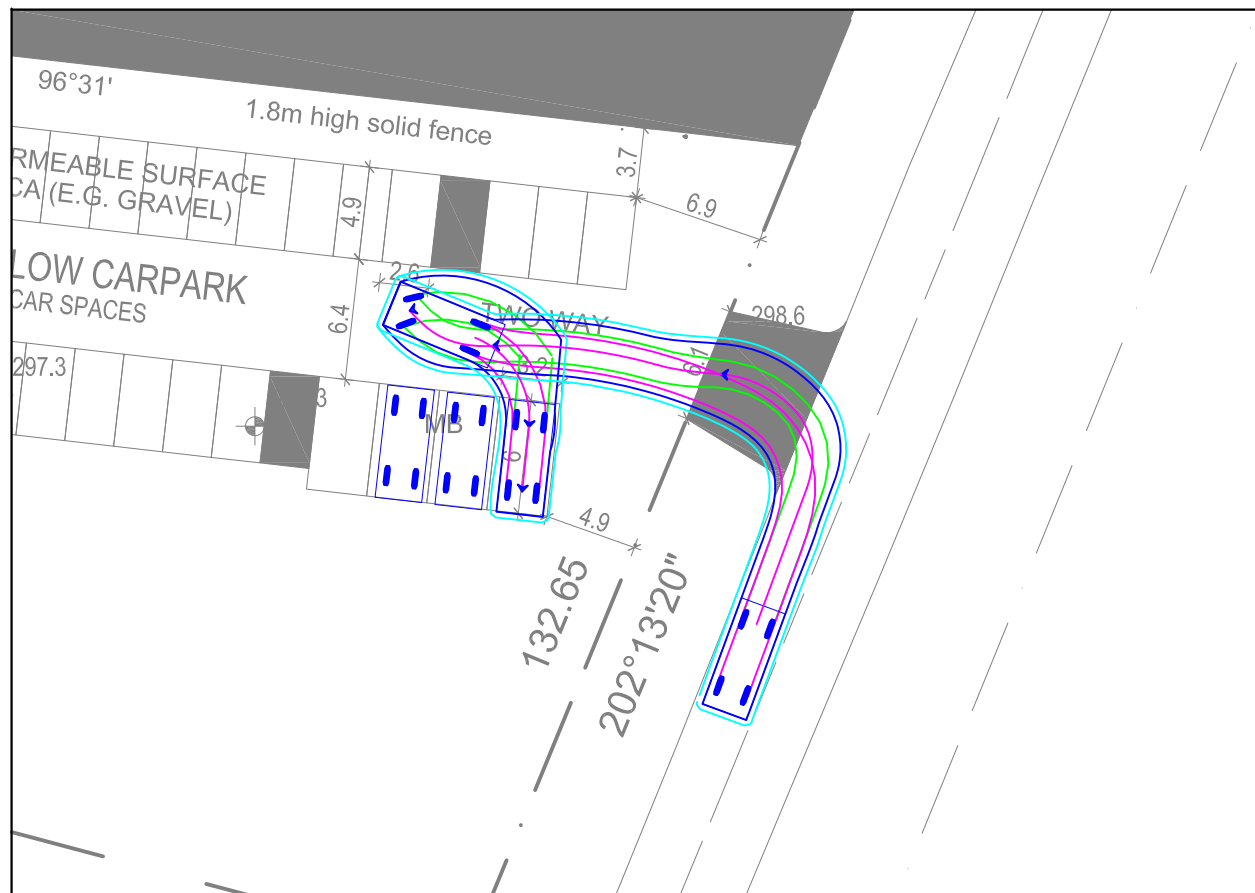


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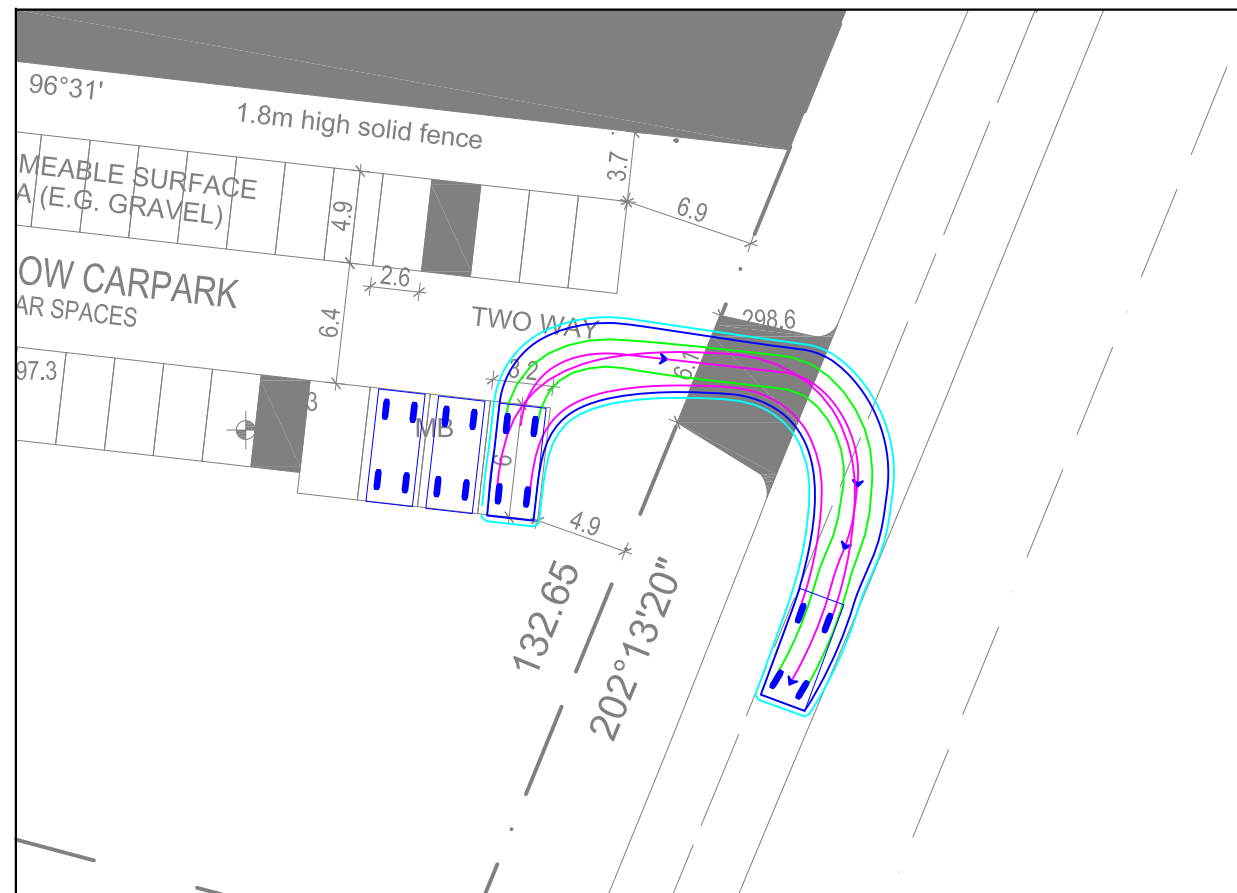
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MINIBUS SPACE 01 - INGRESS

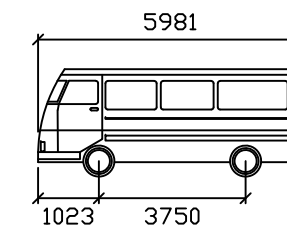


MINIBUS SPACE 01 - EGRESS



VEHICLE PROFILE

VEHICLE USED IN SIMULATION
(VEHICLE SPEED - 5KM/H)



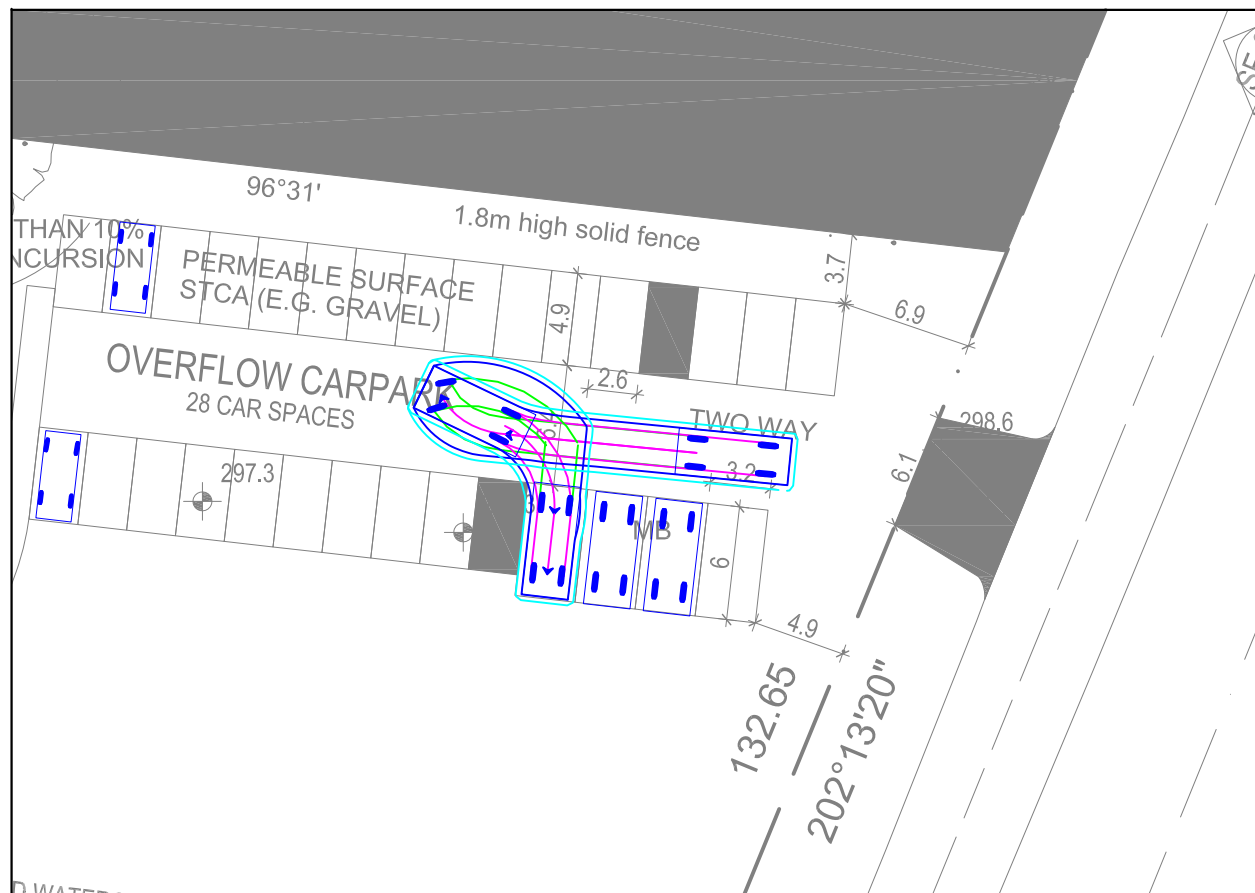
Ford Transit
12-seater Bus

	mm
Width	: 2474
Track	: 1759
Lock to Lock Time	: 6.0
Steering Angle	: 39.0

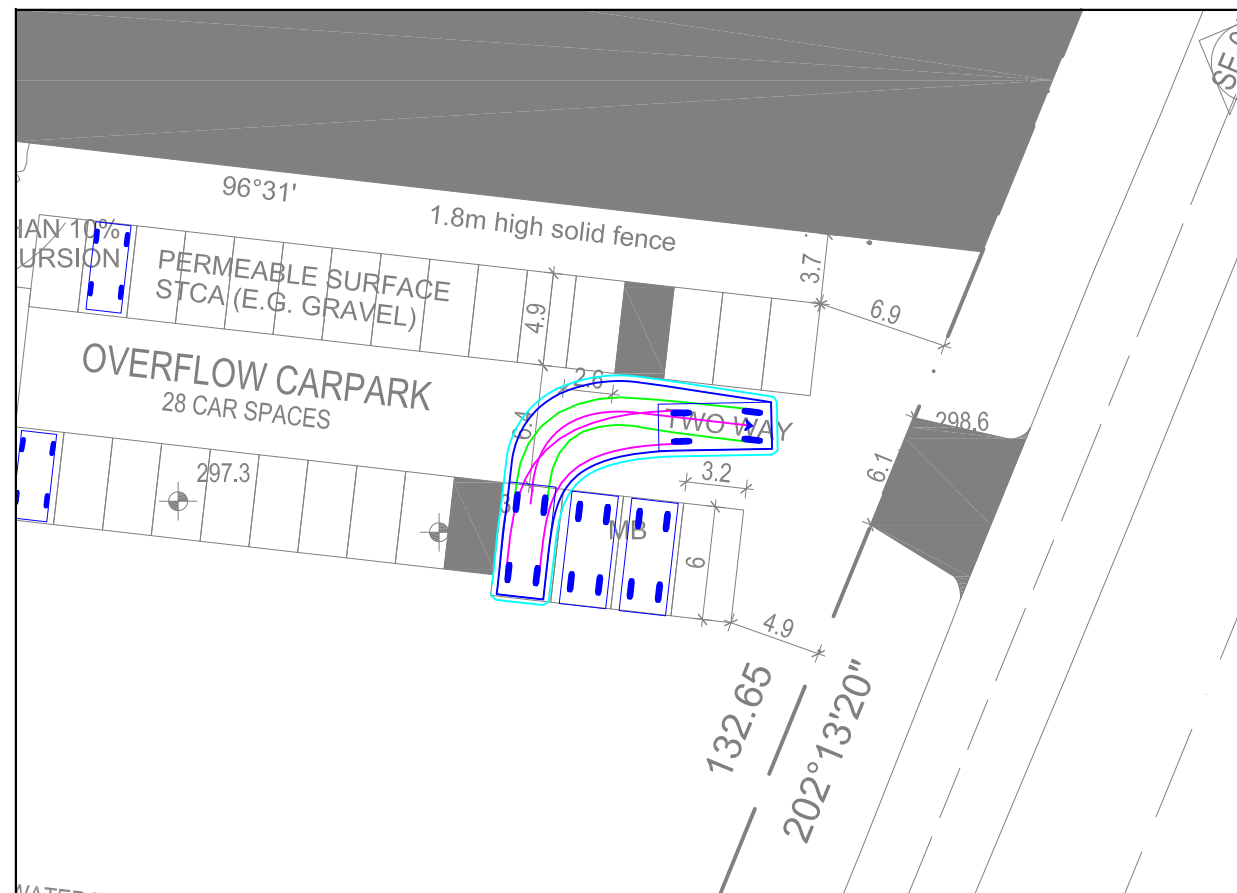
LEGEND

REAR WHEELS	VEHICLE BODY
FRONT WHEELS	BODY CLEARANCE

MINIBUS SPACE 02 - INGRESS



MINIBUS SPACE 02 - EGRESS



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PROPOSED PLACE OF WORSHIP DEVELOPMENT

GENERAL NOTES:
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FILE NAME: G29990-01A
SHEET NO.: 04

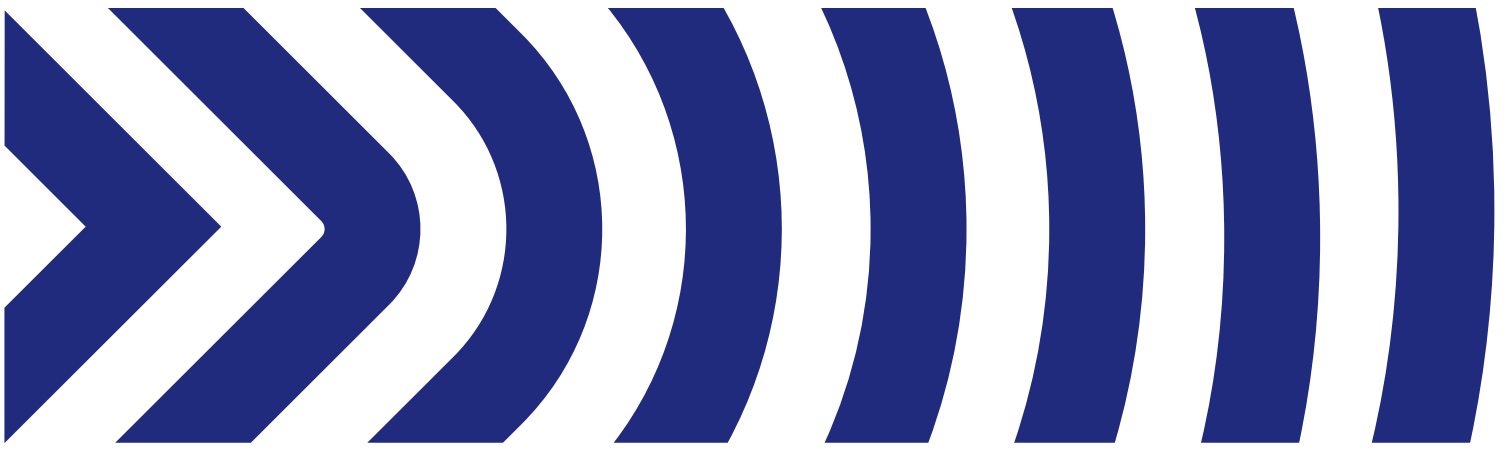


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Appendix D

SIDRA Analysis

MOVEMENT SUMMARY

Site: 101 [Midland Hwy / Sawmill Rd - Existing (Site Folder: General)]

New Site
 Site Category: (None)
 Stop (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
South: Midland Hwy														
2	T1	446	3.0	469	3.0	0.246	0.0	LOS A	0.0	0.1	0.00	0.00	0.00	79.9
3	R2	1	3.0	1	3.0	0.246	9.4	LOS A	0.0	0.1	0.00	0.00	0.00	60.1
Approach		447	3.0	471	3.0	0.246	0.0	NA	0.0	0.1	0.00	0.00	0.00	79.9
East: Sawmill Rd														
4	L2	3	3.0	3	3.0	0.028	10.0	LOS B	0.1	0.6	0.64	0.96	0.64	48.0
6	R2	8	3.0	8	3.0	0.028	15.2	LOS C	0.1	0.6	0.64	0.96	0.64	47.7
Approach		11	3.0	12	3.0	0.028	13.8	LOS B	0.1	0.6	0.64	0.96	0.64	47.8
North: Midland Hwy														
7	L2	6	3.0	6	3.0	0.258	7.0	LOS A	0.0	0.0	0.00	0.01	0.00	73.1
8	T1	462	3.0	486	3.0	0.258	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	79.7
Approach		468	3.0	493	3.0	0.258	0.1	NA	0.0	0.0	0.00	0.01	0.00	79.6
All Vehicles		926	3.0	975	3.0	0.258	0.2	NA	0.1	0.6	0.01	0.02	0.01	79.1

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

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

Queue Model: SIDRA Standard.

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

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

MOVEMENT SUMMARY

Site: 101 [Midland Hwy / Sawmill Rd - PD Arrival (Site Folder: General)]

New Site
 Site Category: (None)
 Stop (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
South: Midland Hwy														
2	T1	446	3.0	469	3.0	0.255	0.1	LOS A	0.1	1.0	0.03	0.01	0.04	79.5
3	R2	8	3.0	8	3.0	0.255	10.5	LOS B	0.1	1.0	0.03	0.01	0.04	59.8
Approach		454	3.0	478	3.0	0.255	0.3	NA	0.1	1.0	0.03	0.01	0.04	79.0
East: Sawmill Rd														
4	L2	3	3.0	3	3.0	0.031	10.0	LOS B	0.1	0.7	0.67	0.96	0.67	47.4
6	R2	8	3.0	8	3.0	0.031	16.5	LOS C	0.1	0.7	0.67	0.96	0.67	47.1
Approach		11	3.0	12	3.0	0.031	14.7	LOS B	0.1	0.7	0.67	0.96	0.67	47.2
North: Midland Hwy														
7	L2	111	3.0	117	3.0	0.319	7.1	LOS A	0.0	0.0	0.00	0.13	0.00	71.2
8	T1	462	3.0	486	3.0	0.319	0.1	LOS A	0.0	0.0	0.00	0.13	0.00	77.5
Approach		573	3.0	603	3.0	0.319	1.4	NA	0.0	0.0	0.00	0.13	0.00	76.2
All Vehicles		1038	3.0	1093	3.0	0.319	1.1	NA	0.1	1.0	0.02	0.09	0.02	76.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

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

Queue Model: SIDRA Standard.

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

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

MOVEMENT SUMMARY

Site: 101 [Midland Hwy / Sawmill Rd - PD Departure (Site Folder: General)]

New Site
 Site Category: (None)
 Stop (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
South: Midland Hwy														
2	T1	446	3.0	469	3.0	0.246	0.0	LOS A	0.0	0.1	0.00	0.00	0.00	79.9
3	R2	1	3.0	1	3.0	0.246	9.4	LOS A	0.0	0.1	0.00	0.00	0.00	60.1
Approach		447	3.0	471	3.0	0.246	0.0	NA	0.0	0.1	0.00	0.00	0.00	79.9
East: Sawmill Rd														
4	L2	10	3.0	11	3.0	0.356	11.8	LOS B	1.4	9.9	0.76	1.07	0.97	45.8
6	R2	113	3.0	119	3.0	0.356	18.1	LOS C	1.4	9.9	0.76	1.07	0.97	45.5
Approach		123	3.0	129	3.0	0.356	17.6	LOS C	1.4	9.9	0.76	1.07	0.97	45.6
North: Midland Hwy														
7	L2	6	3.0	6	3.0	0.258	7.0	LOS A	0.0	0.0	0.00	0.01	0.00	73.1
8	T1	462	3.0	486	3.0	0.258	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	79.7
Approach		468	3.0	493	3.0	0.258	0.1	NA	0.0	0.0	0.00	0.01	0.00	79.6
All Vehicles		1038	3.0	1093	3.0	0.356	2.2	NA	1.4	9.9	0.09	0.13	0.12	73.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

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

Queue Model: SIDRA Standard.

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

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



83 BLAKELEY ROAD, CASTLEMAINE

Traffic Noise Impact Assessment

Prepared For

TRUSTEE OF THE CASTLEMAINE GOSPEL TRUST C/-
PLANNING & PROPERTY PARTNERS

DOC. REF: V823-01-L ACOUSTIC REPORT (R1)
11 APRIL 2023

Enfield Acoustics Pty Ltd
ABN 15 628 634 391
Ph: +61 3 9111 0090
PO Box 920
North Melbourne, VIC 3051



Project	83 Blakeley Road, Castlemaine
Subject	Traffic Noise Impact Assessment
Client	Trustee of the Castlemaine Gospel Trust c/- Planning & Property Partners
Document Reference	V823-01-P Acoustic Report (r1).docx
Date of Issue	11 April 2023

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4	Conclusion.....	5
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1 Introduction & Scope

Enfield Acoustics has been instructed by Planning & Property Partners to review Planning Permit Application No. PA012/2020 to use the Subject Land of 83 Blakeley Road, Castlemaine as a place of assembly (church). We note that we had previously reviewed a similar application in 2021 and the key concern raised at that time was in relation to potential noise impacts from vehicles accessing the Subject Land carpark.

Our instructions are that the following hours are sought by the Applicant for typical services within the hall on the Subject Land, which is a reduction in use when compared to the previous application our office reviewed in 2021:

Operational Hours	Maximum Attendees	Peak Traffic Generation (veh/hr)
Monday 6pm – 8:30pm (weekly) Prayer Meeting	50	15
Saturday 10am-1pm (every three weeks) Bible Teaching	466	140
Sunday 7am-9am (weekly) Communion	50	15
Sunday 9am-1pm (every three weeks) Bible Teaching	466	140

2 Qualitative Assessment

There are no policy controls (legislation, statutory or local planning scheme) regarding noise impacts from passenger vehicles on commercial land or public roads. It is appropriate to first consider the likely impacts qualitatively.

The proposed main carpark is setback from Blakeley Road and does not immediately abut any sensitive uses, with a commercial use adjoining the south boundary, and therefore it is unlikely that noise generated on the Subject Land would be audible or intrusive at surrounding dwellings. The nearest dwellings are located on the opposite side of Blakeley Road and the hall provides some shielding of noise between the carpark and opposite side of Blakeley Road.

In our experience, patrons entering and exiting a church congregation do not normally generate any significant vocal noise (such as can occur from a licenced premises). Regardless, this could be considered a reasonable condition for the site to manage such impacts and the most appropriate means to deal with this would be through:

1. Signage within the carpark for patrons to respect neighbours; and
2. A management plan that is endorsed under the planning permit.

Noise emissions while vehicles are on public roads would be the more likely source to generate some audible or noticeable noise when in closer proximity to surrounding dwellings, however these events are inherently transient.

It is noted that Blakeley Road is within approximately 225m of the Midland Hwy which is a major arterial carrying reasonable volumes of heavy vehicles. There is also an intervening rail corridor to the west. To that end, it is reasonable to expect that some traffic and transport noise is already a feature of the surrounding area.

Based on the above hours, there are no proposed operations during particularly sensitive times:

1. Typically, transient impacts (including for traffic) are only considered during the 'Night' period as defined by Sleep Disturbance thresholds being 10pm-7am.
2. The proposed operations are in less sensitive periods when it is reasonable to expect reduced amenity, generally being the daytime and early evening hours. This is consistent with the Environmental Protection Regulations which consider the period 10pm-7am to be the most sensitive and requiring protection of, amongst other things, sleep disturbance;
3. It is intrinsic that local traffic on surrounding roads is more prevalent during the daytime and early evening; and
4. There are no specific noise policies in Victoria that consider traffic noise impacts from passenger vehicles, either on private land or public roads, and they are exempt from assessment under the Environment Protection Regulations. Common examples of this include service stations and public carparks, and it is generally accepted that passenger vehicles do not result in significant noise emission levels, in particular where infrequent. There are best practice guidelines, such as sleep disturbance targets which are often cited at VCAT, however they again only apply to the 10pm-7am period, further highlighting that traffic noise impacts normally only require consideration during these more sensitive hours.

3 Quantitative Assessment

The 'sleep disturbance thresholds' often cited as a best practice guideline are derived from the NSW Traffic Noise Policy. The adopted sleep disturbance threshold is 60-65dB(A) L_{max} outside of a dwelling window, which can be assumed to be open, though is rarely the case in practice. A threshold 10-15dB higher would normally be acceptable where windows to dwellings are assumed to be closed. It is noted that the L_{max} noise metric captures the inherent transient nature of vehicle passbys.

The sleep disturbance thresholds are provided here only as a reference tool, as it is also atypical to apply it to planning applications where the impacts are generated on public roads, in particular where that public road would also have other traffic not related to the application. This application also does not propose operations before 7am or after 10pm so considering the thresholds is already conservative.

The maximum proposed attendees during the earliest use on a Sunday morning (7am) would be 50 and we are instructed that this would be made up of family groups and that vehicles would park closer to the rear of the proposed building on the site, being the closest access point to the

building. The peak traffic volume is expected to be 15 vehicles in an hour. While it is noted that a lower number of vehicles inherently results in noise impacts being less likely, the quantitative assessment against sleep disturbance thresholds does not consider this as it is based on the maximum event that occurs.

We have carried out acoustic modelling of proposed vehicles using Blakeley Road and entering/exiting the Subject Land to assess whether the sleep disturbance targets would likely be exceeded in respect to the early morning Sunday use. Noise contour mapping is appended to this document and the summary of results indicates that:

- Vehicle noise while on the Subject Land carpark would be up to 23dB(A) L_{max} at the nearest dwelling, being 71 Blakeley Road, assuming vehicles on the Subject Land are travelling at anticipated low speeds (10-20km/hr).
- Vehicle noise while on the public road would be up to 43dB(A) L_{max} at the nearest dwelling, being 80 Blakeley Road, assuming vehicles on the road are accelerating into or out of the site.
- Doors slamming and voices in the carpark would generate up to 33dB(A) at the above dwellings, being less than the on-road traffic noise level predicted.

The modelling indicates that vehicle noise emissions relevant to the proposed use would be less than the adopted sleep disturbance threshold, within a comfortable margin. Given the result of this and that the proposal does not include operations before 7am, our view is that no further assessment is required to address acoustic impacts.

4 Conclusion

In summary, Enfield Acoustics is satisfied that the proposal is unlikely to generate any adverse noise impacts as a result of vehicles associated with the proposed use. The proposed hours are reasonable and sleep disturbance targets are not expected to be exceeded even if they were to apply for more sensitive hours of use.

Appendix A: Noise Mapping Contours



Legend: Point Source
 Building
 Receiver

Scale: 1: 1089 @ A3

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NOISE
VIBRATION



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 North Melbourne, VIC 3051
 P. 03 9111 0090

Project No.: V823

Drawing No.: MAP-01

Date: 09.02.2023

Noise emission levels from VEHICLES
 L'Amex Noise Levels

NOTES:
 *Propagation in accordance with ISO9613

NEXUS PLANNING

BUSHFIRE | PLANNING | SOLUTIONS

Statement of expert evidence in bushfire planning

Comprising a Bushfire Management Statement that incorporates the following elements:

- a Bushfire Hazard Landscape Assessment
- two Bushfire Hazard Site Assessments
- a response to the bushfire planning controls of the Planning Scheme
- two Bushfire Management Plans

Proposed development of a place of worship and a two lot subdivision of residential land at 83 Blakeley Road, Castlemaine VIC 3450

Prepared by: Mr Anthony Matthews, Director Nexus Planning

Prepared for: Castlemaine Gospel Trust

VCAT Reference: P409/2021

Hearing date: 18 October 2021

Report date: October 2021

Nexus Planning

t 0407 880 899 w www.nexusplanning.com.au e anthony@nexusplanning.com.au




Nexus Planning Pty Ltd ATF ANJST Matthews Family Trust T/as Nexus Planning

ABN 59 660 012 941

P.O. Box 320, ROSEBUD VIC 3939

P: 0407 880 899

anthony@nexusplanning.com.au, www.nexusplanning.com.au

Document type	Statement of expert evidence in bushfire planning comprising a Bushfire Management Statement that incorporates a Bushfire Hazard Landscape Assessment, two Bushfire Hazard Site Assessments, a response to the bushfire planning requirements of the Planning Scheme and two Bushfire Management Plans (BMP)			
Bushfire hazard map	Designated Bushfire Prone Area	Yes	Bushfire Management Overlay	Part
Address	83 Blakeley Road, Castlemaine VIC 3450 – Lot 2, PS.804722D			
Proposal	Development of a place of worship and a two lot subdivision of residential land			
Client	Castlemaine Gospel Trust			
Responsible authority	Mount Alexander Shire Council			
Report author	Anthony Matthews Director Nexus Planning	BPAD Accredited Practitioner Level 2 – VIC Accreditation # BPAD46250		
				

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Terminology

AS.3959-2018/ AS.3959	<i>Australian Standard AS 3959:2018 Construction of buildings in bushfire-prone areas</i>
BMO	Bushfire Management Overlay – Clause 44.06 of the Planning Scheme
BMO Technical Guide	<i>Technical Guide Planning Permit Applications Bushfire Management Overlay, September 2017 (Department of Environment, Land, Water and Planning)</i>
Bushfire	An unplanned fire burning in vegetation; also referred to as wildfire. ¹
Bushfire attack	Attack by wind, burning embers, radiant heat or flame generated by a bushfire. ²
Bushfire-prone area (BPA)	An area that is subject to, or likely to be subject to, bushfire attack ³ and as designated pursuant to Section 192A of the <i>Building Act 1993</i> .
Bushfire Attack Level (BAL)	A means of measuring the severity of a building’s potential exposure to ember attack, radiant heat and direct flame contact, using increments of radiant heat expressed in kilowatts per metre squared, and the basis for establishing the requirements for construction to improve protection of building elements from attack by bushfire. ⁴
CFA	Country Fire Authority (Relevant Fire Authority)
Classified vegetation	Vegetation that has been classified in accordance with Clause 2.2.3 ⁵ [of AS.3959-2018] and Tables 1, 2 or 3 of Clause 53.02-5 of the Planning Scheme.
Defendable space	An area of land around a building where vegetation is modified and managed to reduce the effects of flame contact and radiant heat associated with bushfire. ⁶
Effective slope	The slope under that classified vegetation which most influences the bushfire attack. ⁷
Ember attack	Attack by smouldering or flaming windborne debris that is capable of entering or accumulating around a building, and that may ignite the building or other combustible materials and debris. ⁸
Low threat vegetation	Vegetation that is excluded from the bushfire assessment in accordance with Clause 2.2.3.2 of AS.3959-2018
Modified vegetation	A vegetation type listed in Tables 1 and 2 to Clause 53.02-5 that is different from the other vegetation types in AS.3959-2018 and Tables 1 & 2 to Clause 53.02-5 because it has been altered from its natural state. ⁹
Site	That part of the allotment of land on which a building stands or is to be erected. ¹⁰

¹ Standards Australia, 18 December 2020 – Clause 1.5.1

² Standards Australia, 18 December 2020 – Clause 1.5.2

³ Standards Australia, 18 December 2020 – Clause 1.5.3

⁴ Standards Australia, 18 December 2020 – Clause 1.5.4

⁵ Standards Australia, 18 December 2020 – Clause 1.5.7

⁶ Clause 73.01 of the Planning Scheme

⁷ Standards Australia, 18 December 2020 – Clause 1.5.11

⁸ Standards Australia, 18 December 2020 – Clause 1.5.12

⁹ Derived from DELWP, September 2017

¹⁰ Standards Australia, 18 December 2020 – Clause 1.5.30

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1 Introduction

1.1 Purpose and scope of this report

1. This report is a statement of expert evidence in bushfire planning to the Victorian Civil and Administrative Tribunal (VCAT) Planning and Environment List (VCAT Reference P409/2021) for the development of a place of worship and a two lot subdivision of residential land known as 83 Blakeley Road, Castlemaine.
2. The report has been prepared in accordance with VCAT Practice Notice PNVCAT2 – Expert Evidence.
3. The report is presented in the form of a Bushfire Management Statement that incorporates the following elements:
 - A Bushfire Hazard Landscape Assessment which describes the bushfire hazard more than 150 metres from the site (**Map 1** and **Map 2**).
 - A Bushfire Hazard Site Assessment which describes the bushfire hazard within 150 metres of the place of worship (**Map 3**) and the subdivision (**Map 4**).
 - A description of how the proposed development of the land responds to the bushfire planning requirements of the Planning Scheme.
 - A Bushfire Management Plan (BMP) for the place of worship (**Map 5**) and the future dwelling to be developed on proposed Lot 1 (**Map 6**) which describes the bushfire protection measures that must be incorporated into the completed development and maintained on a continuing basis.
4. This report includes limited recommendations related to emergency management procedures but does not incorporate a Bushfire Emergency Management Plan.

1.2 Expert witness details

Name and address

5. This report has been prepared by Anthony Matthews and I am the owner and sole Director of Nexus Planning Pty Ltd. The registered address for the business is 1129 Point Nepean Road, Rosebud Victoria 3939.

Qualifications, accreditations, memberships and experience

6. I have a Bachelor of Arts (Urban Studies) and Graduate Diploma in Urban Planning through Victoria University.
7. I have successfully completed the following units from the Graduate Diploma in Bushfire Protection through Western Sydney University:
 - 200457 – Bushfire Behaviour
 - 300947 – Building Regulations
 - 200458 – Building in Bushfire Prone Areas
 - 200500 – Bushfire Fighting

- 301050 – Disaster and Emergency Management
 - 200459 – Emergency Management for Bushfire Prone Areas
8. I am accredited in Victoria as a Level 2 Practitioner under the Fire Protection Association Australia (FPAA) Bushfire Planning and Design Accreditation (BPAD) Accreditation Scheme – Accreditation No. BPAD46250.
9. I am a member of the Victorian Planning and Environmental Law Association (VPELA).
10. I have over 25 years of experience as a town planner working with the Mornington Peninsula Shire Council (December 1995 to July 2014), the Country Fire Authority (secondment from September 2011 to June 2014) and in private practice since August 2014.

Relevant expertise

11. I have specialised in bushfire planning policy for more than 10 years which has included the following experience:
- As Director of Nexus Planning (1st October 2019 to current day) and Foresite Planning & Bushfire Consultants (August 2014 – September 2019) I have:
 - Provided expert evidence to the Victorian Civil & Administrative Tribunal (VCAT) in relation to a proposed dwelling in Mount Macedon (VCAT Reference P1797/2017).
 - Provided expert evidence to Planning Panels Victoria in relation to a substantial rezoning of land in Bright (Amendment C34 to the Alpine Planning Scheme).
 - Prepared a strategic bushfire assessment for the Wangaratta Low Density & Rural Residential Strategy for the Rural City of Wangaratta.
 - Represented CFA at VCAT hearings.
 - Prepared more than 400 Bushfire Management Statements under the provisions of the Bushfire Management Overlay ('BMO') for a range of development proposals across a range of localities in Victoria.
 - Prepared more than 450 Bushfire Attack Level Assessments in accordance with AS.3959 – *Construction of buildings in bushfire-prone areas* for a range of development proposals across a range of localities in Victoria.
 - During a nearly 3 year secondment to the CFA (September 2011 to June 2014), I held the position of Bushfire Management Overlay Implementation Team Leader. In this position I played a key role in guiding the CFA's implementation of the BMO which included:
 - Providing specialist training and advice to CFA Fire Safety Officers.
 - Providing specialist training at a range of industry forums and as a guest presenter at 'Development and Building in Bushfire Prone Areas' short-courses conducted in Melbourne by the University of Technology Sydney.
 - Supporting decision making by CFA's Fire Safety Officers under the BMO provisions.
 - Undertaking bushfire site assessments, assessing Bushfire Management Statements referred to CFA and preparing reports documenting the basis of CFA's decision.

- “Ground truthing” proposed Schedules to the BMO in a wide range of areas across the State including the southern Mornington Peninsula, Frankston, Cockatoo, Anglesea and Lorne.
- Representing CFA at VCAT hearings for a wide range of proposals and appeals.

- As a Team Leader of Statutory Planning with the Mornington Peninsula Shire Council I project managed the Shire’s participation in the pilot program for the development of the first Schedule to the Bushfire Management Overlay in Victoria and I was subsequently involved in the implementation of this schedule while seconded to the Country Fire Authority.

- As a Team Leader of Statutory Planning with the Mornington Peninsula Shire Council I was responsible for leading the Shire’s response to the introduction of the Wildfire Management Overlay on 11 February 2010 which formed part of the State’s initial response to the Black Saturday Bushfires.

1.3 Engagement and relationship with party for whom the report has been prepared

12. I have been instructed by Planning and Property Partners Pty Ltd on behalf of the permit applicant to provide expert evidence in relation to bushfire planning requirements for a proposed 2 lot subdivision and place of worship at 83 Blakely Road Castlemaine.

13. I have no private, business or other relationship with the Trustee of the Castlemaine Gospel Trust, other than being engaged to provide expert evidence in relation to this matter.

1.4 Facts, matters and assumptions relied upon

14. In preparing this report I have:
 - Inspected the review site and immediate surrounds (carried out on 22 August 2021).
 - Reviewed the plans and bushfire related documentation submitted with the planning application PA012/2020.
 - Reviewed the Further Information Request from the Country Fire Authority (“CFA”) dated 14 October 2020.
 - Reviewed the Notice of Decision to Refuse to Grant a Permit issued by the Mount Alexander Shire Council on 15 December 2020.
 - Reviewed the Delegate Report from the Council Meeting Agenda dated 15 December 2020.
 - Reviewed the amended plans dated 1 September 2021.
 - Provided advice to inform the preparation of the amended plans filed with VCAT on 6 September 2021 including reviewing earlier iterations of the plan.
 - Reviewed and provided advice on the preparation of the landscape plan by CDA Design Group that is to be filed with VCAT.
 - Reviewed the planning permit and endorsed plans relating to the approved 2 lot subdivision of the review site (Planning Permit NO. PA027/2019).

- Reviewed the planning permit and endorsed plans relating to the development of the adjoining land at 73 Blakeley Road, Castlemaine (Planning Permit No. PA270/2017-1).
- Reviewed the Statement of Grounds by the CFA dated 17 September 2021.
- Reviewed the bushfire policies and provisions of the Mount Alexander Planning Scheme.
- Reviewed the documents referenced in **Section 10** of this report.

15. I have prepared this report in accordance with Practice Note PNVCAT2 – *Expert evidence* and understand my paramount duty to the Tribunal and my duty to assist the Tribunal on matters relevant to my expertise.

1.5 Identity of any person who carried out tests or experiments

16. I am the only person who has been involved in the preparation of this report and I have not relied upon any tests or experiments undertaken by another person.

1.6 Summary of opinion

17. The review site is located in an area where there is there is a risk to life and property from bushfire and the decision maker has an obligation to ensure those risks can be reduced to an acceptable level.

18. The risks to life and property from bushfire are capable of being reduced to an acceptable level through the implementation of appropriate bushfire protection measures for the place of worship and the future dwelling to be developed on proposed Lot 1 and through the implementation of emergency management procedures for the place of worship.

1.7 Provisional opinions

19. My report does not rely on any provisional opinions.

1.8 Questions outside expertise and inaccuracies

20. I have not been asked any questions that fall outside my area of expertise and I am not aware of any inaccuracies contained in this report.

1.9 Declaration

21. *I have made all the inquiries that I believe are desirable and appropriate and that no matters of significance which I regard as relevant have to my knowledge been withheld from the Tribunal.*



Anthony Matthews

Director

Nexus Planning Pty Ltd ATF ANJST Matthews Family Trust TA Nexus Planning

4 October 2021

2 Review site and immediate surrounds

22. The review site is Lot 2 on PS804722D and is known as 83 Blakeley Road Castlemaine. The land has an area of 2.778 hectares however Planning Permit PA027/2019 has authorised the subdivision of that land into two lots and upon registration of that plan of subdivision the review site (shown as Lot 2 on the approved plan) will have an area of 2.578 hectares. All references in this report to the 'review site' is to be taken as a reference to Lot 2 on the approved subdivision.
23. The review site has a frontage of 132.65 metres to Blakeley Road and the rear (western) boundary of the land has a combined frontage of 166.75 metres to a paper road that is continuous with the train line which is continuous with the Midland Highway.
24. The land is vacant with improvements confined to a dam that is located in a generally central position on the land and the front, southern and western boundaries of the land are fenced. A drainage line extends east and west of the dam.
25. The topography of the land is gently undulating falling in both a south-north and east-west direction with the highest point of the land located generally proximate to the south-western corner of the land and the lowest point located at the north-western corner of the land.
26. Photos identifying the key features of the review site are presented in **Plates 1-4** below and in **Section 7** of this report.

Plate 1 View west across the review site to the site for the proposed place of worship building



Plate 2 View north from the site for the proposed place of worship building to the site for the realigned watercourse and overflow car park



Plate 3 View west from the site for the proposed place of worship building to the site of the main car park

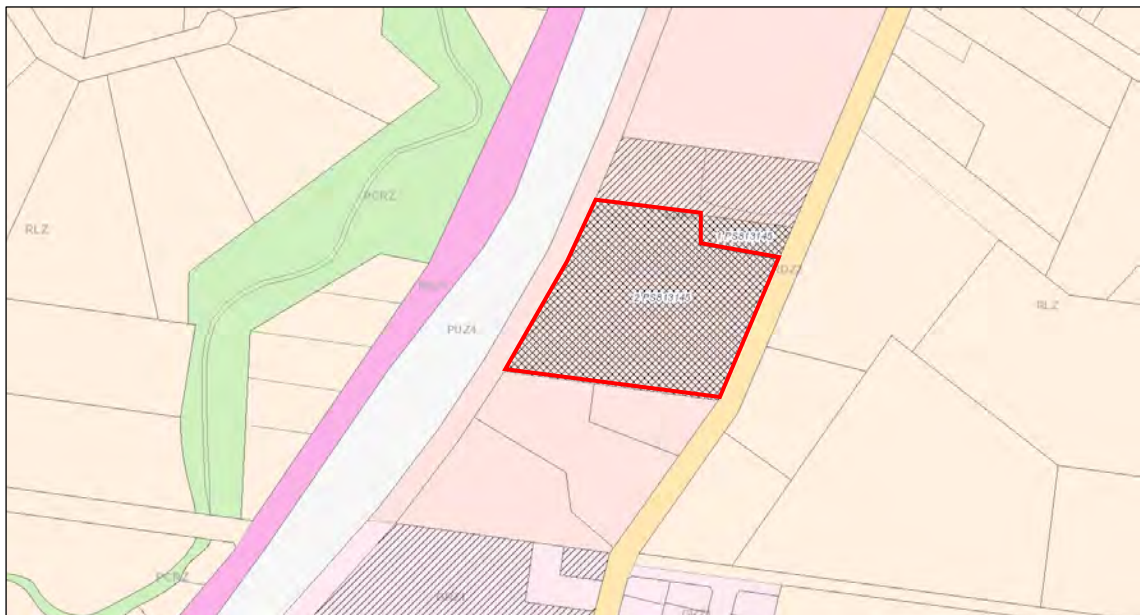


Plate 4 View west across the site for the proposed vacant residential lot (Lot 1)



27. With reference to **Figure 1** below the review site and adjoining land to the north and south is located in a Low Density Residential Zone and land on the eastern side of Blakeley Road is located in a Rural Living Zone.

Figure 1: Zoning of the review site and surrounds



The image presented in this figure was sourced from VicPlan on 3 October 2021 – <https://mapshare.vic.gov.au/vicplan/>. The boundaries of the review site (based on the approved subdivision) are outlined in red.

28. The adjoining land to the south of the review site is used and developed for industrial purposes which appears to be used for automotive repairs and related activities – with signage indicating the business is known as the ‘Castlemaine Rod Shop’. From my inspection of the area and analysis of recent aerial photography (Nearmap image dated 9 December 2020) I have observed that there are extensive hard stand areas surrounding the building on all sides with the only significant vegetation located close to the review site being a treeline adjacent to the eastern two-thirds of the northern boundary of the land which is common with the review site.

I am aware that Planning Permit No. PA270/2017-1 was issued by the Mount Alexander Shire Council on 15 February 2018 which authorised “*Construct an extension to a building for storage of car parts and workshop associated with an existing automotive business.*” and I have observed that the plans endorsed under that permit show part of the area to the north of the building on that land as a ‘concrete skid pan’.

29. The adjoining land to the north of the review site has an area of approximately 1 hectare and is developed with a single dwelling sited close to Blakely Road. The front (eastern) half of the land comprises low threat cultivated gardens while the rear (western) half of the land comprises substantially cleared grassland with a small pocket of bushland (Forest) that is continuous with the bushland on the review site.
30. Most of the land properties in the Rural Living Zone to the east of the review site are developed with a single dwelling and outbuildings and comprise a mosaic of low threat cultivated gardens, Grassland and Forest. Further to the south-east of the review site is the Castlemaine Church of Christ which comprises low threat maintained gardens.

3 Proposal

31. The proposal subject to this report has two main components as follows:
- The development of a place of worship building which will accommodate a maximum of 466 patrons at any one time – except for a special event that will be held once every three years and where patron numbers will be capped at 860. Additional buildings and works associated with the development of this facility include:
 - Construction of a main car park that will accommodate 111 car spaces to the west of the building.
 - Construction of an overflow car park that will accommodate 28 car spaces to the north of the building (north of the realigned water course).
 - Realignment of the water course further to the north of the building – with its new position located approximately 20 metres north of the proposed building.
 - The subdivision of the review site into two lots – with Lot 1 to have an area of 2,006.6 square metres which is intended to be developed with a single dwelling and Lot 2 to have an area of 23,774.7 square metres and which will contain the place of worship and associated car parking.

32. I have prepared a Bushfire Management Plan ('BMP') for the place of worship (**Map 5**) and for the future dwelling to be developed on proposed Lot 1 (**Map 6**) which are presented at the end of **Section 8** of this report. These plans prescribe the bushfire protection measures that must be implemented and maintained for those developments. A summary of the bushfire protection measures for each development is provided below.
33. With reference to **Map 5** the bushfire protection measures prescribed for the place of worship can be summarised as follows:
- A defensible space envelope that applies for a distance of 60 metres or to the title boundary – whichever is the lesser distance from the building – and which extends to the southern boundary of proposed Lot 1.
 - Management of the vegetation within the defensible space envelope to comply with the requirements of Table 6 to Clause 53.02-5 of the Planning Scheme except for some variations to facilitate the retention of all existing canopy trees and to provide flexibility with some of the landscaping works.
 - Construction of the building to comply with the requirements for a Bushfire Attack Level ('BAL') of BAL-29 in accordance with Sections 3 and 7 of AS.3959-2018.
 - Provision of a static water supply with at least 10,000 litres of water reserved for firefighting purposes in an above ground metal or concrete water tank that incorporates fire authority fittings and which is located less than 4 metres from the driveway in accordance with the requirements of Table 4 to Clause 53.02-5 of the Planning Scheme.
 - Provision of emergency vehicle access to the building and the static water supply reserved for firefighting purposes that complies with the design and construction requirements of Table 5 to Clause 53.02-5 of the Planning Scheme.
34. With reference to **Map 6** the bushfire protection measures prescribed for the future dwelling to be developed on proposed Lot 1 can be summarised as follows:
- A setback restriction that requires any dwelling or outbuilding (unless it is a non-habitable outbuilding located at least 10 metres from the dwelling) to be setback at least 25 metres from a line that is continuous with a projection of the western boundary of the recently approved subdivision to the north of the review site (Lot 1, PS.813145).
 - A defensible space envelope that applies to all parts of proposed Lot 1 that are located east of a line that is continuous with a projection of the western boundary of the recently approved subdivision to the north of the review site (Lot 1, PS.813145).
 - Management of the vegetation within the defensible space envelope to comply with the requirements of Table 6 to Clause 53.02-5 of the Planning Scheme.
 - Construction of the dwelling and any habitable outbuilding or any non-habitable outbuilding (where the non-habitable outbuilding is located less than 10 metres from the dwelling) to comply with the requirements for BAL-29 in accordance with Sections 3 and 7 of AS.3959-2018.
 - Provision of a static water supply with at least 10,000 litres of water reserved for firefighting purposes in an above ground metal or concrete water tank that incorporates fire authority fittings and which is located less than 4 metres from the driveway in accordance with the requirements of Table 4 to Clause 53.02-5 of the Planning Scheme.

- Provision of fire authority access to the static water supply reserved for firefighting purposes that complies with the design and construction requirements of Table 5 to Clause 53.02-5 of the Planning Scheme.

4 Bushfire hazard mapping, National Construction Code and AS.3959

35. With reference to **Appendix 1** the review site and surrounding area is mapped in a designated Bushfire Prone Area ('BPA') pursuant to Section 192A of the *Building Act 1993*. These are areas that the Minister for Planning has determined are subject to or likely to be subject to bushfires (DELWP, December 2019).
36. The mapping of the review site in a BPA triggers two key requirements:
 - A requirement under the *Building Regulations 2018* for specific classes of buildings as defined under the National Construction Code ('NCC') (ABCB, May 2019a and ABCB, May 2019b) and other 'Specific use bushfire protected buildings' (as defined under Regulation 158 of the *Building Regulations 2018*) to comply with the applicable Performance Requirement for construction of buildings in bushfire prone areas. Specifically, the construction of such buildings "... must, to the degree necessary, be design and constructed to reduce the risk of ignition from a bushfire, appropriate to the – (a) potential for ignition caused by burning embers, radiant heat or flame generated by a bushfire; and (b) intensity of the bushfire attack on the building." (ABCB, May 2019a, pg. 312 and ABCB, May 2019b, pg.73).
 - A requirement under the Planning Scheme to consider Planning Policy Clause 13.02-1S – *Bushfire planning* of the Planning Scheme.
37. With reference to **Appendix 2** and **Map 3** and **Map 4** in this report, part of the review site is mapped in the Bushfire Management Overlay ('BMO') pursuant to Clause 44.06 of the Planning Scheme. The BMO is a planning provision used to guide the development of land in areas of high bushfire hazard where there is the potential for extreme bushfire behaviour, such as crown fire and extreme ember attack and radiant heat (DELWP, September 2017, pg.4)¹¹.
38. The BMO provisions trigger a planning permit for the construction of buildings and the construction and carrying out of works associated with specific uses as listed in Clause 44.06-2 of the Planning Scheme and which are required to comply with the requirements of Clause 53.02 – *Bushfire planning* of the Planning Scheme. Further details about the operation of Clause 13.02-1S and the BMO provisions (Clauses 44.06 and 53.02) are set out in **Section 5** of this report.
39. Australian Standard AS.3959-2018 – *Construction of buildings in bushfire-prone areas* ('AS.3959-2018') provides a "deemed-to-satisfy" construction solution for meeting the relevant Performance Requirements under the National Construction Code. The bushfire provisions of the Planning Scheme (as set out in Clause 13.02-1S, 44.06 and 53.02) also reference the requirements of AS.3959-2018.

¹¹ DELWP, September 2017

40. Pursuant to Regulation 156 of the *Building Regulations 2018* where a planning permit is issued and a site assessment for the purpose of determining the bushfire attack level for the site has been considered as part of the application for planning permit, the relevant building surveyor must accept the site assessment for the purpose of determining the BAL of the site and the construction requirements that are applicable to the building. In these circumstances there is no need to undertake a separate bushfire site assessment at time of obtaining a building permit.

5 Bushfire planning policy and provisions and related guidance

41. This section of the report provides an overview of the nature and operation of the key bushfire planning policies and provisions of the Planning Scheme.

5.1 Planning Policy Framework

Clause 71.02-3 – Integrated decision making

42. Clause 71.02-3 of the Planning Scheme (DELWP, 31 July 2018a) sets out the framework for integrated decision making which includes the following statement:

Planning authorities and responsible authorities should endeavour to integrate the range of policies relevant to the issues to be determined and balance conflicting objectives in favour of net community benefit and sustainable development for the benefit of present and future generations. However in bushfire affected areas, planning authorities and responsible authorities must prioritise the protection of human life over all other policy considerations.

Clause 13.02-1S – Bushfire planning

43. Clause 13.02-1S – *Bushfire planning* of the Planning Policy Framework (DELWP, 31 July 2018b) applies to all planning and decision making relating to land which is within a designated bushfire prone area, subject to a BMO or that is proposed to be used or developed in a way that may create a bushfire hazard.

44. The Objective of Clause 13.02-1S is:

To strengthen the resilience of settlements and communities to bushfire through risk-based planning that prioritises the protection of human life.

45. The strategies that support this Objective are:

Protection of human life

Give priority to the protection of human life by:

- *Prioritising the protection of human life over all other policy considerations.*
- *Directing population growth and development to low risk locations and ensuring the availability of, and safe access to, areas where human life can be better protected from the effects of bushfire.*
- *Reducing the vulnerability of communities to bushfire through the consideration of bushfire risk in decision making at all stages of the planning process.*

Bushfire hazard identification and assessment

Identify bushfire hazard and undertake appropriate risk assessment by:

- *Applying the best available science to identify vegetation, topographic and climatic conditions that create a bushfire hazard.*
- *Applying the Bushfire Management Overlay to areas where the extent of vegetation can create an extreme bushfire hazard.*
- *Considering and assessing the bushfire hazard on the basis of:*
 - *Landscape conditions – meaning conditions in the landscape within 20 kilometres and potentially up to 75 kilometres) of a site;*
 - *Local conditions – meaning conditions in the area within approximately 1 kilometre of a site;*
 - *Neighbourhood conditions – meaning conditions in the area within approximately 400 metres of a site;*
 - *The site for the development.*
- *Consulting with emergency management agencies and the relevant fire authority early in the process to receive their recommendations and implement appropriate bushfire protection measures.*
- *Ensuring that strategic planning documents, planning scheme amendments, planning permit applications and development plan approvals properly assess bushfire risk and include appropriate bushfire protection measures.*
- *Not approving development where a landowner or proponent has not satisfactorily demonstrated that the relevant policies have been addressed, performance measures satisfied or bushfire protection measures can be adequately implemented.*

Settlement planning

Plan to strengthen the resilience of settlements and communities and prioritise protection of human life by:

- *Directing population growth and development to low risk locations, being those locations assessed as having a radiant heat flux of less than 12.5 kilowatts/square metre under AS 3959-2009 Construction of Buildings in Bushfire-prone Areas (Standards Australia, 2009).*
- *Ensuring the availability of, and safe access to, areas assessed as a BAL-LOW rating under AS 3959-2009 Construction of Buildings in Bushfire-prone Areas (Standards Australia, 2009) where human life can be better protected from the effects of bushfire.*
- *Ensuring the bushfire risk to existing and future residents, property and community infrastructure will not increase as a result of future land use and development.*
- *Achieving no net increase in risk to existing and future residents, property and community infrastructure, through the implementation of bushfire protection measures and where possible reducing bushfire risk overall.*
- *Assessing and addressing the bushfire hazard posed to the settlement and the likely bushfire behaviour it will produce at a landscape, settlement, local, neighbourhood and site scale, including the potential for neighbourhood-scale destruction.*

- *Assessing alternative low risk locations for settlement growth on a regional, municipal, settlement, local and neighbourhood basis.*
- *Not approving any strategic planning document, local planning policy, or planning scheme amendment that will result in the introduction or intensification of development in an area that has, or will on completion have, more than a BAL-12.5 rating under AS 3959-2009 Construction of Buildings in Bushfire-prone Areas (Standards Australia, 2009).*

Areas of conservation value

Ensure settlement growth and development approvals can implement bushfire protection measures without unacceptable biodiversity impacts by discouraging settlement growth and development in bushfire affected areas that are important areas of biodiversity.

Use and development control in a Bushfire Prone Area

In a bushfire prone area designated in accordance with regulations made under the Building Act 1993, bushfire risk should be considered when assessing planning applications for the following uses and development:

- *Subdivisions of more than 10 lots.*
- *Accommodation.*
- *Child care centre.*
- *Education centre.*
- *Emergency services facility.*
- *Hospital.*
- *Indoor recreation facility.*
- *Major sports and recreation facility.*
- *Place of assembly.*
- *Any application for development that will result in people congregating in large numbers.*

When assessing a planning permit application for the above uses and development:

- *Consider the risk of bushfire to people, property and community infrastructure.*
- *Require the implementation of appropriate bushfire protection measures to address the identified bushfire risk.*
- *Ensure new development can implement bushfire protection measures without unacceptable biodiversity impacts.*

46. It is my opinion that the nature and scale of the proposed development of the review site does not trigger the settlement planning strategies of this policy.

Clause 02.03-3 – Environmental risks and amenity

47. Clause 02.03-3 of the Planning Scheme (DELWP, 20 May 2021a) provides the local content for environmental risks and amenity and the following statement is made in relation to bushfire:

Bushfire

The Shire faces significant urban bushfire risk at the fringes of all of its main townships, namely Castlemaine, Maldon, Newstead and Harcourt. The highest bushfire risks to Castlemaine are to the north, west, south and south east. There is some vacant land that is zoned for residential development close to these areas. There are also areas of high bushfire risk in smaller settlements such as Chewton, Fryerstown and Taradale, and the rural areas of the Shire.

Council's strategic directions to address bushfire risk are:

- *Directing urban development to the lowest risk locations.*
- *Avoiding development in areas of high bushfire risk where defensible space cannot be provided.*
- *Minimising biodiversity impacts when creating areas of defensible space around new dwellings.*

48. It is my opinion that Council's strategic directions to address bushfire risk are generally consistent with Clause 13.02-1S and do not raise any additional considerations beyond those required to be addressed by Clause 13.02-1S and the BMO provisions.

Clause 11.01-1L-02 – Castlemaine and Diamond Gully

49. The policy at Clause 11.01-1L-02 – *Castlemaine and Diamond Gully* (DELWP, 20 May 2021b) applies to all land in the Castlemaine Land Use Framework Plan attached to the clause and I note that the framework plan identifies that the review site is located inside the urban boundary. I also note that the framework plan references the Regional Bushfire Planning Assessment reference in paragraph 50 below.

Regional Bushfire Planning Assessment – Loddon Mallee Region

50. A Regional Bushfire Planning Assessment was prepared for each region in the State in 2012 in response to Recommendation 38 of the Victorian Bushfires Royal Commission. While it is my opinion that these assessments provide little in the way of information that is useful to guiding decision making, I make the following observations about the Regional Bushfire Assessment that was prepared for the Loddon Mallee Region and in particular the section that deals with the Mount Alexander Shire (DPCD, April 2012, pg. 36-40):

- Castlemaine is located in the area described as the 'Central Area' which is described as having the following characteristics:

The central area of the municipality, which is to the west of the Calder Freeway, contains the Castlemaine Diggings National Heritage Park and numerous state forest areas. Towns and scattered rural settlements are often located on the fringes of the parks and forests and contain small residential or rural residential lots which interface with the bushfire hazard.

Settlements adjoining Castlemaine Diggings National Heritage Park are surrounded by vegetation mapped as being of high and very high conservation significance. These townships interface with the bushfire hazard associated with vegetated areas. Other settlements are surrounded by the Heritage Park and contain small lots in a vegetated landscape. Some settlements in bushfire hazard areas also have limited or single road access.

- The review site is contained within the area shown blue cross hatched which is noted as having ‘multiple matters’ which signifies that there are multiple bushfire issues that occur in a single area (DPCD, April 2012, pg. 3). In the case of the review site it is my opinion that the following issues are likely to have triggered this designation of being in an area with “multiple matters”:
 - ‘Small lots in or close to hazard (0-0.4 hectares).
 - Medium lots in or close to hazard (0.4 – 4 hectares).
 - Urban/bushfire hazard interface.

5.2 Clause 44.06 – Bushfire Management Overlay (BMO)

51. This section of the report provides an overview of the key operational provisions of Clause 44.06 – *Bushfire Management Overlay* (‘BMO’) (DELWP, 8 August 2019).

Purpose of the BMO

52. The purpose of the BMO is:

To implement Municipal Planning Strategy and the Planning Policy Framework.

To ensure that the development of land prioritises the protection of human life and strengthens community resilience to bushfire.

To identify areas where the bushfire hazard warrants bushfire protection measures to be implemented.

To ensure development is only permitted where the risk to life and property from bushfire can be reduced to an acceptable level.

53. The BMO controls is the key statutory implementation of Clause 13.02-1S – *Bushfire planning* and the purpose of the BMO is achieved through demonstrating compliance with Clause 53.02 – *Bushfire planning* (Clause 53.02).

BMO planning permit triggers

54. Clause 44.06-2 sets out the permit requirements for the BMO and applicable exemptions. In accordance with those provisions a planning permit is required to subdivide land and to construct a building or to construct or carry out works associated with several land uses listed in the control and which includes a place of assembly.
55. The proposed subdivision of the land triggers a planning permit under those provisions.

56. The proposed development of the place of assembly building does not trigger a planning permit under Clause 44.06-2 because the building is located well outside the part of the land that is mapped in the BMO. Despite this it is noted that a small section of the northern-most car park encroaches into the part of the land that is mapped in the BMO (which can be seen in **Map 5**) and accordingly those works technically trigger a planning permit under that control.
57. Whilst the place of worship building does not trigger a planning permit under the BMO provisions it is my opinion that the BMO provisions (as set out in Clause 44.06 and Clause 53.02) prescribe the appropriate criteria for assessing the bushfire risks to a building of that kind and accordingly this report incorporates an assessment of that building as if it did trigger a planning permit under that control.

BMO application requirements

58. Clause 44.06-3 specifies that unless a schedule to the overlay specifies different requirements, an application must be accompanied by:
- *A **Bushfire Hazard Site Assessment** including a plan that describes the bushfire hazard within 150 metres of the proposed development. The description of the hazard must be prepared in accordance with Section 2.2.3 to 2.2.5 of AS3959:2009 Construction of buildings in bushfire prone areas (Standards Australia) excluding paragraph (a) of 2.2.23.2. Photographs or other techniques may be used to assist in describing the bushfire hazard.*
 - *A **bushfire hazard landscape assessment** including a plan that describes the bushfire hazard of the general locality more than 150 metres from the site. Photography or other techniques may be used to assist in describing the bushfire hazard. This requirement does not apply to a dwelling that includes all of the approved measures specified in Clause 53.02-3.*
 - *A **Bushfire Management Statement** describing how the proposed development responds to the requirements of in this clause and Clause 53.02. If the application proposed an alternative measure, the Bushfire Management Statement must explain how the alternative measure meets the relevant objective.*
- If in the opinion of the responsible authority any part of these requirements is not relevant to the assessment of an application, the responsible authority may waive, vary or reduce the requirement.*

59. The review site is not subject to a Schedule to the BMO and accordingly the above application requirements must be satisfied unless they are waived, varied or reduced by the Responsible Authority.
60. This report addresses and in my opinion complies with each of these requirements.

Relationship of the BMO provisions to the requirements of Clause 53.02

61. Clause 44.06-4 specifies (in part) that an application must meet the requirements of Clause 53.02 unless the application meets all of the requirements specified in a schedule to this overlay. The review site is not affected by a schedule to the BMO and accordingly the proposal must meet the requirements of Clause 53.02.

Clause 44.06-5 – Mandatory conditions

62. Clause 44.06-4 prescribes the following mandatory conditions that are applicable to this review:

Subdivision

A permit which creates a lot for a single dwelling on land zoned for residential or rural residential purposes must include the following condition:

“Before the statement of compliance is issued under the Subdivision Act 1988 the owner must enter into an agreement with the responsible authority under Section 173 of the Planning and Environment Act 1987. The agreement must:

- *State that it has been prepared for the purpose of an exemption from a planning permit under Clause 44.06-2 of the [*insert name of applicable planning scheme] Planning Scheme.*
- *Incorporate the plan prepared in accordance with Clause 53.02-4.4 of this planning scheme and approved under this permit.*
- *State that if a dwelling is constructed on the land without a planning permit that the bushfire mitigation measures set out in the plan incorporated into the agreement must be implemented and maintained to the satisfaction of the responsible authority on a continuing basis.*

The land owner must pay the reasonable costs of the preparation, execution and registration of the Section 173 Agreement.”

This does not apply:

- *If a schedule to this overlay specifies that a Section 173 Agreement is not required.*
- *Where the relevant fire authority states in writing the preparation of an agreement under Section 173 of the Act is not required for the subdivision.*
- *For the subdivision of the land into lots each containing an existing dwelling or car parking space.*

Buildings and works

A permit to construct a building or construct or carry out works must include the following condition:

“The bushfire protection measures forming part of this permit or shown on the endorsed plans, including those relating to construction standards, defendable space, water supply and access, must be maintained to the satisfaction of the responsible authority on a continuing basis. This condition continues to have force and effect after the development authorised by this permit has been completed.”

Clause 44.06-6 – Referral of applications

63. Pursuant to Clause 44.06-6 and Clause 66.03 an application under the BMO is required to be referred to the Relevant Fire Authority – which in this case the Country Fire Authority (‘CFA’).
64. In accordance with Clause 66.03 the CFA are a “Recommending referral authority” for an application for an application to subdivide land and are a “Determining referral authority” for the car parking works associated with the place of assembly building.

5.3 Clause 53.02 – Bushfire Planning

65. This section of the report provides an overview of the key operational provisions of Clause 53.02 – *Bushfire Planning* ('Clause 53.02') (DELWP 24, January 2020) and in particular its relationship to the BMO provisions at Clause 44.06.

Purpose of Clause 53.02

66. The purpose of Clause 53.02 is:

To implement the Municipal Planning Strategy and the Planning Policy Framework.

To ensure that the development of land prioritises the protection of human life and strengthens community resilience to bushfire.

To ensure that the location, design and construction of development appropriately responds to the bushfire hazard.

To ensure development is only permitted where the risk to life, property and community infrastructure from bushfire can be reduced to an acceptable level.

To specify location, design and construction measures for a single dwelling that reduces the bushfire risk to life and property to an acceptable level.

Application of Clause 53.02

67. In accordance with the *Application* of Clause 53.02 the requirements of Clause 53.02-3 apply to this proposal – with the review site not being mapped in a Schedule to the overlay and not involving an application for the development of a single dwelling.

Operation of Clause 53.02

68. In accordance with the *Operation* of Clause 53.02 the provisions contain:

- **Objectives.** *An objective describes the outcome that must be achieved in a completed development.*
- **Approved measures (AM).** *An approved measure meets the objective.*
- **Alternative measures (AltM).** *An alternative measure may be considered where the responsible authority is satisfied that the objective can be met. The Responsible Authority may consider other unspecified alternative measures.*
- **Decision guidelines.** *The decision guidelines set out the matters that the responsible authority must consider before deciding on an application, including whether any proposed alternative measure is appropriate.*

A schedule to Clause 44.06 may specify a different approved measure, additional alternative measure or additional decision guidelines.

If a schedule to Clause 44.06 specifies an approved measure different from an approved measure set out in this clause, the requirement in the schedule applies.

69. **Section 8** of this report sets out my opinion of how the proposed development and subdivision of the review site addresses the applicable requirements of Clause 53.02.

6 Bushfire Hazard Landscape Assessment

70. This section is to be read in conjunction with **Map 1** and **Map 2** which are presented at the end of this section.
71. An assessment of the landscape bushfire hazard is a critical step in assessing whether the bushfire risk can be reduced to an acceptable level and in demonstrating compliance with the objectives of Clause 53.02. It also informs decisions about the nature and adequacy of the bushfire protection measures for a given development.
72. Fire intensity varies significantly depending on a range of factors including the characteristics of the wider landscape. Critical factors affecting fire intensity include:
- Weather conditions – particularly wind speed, temperature, relative humidity and atmospheric stability¹².
 - The extent, type, arrangement and continuity of vegetation.
 - The length of time a fire has to grow and develop.
 - Topographical features.
73. The influence of the landscape features on the bushfire risk at a specific site can also vary considerably and depends on a range of factors including the following:
- The proximity and relationship of the site to areas which may be capable of extreme fire behaviour.
 - Changes in vegetation and slope characteristics within 150 metres of the site which may mitigate the bushfire intensity at the site level.
 - The proximity of the site to urban areas or other areas where land is managed in a minimal fuel condition which may mitigate the bushfire intensity at the site level and potentially provide shelter from the effects of bushfire.
74. **Map 1** (10 kilometre assessment area) and **Map 2** (1 kilometre assessment area) describes the key features of the landscape bushfire hazard that are relevant to the review site including:
- Location and land use patterns
 - Proximity to urban or township area
 - Significant landscape features, vegetation and topography
 - Recent bushfire and planned burn history
 - Availability of infrastructure to support a response to a bushfire event
75. The BMO Technical Guide sets out four bushfire landscape typologies – with Broader Landscape Type One representing the lowest risk landscape through to Broader Landscape Type Four which represents the most extreme risk landscape.

¹² These conditions are already taken into account in the AS.3959-2018 bushfire models that have been used to develop the defendable space and construction tables of Clause 53.02-5 and are usually taken as a given except in extreme bushfire hazard landscapes.

76. The BMO Technical Guide explains that this approach to ranking landscape typologies is intended to streamline and provide more consistent decision making based on the risk from the landscape beyond the site¹³. Notwithstanding this it is the view of the author of this report that there are significant limitations with the approach adopted in the Technical Guide for ranking bushfire landscape typologies which limits the utility of this guidance – including an oversimplification of the descriptions and sample aerial views and the fact that this guidance was not produced by or in consultant with the relevant fire authority.
77. The review site demonstrates some of the limitations with the landscape typologies as it is most closely aligned with the description for Broader Landscape Type Two however there are pockets of bushfire hazard located within 150 metres of the site that may generate sufficient radiant heat, ember attack and smoke to make conditions untenable for an unprotected person in the open during a major bushfire event. To that extent it the review site also incorporates elements of Broader Landscape Type Three. The descriptors for both landscape types are reproduced below:

Broader Landscape Type Two

- *The type and extent of vegetation located more than 150 metres from the site may result in neighbourhood-scale destruction as it interacts with the bushfire hazard on and close to a site.*
- *Bushfire can only approach from one aspect and the site is located in a suburban, township or urban area managed in a minimal fuel condition.*
- *Access is readily available to a place that provides shelter from bushfire. This will often be the surrounding developed area.*

Broader Landscape Type Three

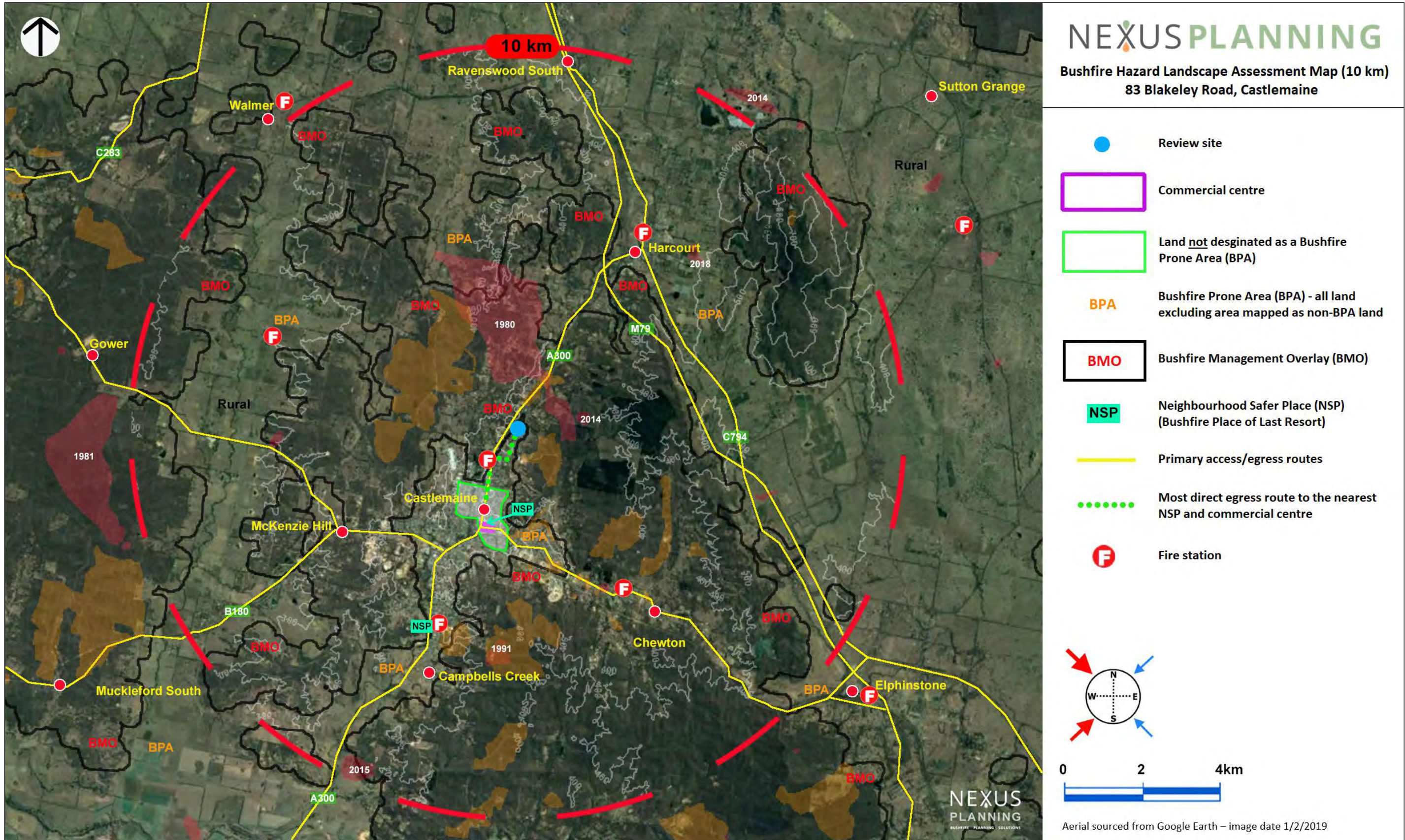
- *The type and extent of vegetation located more than 150 metres from the site may result in neighbourhood-scale destruction as it interacts with the bushfire hazard on and close to a site.*
- *Bushfire can approach from more than one aspect.*
- *The site is located in are that is not managed in a minimum fuel condition.*
- *Access to an appropriate place that provides shelter from bushfire is not certain.*

78. Having regard to the case of the review site it is my opinion that the landscape risk factors are relevant to the proposed development of the land:
- 78.1. Castlemaine is situated in a low valley that is surrounded by forested public and private land that has the potential to support the development of a large and destructive bushfire in the wider landscape.
- 78.2. There is potential for the review site to be impacted by spotting and ember attack from a bushfire in the wider landscape before the site is directly impacted by a bushfire.

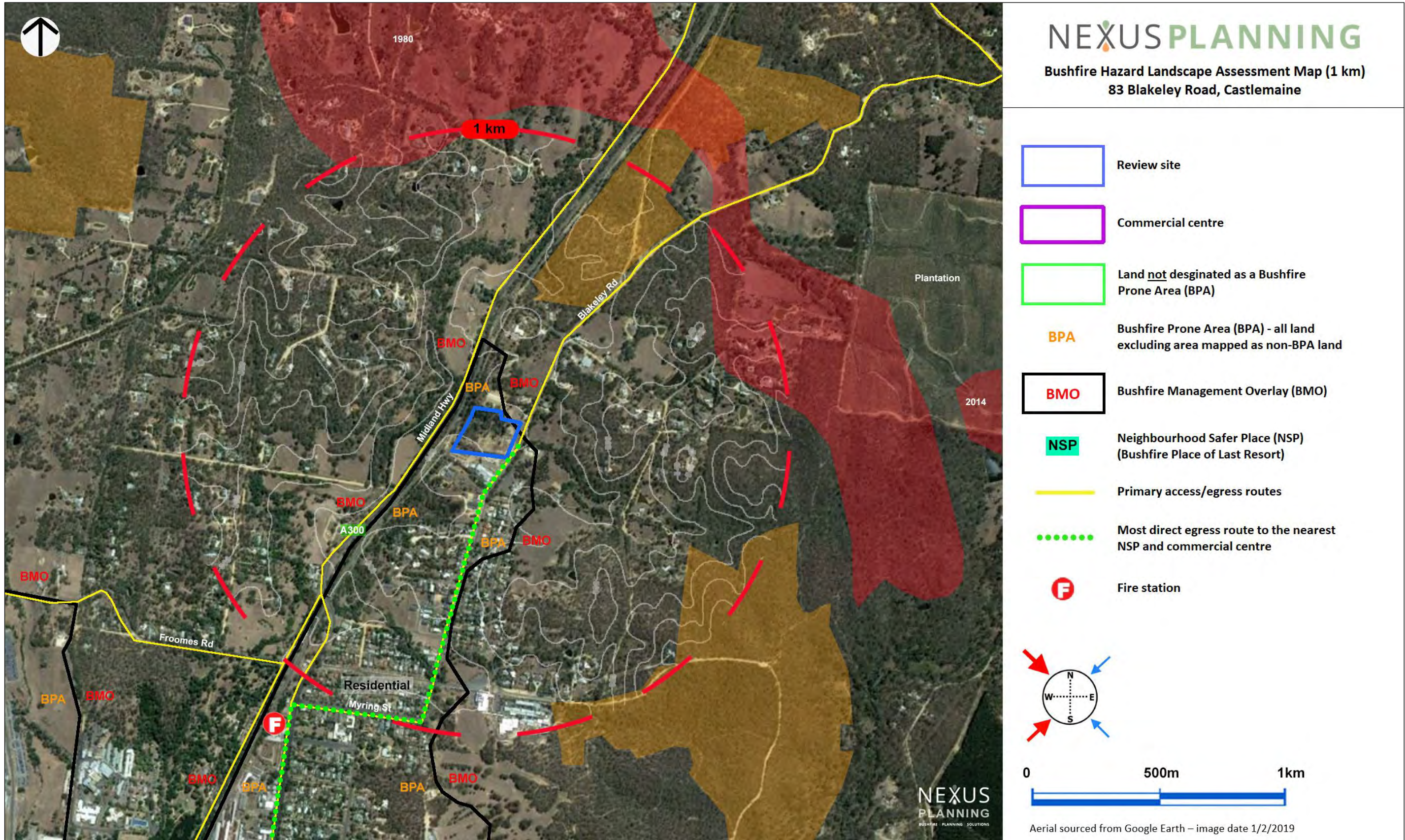
¹³ DELWP, September 2017, p.11

- 78.3. The bushfire hazard located within at least 600 metres of the review site is highly fragmented and it is unlikely that a bushfire could directly impact the land to the intensity that is assumed in the BMO/AS.3959-2018 design fire under credible bushfire scenarios. For this reason, it is my opinion that the review site is not exposed to the risk of extreme fire behaviour.
- 78.4. The review site is located at the northern edge of an established residential area that is continuous with the township area of Castlemaine which is a large regional city that has a substantial urban footprint that can provide shelter from the effects of bushfire. This satisfies the criteria of Broader Landscape Type Two of access being readily available to a place that provides shelter from bushfire.
- 78.5. The review site is located approximately 3.3 kilometres by road to the town centre of Castlemaine and the nearest Neighbourhood Safer Place (Bushfire Place of Last Resort) which is designated as Victory Park and the section of Mostyn Street located between Barker Street and Hargreaves Street (CFA, 7 September 2021, pg. 3).
79. **Section 8.2** of this report draws conclusions from the Bushfire Hazard Landscape Assessment and sets out my opinion about whether the bushfire risks to the proposed development and subdivision from the landscape beyond the site can be reduced to an acceptable level.

Map 1: Bushfire Hazard Landscape Assessment Map (10 km)



Map 2: Bushfire Hazard Landscape Assessment Map (1 km)



7 Bushfire Hazard Site Assessment

7.1 Introduction

80. This part of the report is to be read in conjunction with **Map 3** and **Map 4** which are presented at the end of this section. This assessment has been informed by an inspection of the review site and immediate surrounds carried out by me on 22 August 2021.
81. As noted in the *Technical Guide Planning Permit Applications Bushfire Management Overlay (BMO Technical Guide)*¹⁴ the Bushfire Hazard Site Assessment provides factual information about the bushfire hazard, it informs the defensible space and construction requirements and is informed by the methodology contained in *Australian Standard AS 3959:2018 – Construction of buildings in bushfire-prone areas (AS.3959-2018)*.
82. In accordance with the *Application requirements* of Clause 44.06-3 and the provisions of Clause 53.02:
- The bushfire hazard has been assessed for a distance of 150 metres from the site.
 - The description of the hazard has been prepared in accordance with Clauses 2.2.3 to 2.2.5 of AS.3959-2009¹⁵, excluding paragraph (a) of Clause 2.2.3.2.
 - The vegetation classification, defensible space and construction have been determined with reference to Table 2 to Clause 53.02-5 ('Table 2') and Table 3 to Clause 53.02-5 ('Table 3').
83. This section of the report also includes details about the road access and water supplies available to the land.

7.2 Vegetation classification (Clause 2.2.3, AS.3959-2018)

84. In accordance with Clause 2.2.3.1 of AS.3959-2018, the vegetation has been classified in accordance with Table 2.3 and Figures 2.3 and 2.4(A) to 2.4(G) of AS.3959-2018 and Table 2 and Table 3 to Clause 53.02-5. Where there is more than one vegetation type, each type has been classified separately with the worst-case scenario applied – which is not necessarily the predominant vegetation.
85. CFA's publication *Vegetation Classes – Victorian Bushfire Management Overlay*¹⁶ and the BMO Technical Guide have also been used to inform the classification of the vegetation surrounding the site.

Forest vegetation (Group A)

86. I have classified the areas of bushland shaded green on **Map 3** and **Map 4** in Group A – Forest and this vegetation is most closely aligned to the description for Open Forest 03:

¹⁴ DELWP, September 2017, p.20

¹⁵ The provision hasn't yet been updated to reference the 2018 version of the standard

¹⁶ CFA, February 2014

Trees up to 30 m high; 30–70% foliage cover (may include understorey of sclerophyllous low trees or shrubs). Typically dominated by eucalypts, melaleuca or callistemon (may include riverine and wetland environments) and callitris. Includes eucalypt plantations.¹⁷

87. In relation to the place of worship this vegetation type is generally located:
- to the west through to north-west of the building in a clockwise direction, and
 - to the east through to south-east of the building in a clockwise direction.
88. In relation to the proposed lot that will be developed with a single dwelling this vegetation type is generally located:
- to the south-west through to the north of the lot, through north-west,
 - to the north-west of the lot, and
 - to the south-east of the lot.
89. The classification of the bushland to the north-west of the site for the future dwelling to be developed on proposed Lot 1 is conservative having regard to the generally absent understorey fuels and the reasonably open canopy of this vegetation.
90. Representative photos of this vegetation type located proximate to the review site are presented in **Plates 5-11** below.

Plate 5 South-eastern edge of the bushland located in the western extent of the review site



¹⁷ Standards Australia, 18 December 2020

Plate 6 Typical fuel structure of the bushland located to the west of the place of worship building



Plate 7 Typical fuel structure of the bushland to the west of proposed Lot 1



Plate 8 Typical fuel structure of the bushland in the drainage line to the west of the dam on the review site (viewed from the paper road adjacent to the railway)



Plate 9 Modified bushland in the western extent of 105 Blakeley Road to the north of the review site viewed from the paper road adjacent to the railway)



Plate 10 Western edge of the bushland located to the north-east of the review site



Plate 11 Close view of the bushland to the south-east the review site from the eastern corner of the Castlemaine Church of Christ property



Grassland (Group G)

91. I have classified the areas of generally cleared grass shaded blue on **Map 3** and **Map 4** in Group G – Grassland which is described in AS.3959-2018 as having the following characteristics:

All forms (except tussock and moorlands), including situations with shrubs and trees, if the overstorey foliage is less than 10%. Includes pasture and cropland.

NOTE: Grassland managed in a minimal fuel condition and non-curing cropland is regarded as low threat vegetation for the purposes of Clause 2.2.3.2.¹⁸

92. In relation to the place of worship this vegetation type is generally located:

- to the west through to the north of the building, and
- to the north-east through to the south-east of the building, through east.

93. In relation to the proposed lot that will be developed with a single dwelling this vegetation type is generally located:

- to the west to north-west of the lot, in a clockwise direction,
- to the north of the lot, and
- to the north-east through to the south-east of the lot, through east.

94. The classification of some of these areas as Grassland is reasonably conservative as my inspection and a review of historical aerial photography suggests that much of this vegetation is maintained in a generally short cropped condition.

95. Representative photos of this vegetation type located proximate to the review site are presented in **Plates 12-15** below.

¹⁸ Standards Australia, 18 December 2020

Plate 12 Grassland to the west of proposed Lot 1



Plate 13 Eastern edge of the Grassland to the north of the review site



Plate 14 South-western extent of the Grassland to the east of the review site



Plate 15 Western edge of the Grassland to the east of the review site – north of Plate 14



Low threat vegetation

96. I have assessed that all unshaded areas within the 150 metre assessment areas on **Map 3** and **Map 4** are excludable as areas of low threat vegetation that satisfies one or more of the following exclusions under Clause 2.2.3.2 of AS.3959-2018¹⁹:
- (b) *Single areas of vegetation less than 1 ha in area and not within 100 m²⁰ of other areas of vegetation being classified vegetation.*
 - (c) *Multiple areas of vegetation less than 0.25 ha in area and not within 20 m of the site, or each other or of other areas of vegetation being classified.*
 - (d) *Strips of vegetation less than 20 m in width (measured perpendicular to the elevation exposed to the strip of vegetation) regardless of length and not within 20 m of the site or each other, or other areas of vegetation being classified vegetation.*
 - (e) *Non-vegetated areas, that is, areas permanently cleared of vegetation, including waterways, exposed beaches, roads, footpaths, buildings and rocky outcrops.*
 - (f) *Vegetation regarded as low threat due to factors such as flammability, moisture content or fuel load. This includes grassland managed in a minimal fuel condition, mangroves and other saline wetlands, maintained lawns, golf courses (such as playing areas and fairways), maintained public reserves and parklands, sporting fields, vineyards, orchards, banana plantations, market gardens (and other non-curing crops), cultivated gardens, commercial nurseries, nature strips and windbreaks.*

NOTES:

- 1 *Minimal fuel condition means there is insufficient fuel available to significantly increase the severity of the bushfire attack (recognizable as short-cropped grass for example, to a nominal height of 100 mm).*
- 2 *A windbreak is considered a single row of trees used as a screen or to reduce the effect of wind on the leeward side of the trees.*²¹

97. This assessment takes the following factors into account:
- 97.1. The existing use, development and maintenance of the areas of low threat vegetation located on surrounding land provides reasonable assurance that this land will continue to be maintained in a low bushfire threat condition that satisfies the above criteria (as applicable).
 - 97.2. Upon the development of a dwelling on the approved subdivision to the north of the review site (Lot 1, PS.813145) the owner will be obligated to maintain vegetation on the subject land in accordance with the requirements of Table 6 to Clause 53.02-5 to provide defensible space for that dwelling.

¹⁹ Clause 53.02 excludes the operation of paragraph (a)

²⁰ For the purposes of the BMO this distance is taken to be 150 metres.

²¹ Standards Australia, 14 November 2018

- 97.3. AS.3959-2018 specifies that when assessing vegetation classes for forests, woodlands and rainforest that the classified vegetation is determined by the unmanaged understorey rather than either the canopy (drip line) or the trunk of any trees)²². This approach effectively treats scattered trees with no understorey fuels as being low threat vegetation because with no understorey there is no point at which the distance to the vegetation can be measured. This principle applies equally to the trees that are to be retained in the defendable space envelope for the place of worship.
- 97.4. Compliance with the requirements of the Bushfire Management Plan (BMP) for the place of worship and the proposed vacant lot to be developed with a dwelling will result in vegetation located in the proposed defendable space envelope for those developments meeting the criteria for exclusion in accordance with Clause 2.2.3.2(f) of AS.3959-2018.
98. Representative photos of this vegetation type located proximate to the review site are presented in **Plates 16-27** below.

Plate 16 View west across the land to the south of the review site from the vehicle crossing to that land



²² Refer to Figure 2.2 of Clause 2.2.5 of AS.3959-2018

Plate 17 View west from the review site (approx. 70-80 metres from the frontage of the review site) across the land to the south of the review site



Plate 18 View south from the review site across the western extent of the land to the south of the review site



Plate 19 View south along Blakeley Road from adjacent to the vehicle crossing to 80 Blakeley Road



Plate 20 View north along Blakeley Road from north of the vehicle crossing to 80 Blakeley Road



Plate 21 View east from Blakeley Road across the northern extent of the frontage of 80 Blakeley Road



Plate 22 View south-east from Blakeley Road across the main frontage of 80 Blakeley Road



Plate 23 View south-east from Blakeley Road across the northern frontage of the Church of Christ property



Plate 24 View south-east from Blakeley Road across the central frontage of the Church of Christ property



Plate 25 View west across the approved Lot 1, PS.813145 to the north of proposed Lot 1



Plate 26 View west from Blakeley Road across the southern extent of the frontage of 85 Blakeley Road to the north of the review site



Plate 27 View west from Blakeley Road across the main frontage of 85 Blakeley Road to the north of the review site



7.3 Distance of the site from classified vegetation (Clause 2.2.4, AS.3959-2018)

99. The distance of the place of worship building and the site for the future dwelling to be developed on proposed Lot 1 from areas of classifiable vegetation has been determined in accordance with Clause 2.2.4 of AS.3959-2018 and the outcome of this assessment is recorded in **Table A** and **Table B** below.
100. In accordance with Note 1 to Figure 2.1 of AS.3959-2018 the distance is taken from the nearest part of an external wall of the building or for parts of the building that do not have external walls it is taken from the supporting posts or columns.
101. This assessment takes into account the setback restriction that is to be imposed on proposed Lot 1 that will require any dwelling, habitable outbuilding or non-habitable outbuilding (unless the non-habitable outbuilding is located more than 10 metres from the dwelling) to be setback at least 25 metres from a line that is continuous with a projection of the western boundary of the recently approved subdivision to the north of the review site (Lot 1, PS.813145).

7.4 Effective slope of land under the classified vegetation (Clause 2.2.5, AS.3959-2018)

102. The effective slope of areas of classifiable vegetation have been determined in accordance with Section 2.2.5 of AS.3959-2018 and the outcome of this assessment is recorded in **Table A** and **Table B** below.
103. In deciding to classify the effective slope of the Forest located generally to the west of the two development sites, I determined that the approximately 3 degree downslope to that aspect was not an effective slope as it would not result in increased fire behaviour beyond what is assumed for a flat slope having regard to the following:
- 103.1. The beneficial effect that the fuel breaks provided by the Midland Highway and the railway line to the west of the site will have on reducing the rate of spread and intensity of a fire impacting this area of bushland from that aspect.
- 103.2. The short length of the maximum potential unbroken fire runs through the bushland towards the place of assembly building – being approximately 100 metres from the west and approximately 75 metres from the north-west.
- 103.3. The short length of the maximum potential unbroken fire run through the bushland toward the site for the future dwelling to be developed on proposed Lot 1 which is approximately 150 metres from the west.
- 103.4. The beneficial effect the dam will have on reducing the rate of spread and intensity of a bushfire impacting the place of assembly from the north-west and on a bushfire impacting the future dwelling to be developed on proposed Lot 1 from the south-west.
- 103.5. The fact that this area of bushfire hazard was insufficient to trigger a buffer being applied to it for the BMO mapping.
104. I also note that the conditions set out in CFA’s Statement of Grounds require defensible space to be provided for a minimum of 48 metres (or to the property boundary whichever is the lesser) for the place of assembly building and a minimum of 21 metres (or to the property boundary whichever is the lesser) for the future dwelling to be developed on proposed Lot 1. With reference to Table 2 and Table 3 to Clause 53.02-5 it appears to me that the CFA have adopted the following approach to the classification of this vegetation it its effective slope:
- 104.1. For the place of worship building it has adopted a vegetation classification of Forest with an effective slope of flat – with 48 metres being the distance needed to achieve defensible space for BAL-12.5 in accordance with Table 2 based on these hazard inputs. This is consistent with my classification of this area of bushfire hazard, although I have also proposed a more conservative approach to the provision of defensible space for this building.

104.2. For the future dwelling to be developed on proposed Lot 1 it has adopted a vegetation classification of Woodland with an effective slope of downslope 0-5 degrees – with 21 metres being the distance needed to achieve defensible space for BAL-29 in accordance with Table 2 based on these hazard inputs. This is not consistent with my classification of this area of bushfire hazard however my classification of the vegetation as Forest rather than Woodland results in an additional 4 metres of defensible space being provided for the future dwelling when compared to CFA’s approach and to that extent my approach is more conservative than the CFA’s.

Table A: Recording the outcome of the bushfire hazard site assessment for the place of worship building

Aspect	Vegetation classification (Clause 2.2.3)	Distance from vegetation (Clause 2.2.4)	Effective slope (degrees) (Clause 2.2.5)
West	Forest	≥ 60 m	Flat
North	Forest	≥ 60 m	Flat
North	Grassland	≥ 85 m	Upslope
East	Grassland	≥ 45 m	Flat
East	Forest	≥ 95 m	Flat
South	Low threat	N/A	N/A

1. Distance to vegetation includes vegetation located in the defensible space and other areas of low threat vegetation.
2. Low threat vegetation means vegetation that satisfies one or more of the exclusions in Clause 2.2.3.2 of AS.3959-2018 – excluding paragraph a).

Table B: Recording the outcome of the bushfire hazard site assessment for the future dwelling on proposed Lot 1

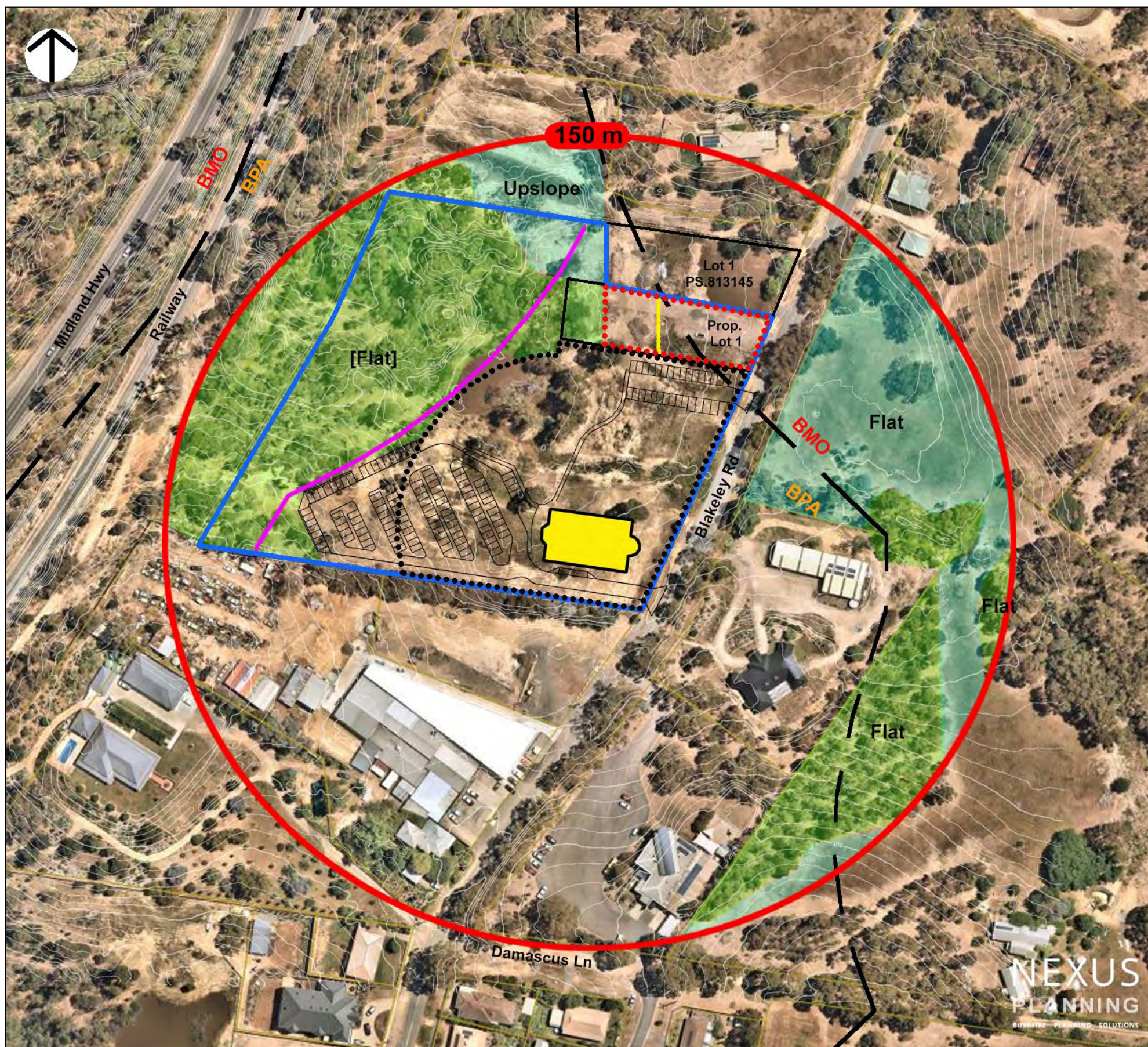
Aspect	Vegetation classification (Clause 2.2.3)	Distance from vegetation (Clause 2.2.4)	Effective slope (degrees) (Clause 2.2.5)
West	Forest	25 m	Flat/up
West	Grassland	25 m	Upslope
North	Forest	≥ 80 m	Upslope
North	Grassland	≥ 80 m	Upslope
East	Grassland	≥ 20 m	Flat/up
East	Forest	≥ 75 m	Flat/up
South	Low threat	N/A	N/A
West	Forest	25 m	Flat/up

1. Distance to vegetation takes into account the BAL-29 setback restriction prescribed on the BMP.
2. Distance to vegetation includes vegetation located in the defensible space and other areas of low threat vegetation.
3. Low threat vegetation means vegetation that satisfies one or more of the exclusions in Clause 2.2.3.2 of AS.3959-2018 – excluding paragraph a).

7.5 Road access and water supplies

105. Blakeley Road is an asphalt road with a trafficable width of approximately 6 metres.
106. Reticulated water is available in the area and there are two fire hydrants located in the road reserve adjacent to the review site. The southern-most of these hydrants is in immediate proximity of the proposed driveway access to place of worship building and will provide full hose coverage of this building within 120 metres of the hydrant. The northern-most of these hydrants is located approximately 35-40 metres from the frontage of the proposed Lot 1 and will provide full hose coverage of the future dwelling on this lot within 120 metres of the hydrant.

Map 3: Bushfire Hazard Site Assessment Map (Place of Worship)



NEXUS PLANNING
 Bushfire Hazard Site Assessment Map
 Proposed place of worship at 83 Blakeley Rd Castlemaine

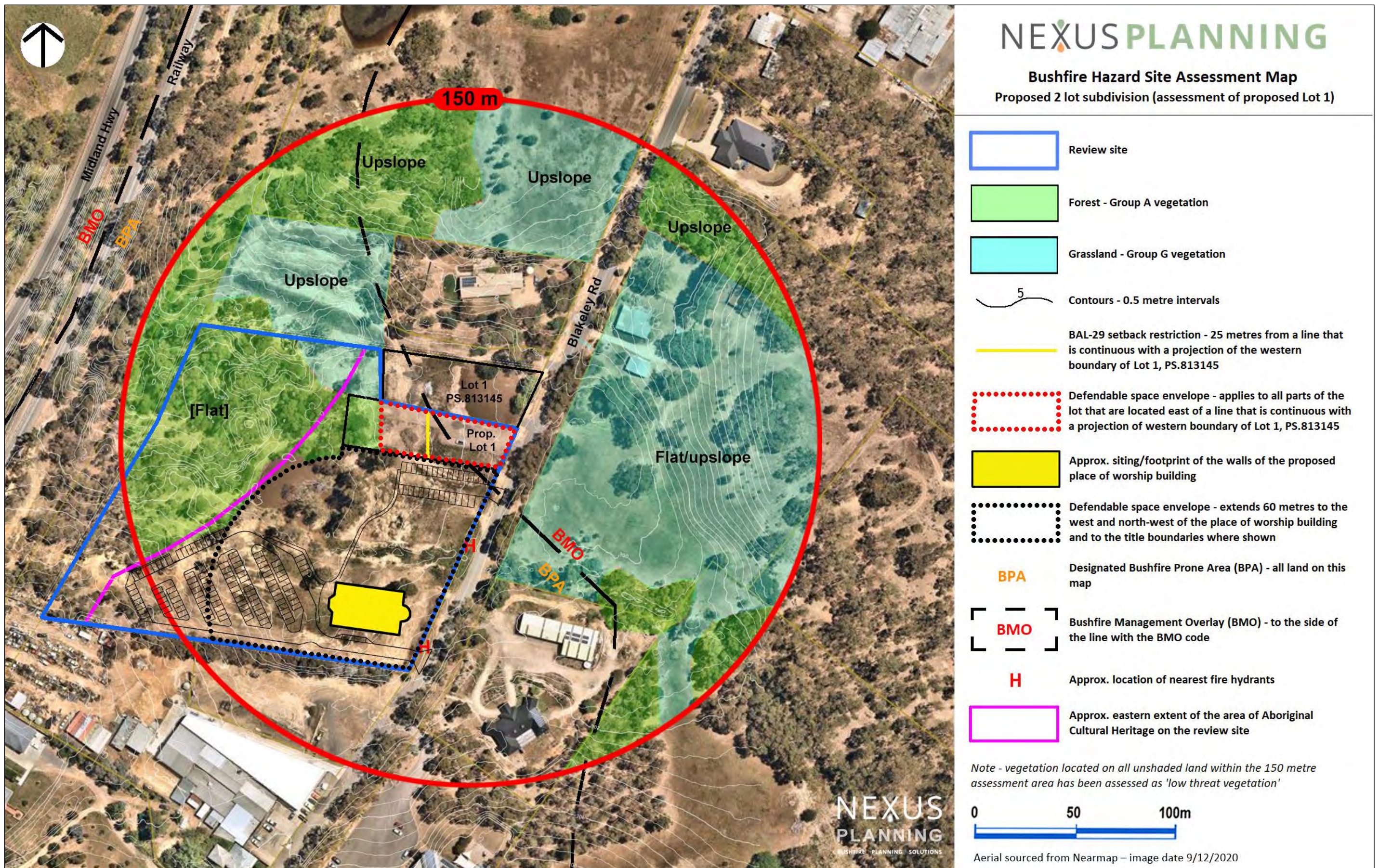
- Review site
- Forest - Group A vegetation
- Grassland - Group G vegetation
- Contours - 0.5 metre intervals
- Approx. siting/footprint of the walls of the proposed place of worship building
- Defendable space envelope - extends 60 metres to the west and north-west of the place of worship building and to the title boundaries where shown
- BAL-29 setback restriction - 25 metres from a line that is continuous with a projection of the western boundary of Lot 1, PS.813145
- Defendable space envelope - applies to all parts of the lot that are located east of a line that is continuous with a projection of western boundary of Lot 1, PS.813145
- Designated Bushfire Prone Area (BPA) - all land on this map
- Bushfire Management Overlay (BMO) - to the side of the line with the BMO code
- Approx. location of nearest fire hydrants
- Approx. eastern extent of the area of Aboriginal Cultural Heritage on the review site

Note - vegetation located on all unshaded land within the 150 metre assessment area has been assessed as 'low threat vegetation'

0 50 100m

Aerial sourced from Nearmap – image date 9/12/2020

Map 4: Bushfire Hazard Site Assessment Map (Subdivision – proposed lot 1)



8 Bushfire Management Statement

8.1 Introduction

107. This section of the report is to be read in conjunction with the Bushfire Management Plan (BMP) prepared by me for the proposed place of worship building and the future dwelling to be developed on proposed Lot 1 which are presented as **Map 5** and **Map 6** at the end of this section. I have also prepared separate versions of these plans that stand alone from plans in this report that are suitable for endorsement as part of the planning permit and referencing in the Section 173 Agreement for the BMP for the future dwelling on proposed Lot 1. Those versions of the plans mirror the versions in this report except they omit the reference to a Map number and to the maps forming part of a specific page in this report – thereby making them more suitable for endorsement.
108. **Table C** below sets out the Objectives, Approved measures and Alternative measures of Clause 53.02 that I have identified as being applicable to the proposed place of worship and the proposed subdivision of the land and which are addressed in this section of the report.
109. In accordance with the *Operation* to Clause 53.02 compliance with the Approved measures is deemed to meet the objective. Where an Approved measure can't be met an Alternative measure – including other unspecified alternative measures – may be considered where the responsible authority is satisfied that the objective can be met.

Table C: Clause 53.02 – Relevant objectives, approved measures and alternative measures

Pathway / Clause / Objective / measures		Applicable (or is otherwise relied upon)?	Rationale / Approved Measure met or Alternative Measure proposed?
53.02-4.1	Landscape, siting and design objectives		
AM 2.1	Landscape bushfire hazard	Place of worship & subdivision	Complies
AM 2.2	Siting	Place of worship & subdivision	Complies
AM 2.3	Building design	Place of worship only	Complies
53.02-4.2	Defendable space and construction objective		
AM 3.1	For dwellings, dependant person's units, industry, office and retail	No	This measure does not apply to the place of worship or the subdivision
AM 3.2	For development other than that listed in AM 3.1	Place of worship only	Complies – in conjunction with Alternative measure AltM 3.3
AltM 3.3	Use of adjoining land for defendable space	Place of worship & subdivision	Complies for the place of worship and as part of an unspecified alternative measure for meeting AM 5.2 for the subdivision
AltM 3.4	Use of Method 2 (AS.3959)	No	Not relied upon
AltM 3.5	Criteria for flame zone	No	Not relied upon
AltM 3.6	Integrated risk management	No	Not relied upon
53.02-4.3	Water supply and access objective		
AM 4.1	For dwellings, dependant person's units, industry, office and retail	Subdivision only	Complies
AM 4.2	Other development	Place of worship only	Complies
53.02-4.4	Subdivision objectives		
AM 5.1	Requirements for non-residential subdivisions	No	AM 5.2 applies
AM 5.2	Requirements for residential subdivision	Subdivision only	An unspecified alternative measure for meeting the objective is proposed
AM 5.3	Perimeter roads for subdivision of 10 or more lots	No	The proposed subdivision creates less than 10 lots
AM 5.4	Management of bushfire risk within the subdivision	Subdivision only	Complies

8.2 Clause 53.02-4.1 – Landscape, siting and design objectives

110. The objectives of Clause 53.02-4.1 – *Landscape, siting and design objectives* are:

- *Development is appropriate having regard to the nature of the bushfire risk arising from the surrounding landscape.*
- *Development is sited to minimise the risk from bushfire.*
- *Development is sited to provide safe access for vehicles, including emergency vehicles.*
- *Building design minimises vulnerability to bushfire attack.*

111. There are three approved measures (AM 2.1, AM 2.2 and AM 2.3) that support the implementation of this objective. My assessment of the proposed place of worship and the future dwelling to be developed on proposed Lot 1 against the requirements of each these approved measures (where applicable) is set out below.

Approved measure 2.1 (Landscape bushfire risk)

Measure	Requirement
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<i>AM 2.1</i>	<i>The bushfire risk to the development from the landscape beyond the site can be mitigated to an acceptable level.</i>
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112. Approved measure AM 2.1 is applicable to both the place of worship and the subdivision – noting that the need for the subdivision to satisfy this approved measure is prescribed in Approved measure AM 5.2.

Assessment of compliance with AM 2.1 (For the place of worship building and future dwelling on Lot 1)

113. With reference to the Bushfire Hazard Landscape Assessment and the Bushfire Hazard Site Assessment it is my opinion that the following conclusions can be drawn about the influence of the bushfire hazard in the wider landscape on the bushfire risk to the proposed place of worship and the future dwelling to be developed on proposed Lot 1:

113.1. The type and extent of vegetation located more than 150 metres from the review site has the potential to result in neighbourhood-scale destruction as it interacts with the bushfire hazard close to the site. However, the nature, size, extent and location of areas of bushfire hazard combined with the gently undulating topography closer to the site is not conducive to the development of extreme bushfire behaviour at the site level and the credible bushfire scenarios for the site will be within the parameters of the BMO/AS.3959-2018 design fire.

113.2. The potential for the land to be impacted by spotting and ember attack from a bushfire in the wider landscape is capable of being addressed through building design and construction.

113.3. The review site is located in close proximity to the township area of Castlemaine that can provide shelter from the impact of bushfire.

- 113.4. The site is located in an area that has a good road network that can support bushfire response and recovery.
114. In deciding whether the requirement of AM 2.1 is met it is also necessary to consider the nature of the bushfire protection measures and emergency management procedures (where relevant) that will be required to be implemented – which in this case includes the following:
- 114.1. The siting and defensible space provided for the place of worship building achieves defensible space in accordance with Table 3 to Clause 53.02-5 ('Table 3') which ensures that the radiant heat exposure to that building will be less than 10 kilowatts per square metre (kW/m²).
- 114.2. The siting and defensible space provided for the future dwelling to be developed on proposed Lot 1 achieves defensible space for BAL-29 in accordance with Table 2 to Clause 53.02-5 (Table 2) which eliminates the potential for the building to be subject to direct flame contact from flames in the fire front under credible bushfire scenarios for the site and limit the mechanisms of bushfire attack to high levels of radiant heat (≤ 29 kW/m²), embers and burning debris²³.
- 114.3. Both the place of worship and the future dwelling on proposed Lot 1 will be required to be constructed to comply with the requirements for BAL-29 in accordance with Sections 3 and 7 of AS.3959-2018.
- 114.4. In the case of the place of worship building the outcome achieved by combining the provision of Table 3 defensible space (and the resulting low level of radiant heat exposure) with BAL-29 construction – together with the bushfire sensitive design of the building (refer to response to Approved measure AM 2.3 below) – means there is a high likelihood that the building will provide a shelter of last resort for the patrons of the church until at least the passage of the fire front and more than likely the entire bushfire event.
- 114.5. The emergency management procedures that will be required to be implemented for the place of worship which should include closure of the facility on days that are predicted to have a Fire Danger Rating of Extreme or Code Red and in the case of the special events that are to be held every 3 years (with up to 860 patrons on site) it is my opinion that such events should not take place at any time during the Declared Fire Danger Period for the North Central Fire District.
115. Having regard to the above and the other factors outlined in response to the other provisions in Clause 53.02 it is my opinion that the bushfire risk to the proposed place of worship and the future dwelling to be developed on proposed Lot 1 will be mitigated to an acceptable level through the implementation of the bushfire protection measures and bushfire emergency management procedures as required by AM 2.1.

²³ Based on the BMO/AS.3959-2018 design fire

Approved measure 2.2 (Siting)

Measure Requirement

- AM 2.2 *A building is sited to ensure the site best achieves the following:*
- *The maximum separation distance between the building and the bushfire hazard.*
 - *The building is in close proximity to a public road.*
 - *Access can be provided to the building for emergency service vehicles.*

116. Approved measure AM 2.2 is applicable to both the place of worship and the subdivision – noting that the need for the subdivision to satisfy this approved measure is prescribed in Approved measure AM 5.2.

Assessment of compliance with AM 2.2 (for the place of worship building)

117. It is my opinion that the siting of the proposed place of worship building and associated car parking is acceptable and meets the requirements of AM 2.2 having regard to the following:
- 117.1. The nature of the bushfire hazard as documented in the Bushfire Hazard Landscape Assessment and the Bushfire Hazard Site Assessment and in particular the absence of bushfire hazards in the wider landscape that have the potential to create extreme fire behaviour at the site level.
 - 117.2. The building is located outside the part of the land that is mapped in the BMO and maximises the separation of the building from the highest risk areas of bushland generally located to the east and west of the site.
 - 117.3. The siting of the building and defensible space to be provided achieves defensible space in accordance with Table 3 which ensures that the radiant heat exposure to the building will be less than 10 kilowatts per square metre (kW/m²) under credible bushfire scenarios for the site.
 - 117.4. The siting and layout maximises the part of the land that is already substantially cleared of vegetation which means little effort will be required to implement the defensible space and vegetation management requirements specified in the BMP for this building.
 - 117.5. The provision of the car parking on the western side of the building significantly reduces the area of the defensible space that requires active management to provide defensible space for the proposed building which in turn increases the likelihood of it being maintained.
 - 117.6. The building has a minimum front setback of 11 metres which places it close proximity to the road.

- 117.7. The main driveway access is approximately 50 metres long measured from the edge of the road carriageway to the rear of the building and the length of the access to the main entry of the building which is situated on the western side of the building is no more than 80 metres.
- 117.8. The BMP prescribes that the design and construction of the vehicle access to the building and the static water supply reserved for firefighting purposes must comply with the requirements of Table 5 to Clause 53.02-5 ('Table 5') ensuring appropriate access for firefighting and other emergency service vehicles.
- 117.9. While not required to comply with Table 5 (because the access is less than 100 metres long) the BMP also prescribes that a turning area for firefighting purposes must be provided close to the building which is already achieved through the design of the intersection between the main driveway and the branch of the driveway located to the west of the building.

Assessment of compliance with AM 2.2 (for the future dwelling on proposed Lot 1)

118. It is my opinion that the building envelope (implemented through a setback restriction) and defensible space envelope for the future dwelling to be developed on proposed Lot 1 is acceptable and meets the requirements of AM 2.2 having regard to the following:
 - 118.1. The nature of the bushfire hazard as documented in the Bushfire Hazard Landscape Assessment and the Bushfire Hazard Site Assessment and in particular the absence of bushfire hazards in the wider landscape that have the potential to create extreme fire behaviour at the site level.
 - 118.2. It ensures the future dwelling will achieve siting and defensible space for BAL-29 in accordance with Table 2 which eliminates the potential for the building to be subject to direct flame contact from flames in the fire front under credible bushfire scenarios for the site and limit the mechanisms of bushfire attack to high levels of radiant heat (≤ 29 kW/m²), embers and burning debris²⁴.
 - 118.3. The setback restriction will result in any dwelling constructed on the lot being setback less than 30 metres from the front boundary of the land and the length of the driveway access to the dwelling is also unlikely to exceed 30 metres.
 - 118.4. The BMP prescribes that the design and construction of the vehicle access to the building and the static water supply reserved for firefighting purposes must comply with the requirements of Table 5 ensuring appropriate access for firefighting and other emergency service vehicles.

²⁴ Based on the BMO/AS.3959-2018 design fire

Approved measure 2.3 (Building design)

Measure Requirement

AM 2.3 *A building is designed to be responsive to the landscape risk and reduce the impact of bushfire on the building.*

119. Approved measure AM 2.3 is only applicable to the place of worship building – noting that Approved measure AM 5.2 does not specify the need for a subdivision to satisfy this approved measure which is logical given that a dwelling design has not usually been contemplated or prepared at the subdivision stage.

Assessment of compliance with AM 2.2 (for the place of worship building)

120. It is my opinion that the design of the proposed place of worship building provides an acceptable response to the requirement of AM 2.3 having regard to the following:
- 120.1. The nature of the bushfire hazard as documented in the Bushfire Hazard Landscape Assessment and the Bushfire Hazard Site Assessment and in particular the absence of bushfire hazards in the wider landscape that have the potential to create extreme fire behaviour at the site level.
 - 120.2. The siting of the building and defensible space to be provided achieves defensible space in accordance with Table 3 which ensures that the radiant heat exposure to the building will be less than 10 kilowatts per square metre (kW/m²) under credible bushfire scenarios for the site.
 - 120.3. The building is constructed slab on ground.
 - 120.4. The building is to be entirely constructed of non-combustible materials and the only glazed elements of the building are for the main entry.
 - 120.5. The building has a predominantly rectangular shape which minimises the creation of re-entrant corners.
 - 120.6. The roof of the building has a moderate pitch (15 degrees) which will assist in shedding embers from the roof and the design of the roof avoids the creation of box gutters.
 - 120.7. The BMP prescribes that the building must be constructed to comply with the requirements for BAL-29 in accordance with Sections 3 and 7 of AS.3959-2018. This ensures that the development is constructed to a standard that is significantly higher than the assessed bushfire attack level (10 kW/m²), is provided with the full range of ember protection measures of the Standard and complies with Performance Requirement P2.7.5 of Volume One of the National Construction Code 2019²⁵.
 - 120.8. The BMP prescribes as an additional bushfire protection measure that non-combustible gutter guards must be installed to reduce the potential for the accumulation of leaf litter in the gutters.

²⁵ ABCB, May 2019a

8.3 Clause 53.02-4.2 – Defendable space and construction objective

121. The objective of Clause 53.02-4.2 – *Defendable space and construction objective* is:

Defendable space and building construction mitigate the effect of flame contact, radiant heat and embers on buildings.

122. There are two Approved measures and four Alternative measures that support the implementation of this objective – with one Approved measure (AM 3.2) and one Alternative measure (AltM 3.3) being relevant to the proposed place of worship building. My assessment of the proposal against the requirements of those measures is outlined below.

Approved measure 3.2 (Defendable space and construction)

Measure	Requirement
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- | | |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AM 3.2 | <p><i>A building used for accommodation (other than a dwelling or dependent person's unit), a child care centre, an education centre, a hospital, leisure and recreation or a place of assembly is:</i></p> <ul style="list-style-type: none">▪ <i>Provided with defendable space in accordance with Table 3 and Table 6 to Clause 53.02-5 wholly within the title boundaries of the land.</i>▪ <i>Constructed to a bushfire attack level of BAL 12.5.</i> |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Alternative measure 3.3 (Off-site defendable space)

Measure	Requirement
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- | | |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AltM 3.3 | <p><i>Adjoining land may be included as defendable space where there is a reasonable assurance that the land will remain or continue to be managed in that condition as part of the defendable space.</i></p> |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

123. As noted earlier in my evidence it is important to understand that unlike Table 2 which is based on achieving defendable space based for each of the different BAL ratings of AS.3959-2018, that Table 3 is designed to ensure that a building is exposed to a radiant heat flux of no more than 10 kilowatts per square metre (kW/m²). I am aware that achieving this radiant heat threshold is consistent with one of the criteria that is applied to buildings that are used for Neighbourhood Safer Places (Bushfire places of last resort). By way of comparison a BAL-29 in accordance with Table 2 represents a radiant heat flux of 29 kW/m².

Assessment of compliance with AM 3.2 and AltM 3.3 (for the place of worship building)

124. The proposed place of worship building does not comply with the requirement of Approved measure AM 3.2 to the extent that the required defendable space is not contained wholly provided within the boundaries of the review site and it proposes the following variations to the requirements of Table 6 to Clause 53.02-5 ('Table 6'):

- The requirement to provide a separation of 5 metres between the canopy of trees has not been applied to several existing trees to be retained in the defensible space and several trees to be planted in the defensible space.
- The requirement for shrubs to be managed in clumps not exceeding 5 square metres in area has not been applied to four narrow, linear strips of shrubs to be planted within the main car park – and subject to an additional requirement that they be maintained to a maximum height of 1.5 metres.
- It excludes the requirement for the rushes and sedges located in the bio-swale on the north side of the main car park to have to comply with any of the vegetation management requirements to remove any uncertainty about whether any of those requirements prevent or restrict that type of vegetation from being established – with such restrictions being unnecessary as this vegetation will pose a low bushfire threat.

125. However, Alternative measure AltM 3.3 sets out criteria that enables the consideration of the provision of defensible space on adjoining land and Table 6 includes a mechanism for the relevant fire authority to agree to variations to the Table 6 requirements.

126. It is my opinion that it is appropriate to use Alternative measure AltM 3.3 and that the proposed place of worship building complies with the requirement of Approved measure AM 3.2, in combination with the requirement of AltM 3.3, and meets the Objective of Clause 53.02-4.2 having regard to the following:

126.1. The nature of the bushfire hazard as documented in the Bushfire Hazard Landscape Assessment and the Bushfire Hazard Site Assessment and in particular the absence of bushfire hazards in the wider landscape that have the potential to create extreme fire behaviour at the site level.

126.2. The building is to be constructed to comply with the requirements for BAL-29 in accordance with Sections 5 and 7 of AS.3959-2018 – which is significantly greater than the BAL-12.5 construction required to comply with AM 3.2.

126.3. **Table D** below demonstrates that the building achieves the siting and defensible space required to comply with the requirement of Table 3 – subject to the allowance for the provision of defensible space on adjoining land and the application of the concept of ‘separation’ (or ‘buffering’).

Table D: Siting and defensible space [or separation/buffer] required to comply with Table 3 for the proposed place of worship building

Aspect	Vegetation type	Distance from vegetation	Effective slope (degrees)	Required defensible space or [separation]	Defensible space (on-site)	Total defensible space or [separation]
West	Forest	≥ 60 m	Flat	60 m	≥ 60 m	≥ 60 m
North	Forest	≥ 60 m	Flat	60 m	≥ 60 m	≥ 60 m
North	Grassland	≥ 85 m	Upslope	35 m	≥ 60 m	≥ 60 m
East	Grassland	≥ 45 m	Flat	35 m	≥ 11 m (PB)	≥ 45 m
East	Forest	≥ 95 m	Flat	[60 m]	≥ 11 m (PB)	[≥ 95 m]
South	Low threat (Forest)	> 150 m	(Flat)	(60 m)	≥ 16 m (PB)	> 150 m
<p>1. Distance to vegetation excludes vegetation located in the defensible space and other areas of low threat vegetation.</p> <p>2. Low threat vegetation means vegetation that satisfies one or more of the exclusions in Clause 2.2.3.2 of AS.3959-2018 – excluding paragraph a).</p> <p>3. PB = property boundary</p>						

126.4. The reliance on off-site defensible space is acceptable and meets the Objective of Clause 53.02-4.2 having regard to the following:

- 126.4.1. The highly managed condition of the vegetation located on surrounding land within at least the required defensible space distances.
- 126.4.2. The existing use, development and maintenance of the areas of defensible space located on adjoining land provides a reasonable level of assurance that the land will continue to be managed in a condition that is consistent with providing defensible space for the building.
- 126.4.3. The bushfire sensitive design and high level of construction (BAL-29) of the building.
- 126.4.4. The required defensible space is achieved wholly within the boundaries of the review site for the aspects that contain the most substantial area of bushland – extending from the west to the north of the site. These are also the aspects that are generally associated with the most significant bushfire impacts.

- 126.5. The reliance on the concept of ‘separation’ (or ‘buffering’) for the defensible space to the east of the site is appropriate and meets the Objective of Clause 53.02-4.2 having regard to the following:
- 126.5.1. The 45 metres of defensible space required to address the bushfire hazard that is located closest to the site to this aspect (being Grassland with an effective slope of flat) is achieved – partly within the boundaries of the review site and partly on surrounding land.
 - 126.5.2. The 60 metres of defensible space required to address the bushfire hazard located further from the site to this aspect (being Forest with an effective slope of flat) is not achieved – however the building is separated/buffered from this vegetation by at least 95 metres.
 - 126.5.3. This approach is consistent with the site assessment methodology in AS.3959-2018.
 - 126.5.4. The matters set out in paragraph 125.3 above.
- 126.6. It is my opinion that the proposed variations to the vegetation management requirements of Table 6 are acceptable and meet the Objective of Clause 53.02-4.2 having regard to the following:
- 126.6.1. Table 6 provides that the requirements of the table can be modified where it is agreed in writing to the satisfaction of the relevant fire authority. This means that any variations to those requirements does not of itself mean that the approach is non-compliant with the requirement of AM 3.2 – provided such variations are agreed to by the fire authority.
 - 126.6.2. All the existing trees to be retained with a canopy separation of less than 5 metres are located more than 25 metres from the building and most of them are located more than 40 metres from the building.
 - 126.6.3. The proposed canopy trees are generally well dispersed within the defensible space and except for one tree are located more than 5 metres from the building.
 - 126.6.4. The proposed canopy trees are located more than 5 metres from the canopy of the existing trees to be retained in the defensible space.
 - 126.6.5. The requirement to provide a separation of 5 metres between the canopy of trees will apply to any other trees that are planted or that naturally regenerate within the defensible space.
 - 126.6.6. The requirement to maintain understorey fuels within the defensible space – including having no shrubs under the canopy of trees, shrubs being clumped and spread out (except for the minor variation in the car park), grass being maintained in a short cropped condition and uplifting of lower level branches significantly reduces the risk of the crown of the trees becoming involved in fire.

- 126.6.7. The approach is consistent with the methodology of AS.3959-2018 where the distance from classified vegetation for forests, woodlands and rainforest is determined by the unmanaged understorey rather than either the canopy (drip line) or the trunk of any trees – as shown in Figure 2.2 of Clause 2.2.5 of AS.3959-2018.
- 126.6.8. Despite exceeding an area of 5 square metres the four linear strips of shrubs located in the main car park will pose a low bushfire risk to the building and its occupants having regard to:
- The narrow width of the shrubs which are less than 1.5 metres wide.
 - The separation of at least 15 metres between each strip of shrubs.
 - The approximately 20 metre separation between the glazed front entry of the building and the nearest strip of shrubs.
 - They are not permitted to be planted under the canopy of the trees to be planted in the car park.
 - They will be required to be maintained to a height of no more than 1.5 metres.

8.4 Clause 53.02-4.3 – Water supply and access objectives

127. The objectives of Clause 53.02-4.3 – *Water supply and access objectives* are:

A static water supply is provided to assist in protecting property.

Vehicle access is designed and constructed to enhance safety in the event of a bushfire.

128. There are two Approved measure (AM 4.1 and 4.2) which support the implementation of this objective – with AM 4.1 being relevant to the future dwelling to be developed on proposed Lot 1 and AM 4.2 being relevant to the place of worship building. My assessment of the proposal against the requirements of those measures is set out below.

Approved measure 4.1 (Static water supply & access for the future dwelling on proposed Lot 1)

Measure	Requirement
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AM 4.1	<i>A building used for a dwelling (including an extension or alteration to a dwelling), a dependent person's unit, industry, office or retail premises is provided with:</i>
--------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

- | | |
|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | <ul style="list-style-type: none">▪ <i>A static water supply for fire fighting and property protection purposes specified in Table 4 to Clause 53.02-5.</i>▪ <i>Vehicle access that is designed and constructed as specified in Table 5 to Clause 53.02-5.</i> |
|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

The water supply may be in the same tank as other water supplies provided that a separate outlet is reserved for fire fighting water supplies.

129. Proposed Lot 1 has an area that exceeds 1,000 square metres and accordingly it is a requirement of Table 4 to Clause 53.02-5 ('Table 4') to provide 10,000 litres of static water supply reserved for fire-fighting and property protection purposes that complies with the following Fire Authority requirements:

Unless with otherwise agreed in writing by the relevant fire authority, the water supply must:

- *Be stored in an above ground water tank constructed of concrete or metal.*
- *Have all fixed above ground water pipes and fittings required for firefighting purposes made of corrosive resistant metal.*
- *Include a separate outlet for occupant use.*

Where a 10,000 litre water supply is required, fire authority fittings and access must be provided as follows:

- *Be readily identifiable from the building or appropriate identification signage to the satisfaction of the relevant fire authority.*
- *Be located within 60 metres of the outer edge of the approved building.*
- *The outlet/s of the water tank must be within 4 metres of the accessway and unobstructed.*
- *Incorporate a separate ball or gate valve (British Standard Pipe (BSP 65 millimetre) and coupling (64 millimetre CFA 3 thread per inch male fitting).*
- *Any pipework and fittings must be a minimum of 65 millimetres (excluding the CFA coupling).*

130. The BMP prescribes compliance with all these requirements and accordingly the proposed subdivision complies with the static water supply requirement of AM 4.1.
131. The BMP does not show a specific location for the water tank because aside from having to comply with a minimum setback the precise location of the future dwelling and driveway is unknown. However, compliance with the prescriptions on the BMP will ensure that the tank is placed in a location that enables it to be accessible within 4 metres by firefighting vehicles.
132. In relation to vehicle access it is my estimate that even with the most modest sized building that the front boundary of the future dwelling on proposed Lot 1 would be setback less than 30 metres from the front boundary of the and that the length of the driveway access to the dwelling measured from the edge of the road carriageway is also unlikely to exceed 30 metres – but it is possible that it might. As noted above there is a requirement for the fire authority to access to the static water supply and for the outlet of the tank to be located within 4 metres of the accessway. Accordingly, the design and construction of the driveway access is required to comply with the following requirements of Table 5 to Clause 53.02-5 ('Table 5'):
- *All-weather construction.*
 - *A load limit of at least 15 tonnes.*
 - *Provide a minimum trafficable width of 3.5 metres.*

- *Be clear of encroachments for at least 0.5 metres on each side and at least 4 metres vertically.*
- *Curves must have a minimum inner radius of 10 metres.*
- *The average grade must be no more than 1 in 7 (14.4%) (8.1°) with a maximum grade of no more than 1 in 5 (20%) (11.3°) for no more than 50 metres.*
- *Dips must have no more than a 1 in 8 (12.5%) (7.1°) entry and exit angle.*

133. The BMP prescribes compliance with all these requirements and accordingly the proposed subdivision complies with the vehicle access requirements of AM 4.1.

134. I note that the conditions sought by CFA to be included on any planning permit that is issued as set out in their Statement of Grounds includes a requirement to incorporate a turning area for firefighting vehicles close to the building. I also note that Table 5 only imposes a requirement for the provision of a turning area where the length of the access is more than 100 metres. Given the length of the driveway servicing the future dwelling on proposed Lot 1 will be approximately one-third of that distance it is my view that this requirement is unnecessary and onerous – unless the CFA are able to provide specific justification on operational grounds.

Approved measure 4.2 (Static water supply & access for the place of worship building)

Measure Requirement

AM 4.2 A building used for accommodation (other than a dwelling or dependent person's unit), child care centre, education centre, hospital, leisure and recreation or place of assembly is provided with:

- *A static water supply for fire fighting and property protection purposes of 10,000 litres per 1,500 square metres of floor space up to 40,000 litres.*
- *Vehicle access that is designed and constructed as specified in Table 5 to Clause 53.02-5.*
- *An integrated approach to risk management that ensures the water supply and access arrangements will be effective based on the characteristics of the likely future occupants including their age, mobility and capacity to evacuate during a bushfire emergency.*

The water supply may be in the same tank as other water supplies provided that a separate outlet is reserved for fire fighting water supplies.

135. The plans record that the place of worship building as an area of 797 square metres. The provision is not explicit about the volume of water that is to be provided where the floor area is less than 1,500 square metres however it is my experience that the CFA generally expect that buildings subject to this provision are provided with a minimum static water supply of 10,000 litres and I note that is the volume requested by the CFA in the conditions forming part of their Statement of Grounds.

136. Given the nature of the bushfire risk in the area and the nature of the intended use of the building it is my opinion that the provision of a 10,000 litre static water supply reserved for firefighting purposes is appropriate and that is reflected in the prescriptions on the BMP for the place of worship building. Those prescriptions also comply with the requirements of Table 4 as listed above.
137. In relation to the provision of emergency vehicle access the main driveway access is approximately 50 metres long measured from the edge of the road carriageway to the rear of the building and the length of the access to the main entry of the building which is situated on the western side of the building is no more than 80 metres.
138. In response to this the BMP prescribes that the design and construction of the vehicle access to the static water supply reserved for firefighting purposes and to the entry of the building must comply with the requirements of Table 5 as listed above. Whilst there is no requirement to provide a turning area for firefighting vehicles for this building due to the driveway being less than 100 metres long I note that the CFA have requested this as a condition in their Statement of Grounds. Given the nature of the use of the building, the potential for emergency services to attend to the site in the event of a bushfire impacting the area and the length of the access it is my opinion that the request for a turning area for this building is reasonable. Accordingly, this requirement is included in the prescriptions on the BMP for the place of worship building – although the design of the internal driveway network already achieves the required ‘Y’ head turning area.
139. The final requirement of AM 4.2 is the need for an integrated approach to risk management that ensures the water supply and access arrangements “*will be effective based on the characteristics of the likely future occupants including their age, mobility and capacity to evacuate during a bushfire emergency.*”. A Bushfire Emergency Management Plan has not yet been prepared for the place of worship and to that extent there are some limitations in being able to demonstrate compliance with this part of the AM 4.2. However, it is my opinion that that requirement is satisfactorily addressed having regard to the following:
- 139.1. The static water supply and vehicle access arrangements for the facility fully complies with the requirements of Table 4 and Table 5 and in the case of vehicle access incorporates a driveway design that is superior to the Table 5 requirements.
- 139.2. The static water supply and vehicle access arrangements for the facility complies with CFA’s operational requirements as set out in the conditions contained in their Statement of Grounds.
- 139.3. There should be a requirement for the facility to close on days that are predicted to have a Fire Danger Rating of Extreme or Code Red and for the special events that are to be held every 3 years (with up to 860 patrons on site) to not be held at any time during the Declared Fire Danger Period for the North Central Fire District.
- 139.4. The CFA condition that requires the submission and endorsement of a bushfire emergency management plan for the facility before the development of the building starts – a condition that I support.
140. Having regard to the above it is my opinion that the proposed place of worship will achieve compliance with the requirement of AM 4.2.

8.5 Clause 53.02-4.4 – Subdivision objectives

141. The objectives of Clause 53.02-4.4 – *Subdivision objectives* are:

To provide lots that are capable being developed in accordance with the objectives of Clause 53.02.

To specify at the subdivision stage bushfire protection measures to develop a lot with a single dwelling on land zoned for residential or rural residential purposes.

142. There are four Approved measure (AM 5.1, AM 5.2, AM 5.3 and AM 5.4) and one Alternative measure (AltM 5.5) that support the implementation of this objective – with the requirements of AM 5.2 and 5.4 being applicable to the proposed two lot subdivision of the land. My assessment of the proposal against the requirements of those two measures is outlined below.

Approved measure 5.2 (Residential subdivisions)

Measure	Requirement
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AM 5.1	An application to subdivide land zoned for residential or rural residential purposes must be accompanied by a plan that shows:
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- Each lot satisfies the approved measure in **AM 2.1**.
- A building envelope for a single dwelling on each lot that complies with **AM 2.2** and provides defensible space in accordance with:
 - Columns A or B of Table 2 to Clause 53.02-5 for a subdivision that creates 10 or more lots; or
 - Columns A, B or C of Table 2 to Clause 53.02-5 for a subdivision that creates less than 10 lots.

The bushfire attack level that corresponds to the defensible space provided in accordance with Table 2 to Clause 53.02-5 must be noted on the building envelope.

- Defensible space wholly contained within the boundaries of the proposed subdivision.
- Defensible space may be shared between lots within the subdivision. Defensible space for a lot may utilise [sic] communal areas, such as roads, where that land can meet the requirements for defensible space.
- Vegetation management requirements in accordance with Table 6 to implement and maintain the defensible space required under this approved measure.
- Water supply and vehicle access that complies with **AM 4.1**.

143. The Bushfire Management Plan (BMP) presented as **Map 6** at the end of this section has been prepared in response to the requirements of AM 5.2 and it is submitted that the BMP achieves or demonstrates compliance with the requirements of AM 5.2 to the extent that:

- 143.1. The proposed subdivision achieves compliance with the requirements of Approved measure AM 2.1 – as documented in **Section 8.2** above (refer to paragraphs 112-114).
- 143.2. The proposed subdivision achieves compliance with the requirements of Approved measure AM 2.2 – as documented in **Section 8.2** above (refer to paragraphs 116-117).
- 143.3. With reference to **Table E** below, proposed Lot 1 is provided with a building envelope (by way of a setback restriction) and a defensible space envelope that provides defensible space for BAL-29 (Column C of Table 2).

Table E: Siting and defensible space [or separation/buffer] to achieve BAL-29 construction in accordance with Table 2 for the future dwelling on proposed Lot 1

Aspect	Vegetation type	Distance from vegetation	Effective slope (degrees)	Required defensible space or [separation]	Defensible space (on-site)	Total defensible space or [separation]
West	Forest	25 m	Flat/up	25 m	≥ 25 m	≥ 25 m
West	Grassland	25 m	Upslope	9 m	≥ 0 m (PB)	≥ 25 m
North	Forest	≥ 80 m	Upslope	25 m	≥ 0 m (PB)	≥ 80 m
North	Grassland	≥ 80 m	Upslope	9 m	≥ 0 m (PB)	≥ 80 m
East	Grassland	≥ 20 m	Flat/up	9 m	≥ 0 m (PB)	≥ 20 m
East	Forest	≥ 75 m	Flat/up	[25 m]	≥ 0 m (PB)	[≥ 75 m]
South	Low threat	N/A	N/A	50 m or PB	≥ 0 m (PB)	> 150 m

1. Distance to vegetation takes into account the BAL-29 setback restriction prescribed on the BMP.
2. Distance to vegetation excludes vegetation located in the defensible space and other areas of low threat vegetation.
3. Low threat vegetation means vegetation that satisfies one or more of the exclusions in Clause 2.2.3.2 of AS.3959-2018 – excluding paragraph a).
4. Up = Upslope, PB = property boundary

- 143.4. The BAL that corresponds to the defensible space provided in accordance with Table 2 is noted on the plan.

- 143.5. Defendable space is shared with Lot 2 which will contain the proposed place of worship building.
- 143.6. The vegetation management requirements prescribed on the BMP comply with the requirements of Table 6.
- 143.7. The water supply and vehicle access requirements prescribed on the BMP comply with the requirements of AM 4.1 – in that they comply with the requirements of Table 4 and Table 5.
144. Notwithstanding the above, there is one area where the BMP fails to achieve or demonstrate compliance with the requirements of AM 5.2 – being the requirement for defendable space to be contained wholly within the boundaries of the subject land. In particular, the proposed subdivision relies on the provision of defendable space on adjoining and surrounding land to the north and east of the proposed lot.
145. Clause 53.02-4.4 includes one alternative measure (AltM 5.5) but this does not provide relief in relation to the area of non-compliance identified above. Accordingly, I have determined that it is appropriate to apply the requirement of Alternative measure AltM 3.3 as an unspecified alternative measure to achieving full compliance with the requirements of AM 5.2. As noted in **Section 8.3** of this report this alternative measure applies to applications for buildings and works under the BMO and is as follows:

Measure Requirement

AltM 3.3 Adjoining land may be included as defendable space where there is a reasonable assurance that the land will remain or continue to be managed in that condition as part of the defendable space.

146. It is my opinion that the reliance on this unspecified alternative measure in conjunction with the compliant aspects of Approved measure AM 5.2 provides an acceptable outcome that complies with the objectives of Clause 53.02-4.4 and the decision guidelines of Clause 53.02-4.5 having regard to the following:
- 146.1. The nature of the bushfire hazard as documented in the Bushfire Hazard Landscape Assessment and the Bushfire Hazard Site Assessment and in particular the site is in an area where extreme fire behaviour is not possible.
- 146.2. The nature and extent of low threat vegetation surrounding the site as documented in the Bushfire Hazard Site Assessment.
- 146.3. More than three times the required defendable space for the primary area of bushfire hazard to the north of the site (Forest, upslope) is provided on the adjoining residential land which is maintained in a minimal fuel condition and upon development of Lot 1, PS.813145 there will be an obligation for all of that land to be maintained as defendable space.

- 146.4. More than twice the required defensible space for the area of bushfire hazard located closest to the site (Grassland, flat/upslope) is provided within the adjacent road reserve and it is likely that any dwelling developed on the land will be sited at least 9 metres from the front boundary which would result in all the defensible space for that hazard being contained within the boundaries of the lot.
- 146.5. Approved measure AM 5.2 permits defensible space to be shared between lots in the subdivision and to utilise communal areas, such as roads, where that land can meet the requirements for defensible space.
- 146.6. As documented in the Bushfire Hazard Site Assessment the road reserve of Blakeley Road is generally maintained in a minimal fuel condition and there would be no more or less certainty about the ongoing management of the road reserve of this road if it were a new road being developed as part of the subdivision than there is with it being an existing road. Accordingly, in my opinion it is immaterial that the road does not form part of the subdivision.
- 146.7. The proposed lot is located three times the distance required to achieve a BAL-29 rating for the bushfire hazard located further to the east (Forest, flat/upslope) which is consistent with the separation/buffer concept that I explained in **Section 8.3** of this report (refer to paragraph 125.5) and a reliance on that approach for this lot is similarly appropriate.

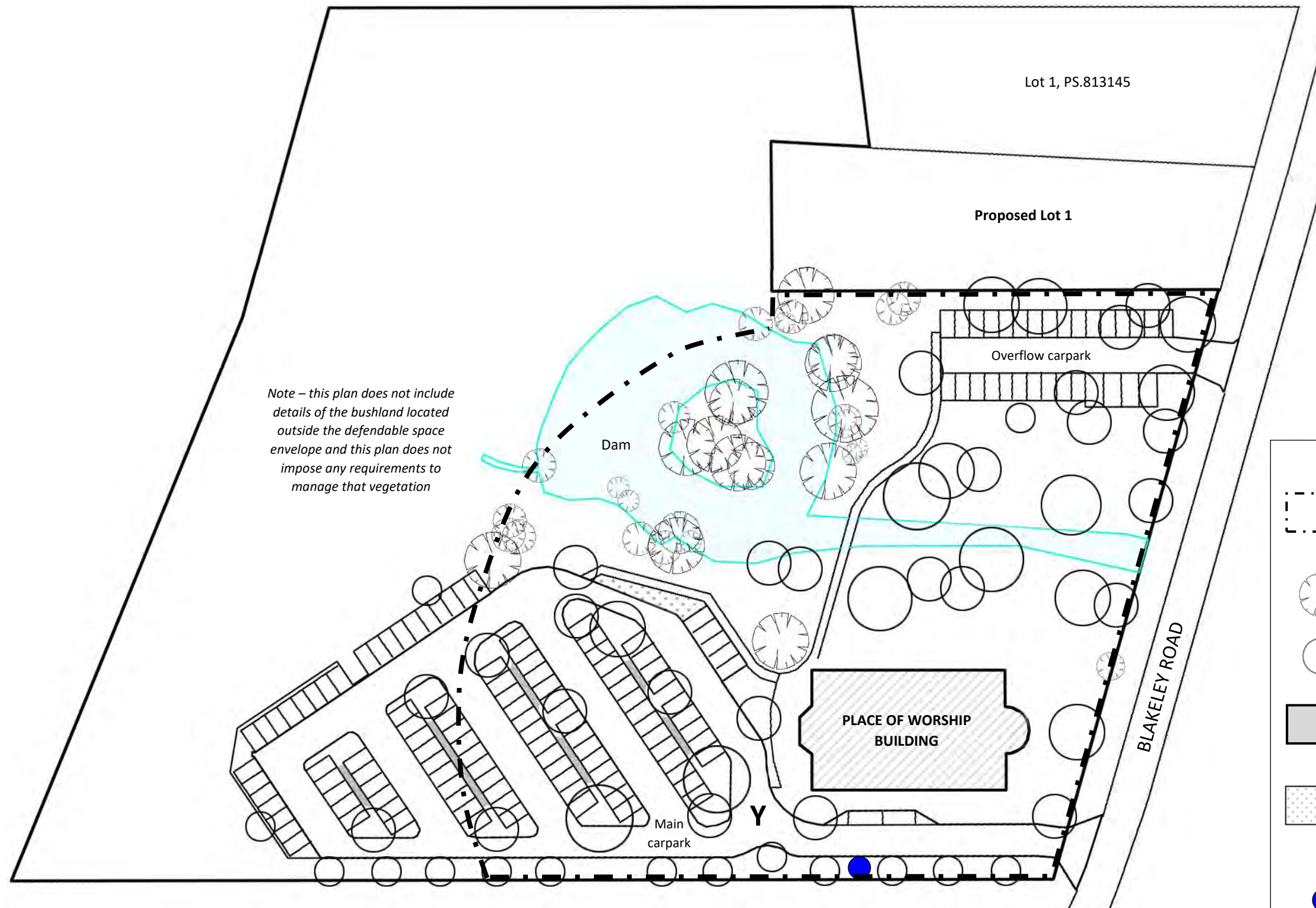
Approved measure 5.2 (Managing risk)

Measure Requirement

AM 5.4 A subdivision manages the bushfire risk to future development from existing or proposed landscaping, public open space and communal areas.

147. It is my opinion that the proposed subdivision complies with the requirement of Approved measure AM 5.4 having regard to the following:
 - 147.1. There are no existing or proposed areas of landscaping or public open space or areas of common land being created by the subdivision.
 - 147.2. The defensible space to be implemented for the proposed place of worship building has been extended to meet the southern boundary of proposed Lot 1 to ensure that land is landscaped and managed in a way that prevents the establishment of fuels that would pose a significant bushfire risk to the future dwelling to be developed on Lot 1.

Map 5: Bushfire Management Plan (Place of worship building) – Sheet 1 of 2



Note – this plan does not include details of the bushland located outside the defendable space envelope and this plan does not impose any requirements to manage that vegetation

Bushfire protection measures

All bushfire protection measures shown on this plan must be implemented before the place of worship building is occupied for the first time and must then be maintained on a continuing basis to the satisfaction of the Responsible Authority.

Construction – Bushfire Attack Level (BAL)

1. The construction of the place of worship building must comply with the requirements for **BAL-29** in accordance with Sections 3 and 7 of AS.3959-2018 – *Construction of buildings in bushfire-prone areas*.
2. Non-combustible gutter guards must be fitted to all gutters.

Legend

- Defendable space envelope – extends 60 metres from the walls of the building or to the title boundaries where shown
- Existing trees to be retained – excluded from 5 metre canopy separation requirement)
- Proposed trees – excluded from 5 metre canopy separation requirement
- Proposed shrubs – excluded from the maximum 5 sq. metre clumping requirement and to be maintained to a height of 1.5 metres
- Bio-swale to be planted with rushes and sedges (excluded from all vegetation management requirements)
- ≥ 10,000 litre static water supply reserved for firefighting & property protection purposes (shape indicative only and not to scale)
- Y** 'Y' head turning area for firefighting vehicles

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		Sheet Size A3	Version 1		

Map 5: Bushfire Management Plan (Place of worship building) – Sheet 2 of 2

Defendable space/vegetation management

Vegetation located in the defendable space envelope shown on this plan, including vegetation that is landscaped or naturally regenerated, must be modified and managed to comply with the following requirements:

1. Grass must be short cropped and maintained during the declared fire danger period.
2. All leaves and vegetation debris must be removed at regular intervals during the declared fire danger period.
3. Within 10 metres of the building, flammable objects must not be located close to the vulnerable parts of the building.
4. Plants greater than 10 centimetres in height must not be placed within 3 metres of a window or glass feature of the building.
5. Shrubs must not be located under the canopy of trees.
6. Individual and clumps of shrubs must not exceed 5 square metres in area and must be separated by at least 5 metres – except the requirement for the clumps to not exceed 5 square metres in area does not apply to the 4 linear strips of shrubs in the main car park as shown shaded on Sheet 1 of this plan.
7. Trees must not overhang or touch any elements of the building.
8. The canopy of trees must be separated by at least 5 metres – except this does not apply to trees shown on Sheet 1 of this plan to be retained or planted.
9. There must be a clearance of at least 2 metres between the lowest tree branches and ground level.

None of the above requirements apply to any rushes and sedges located in the bio-swale to the north of the main car park as shown stippled on Sheet 1 of this plan.

Static water supply for firefighting & property protection purposes

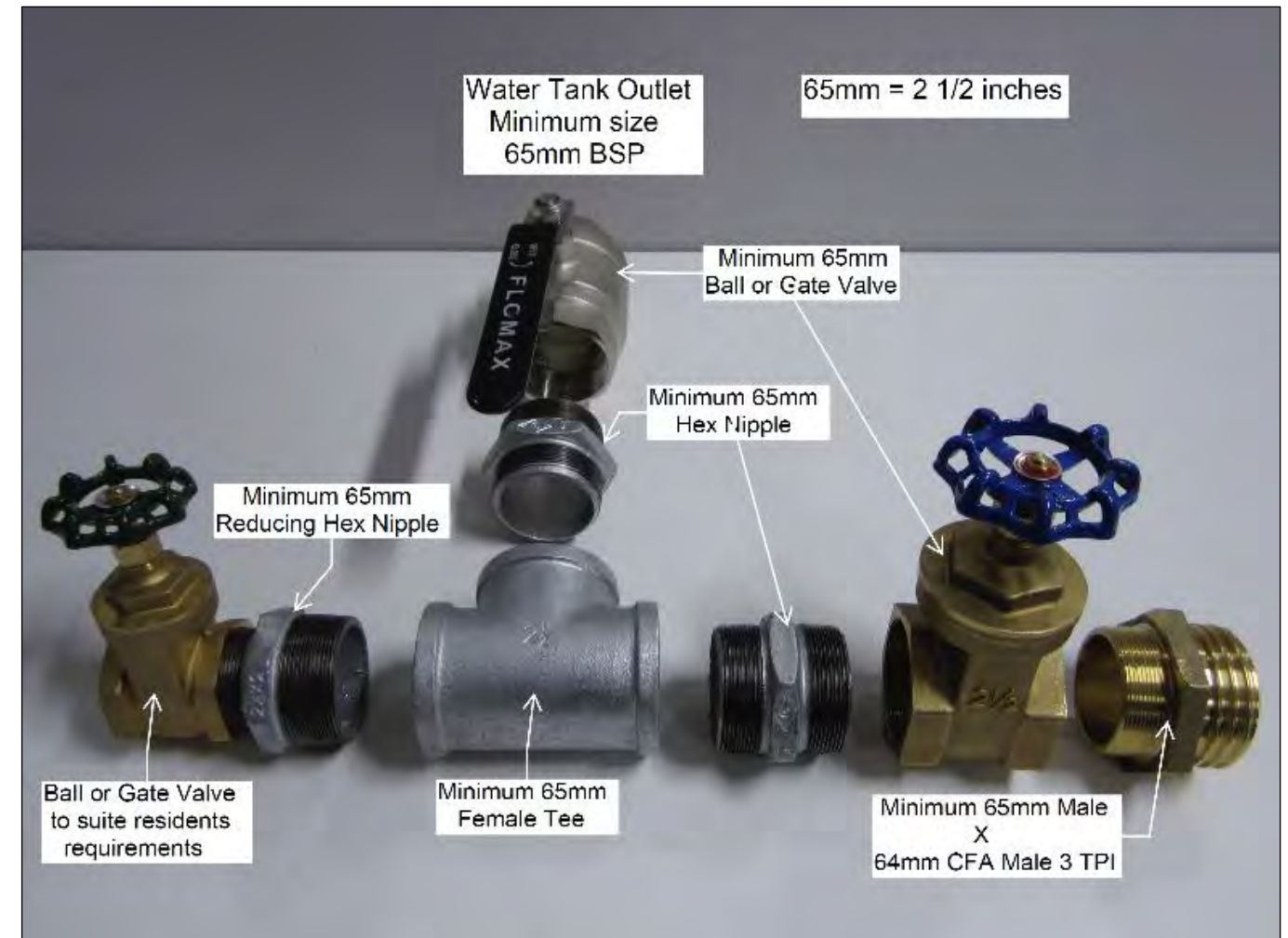
A static water supply must be provided that complies with the following requirements:

1. A minimum of 10,000 litres of water must be stored and reserved for firefighting purposes in an above ground metal or concrete water tank.
2. The tank must be located within 4 metres of the driveway with unobstructed access for firefighters.
3. A ball or gate valve (British Standard Pipe (BSP) 65 mm) and coupling (64 mm CFA 3 thread per inch male fitting) must be fitted to the wall of the tank and must face towards the driveway.
4. All water pipes and fittings must be a minimum of 65 mm nominal bore (excluding the CFA coupling).
5. An additional ball or gate valve that suits the requirements of the operators of the place of worship must be fitted to the wall of the tank.
6. All fixed above-ground water pipes and fittings required for firefighting purposes must be made of corrosive resistant metal.
7. The tank must be visible from the building or appropriate signage to the satisfaction of the CFA must be provided.

Access for fire authority vehicles

The design and construction of the vehicle access to the static water supply reserved for firefighting purposes and the main entrance to the place of assembly building must comply with the following requirements:

1. All-weather construction.
2. A load limit of at least 15 tonnes.
3. Provide a minimum trafficable width of 3.5 metres.
4. Be clear of encroachments for at least 0.5 metres on each side and at least 4 metres vertically.
5. Curves must have a minimum inner radius of 10 metres.
6. The average grade must be no more than 1 in 7 (14.4%) (8.1°) with a maximum grade of no more than 1 in 5 (20%) (11.3°) for no more than 50 metres.
7. Dips must have no more than a 1 in 8 (12.5 per cent) (7.1 degrees) entry and exit angle.
8. Provision of a 'Y' or 'T' head turning area for firefighting buildings in the location shown on Sheet 1 of this plan that meets the specifications of Austroad Design for an 8.8 metre Service Vehicle.



The above image is sourced from FSG LUP 006 – Land Use Planning – Tank Connections Explained, Bushfire Management Overlay, CFA, 5 August 2014

Map 6: Bushfire Management Plan (Future dwelling on proposed Lot 1)

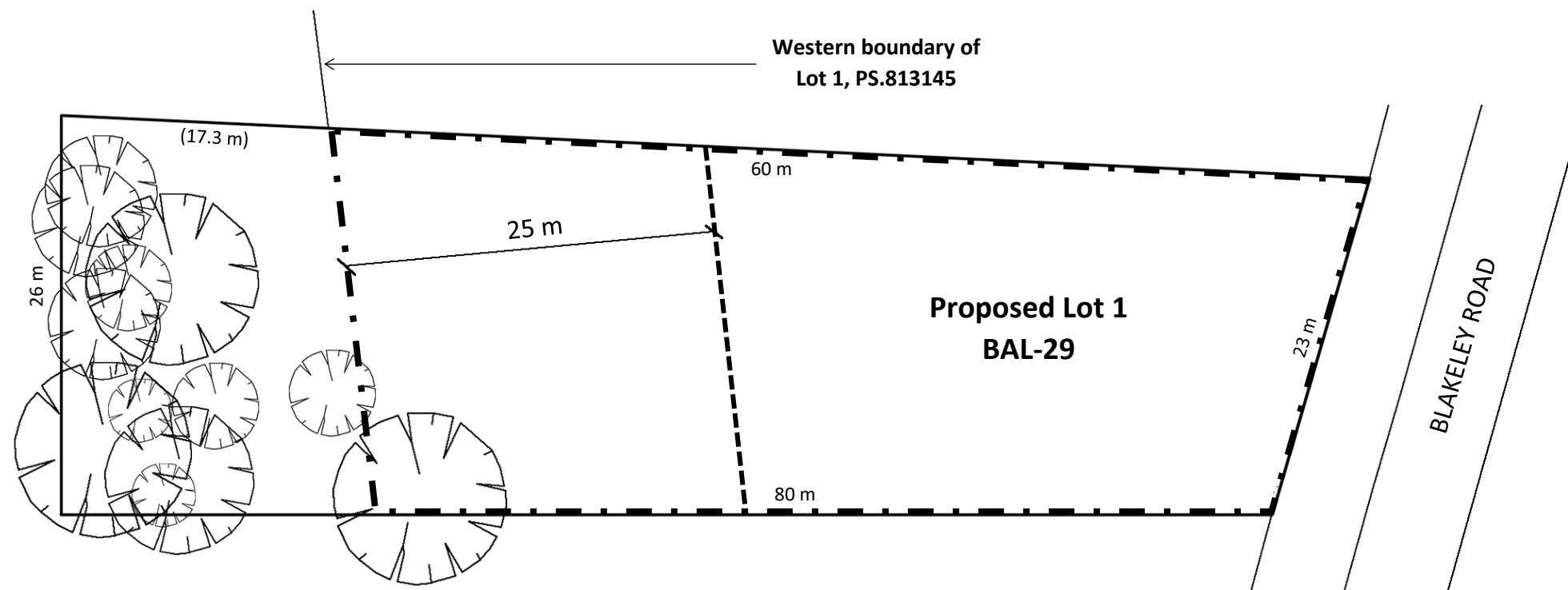
<p>Bushfire protection measures</p> <p>All bushfire protection measures shown on this plan must be implemented before the dwelling is occupied and must then be maintained on a continuing basis to the satisfaction of the Responsible Authority.</p> <p>Building siting</p> <p>Any dwelling or outbuilding (unless it is a non-habitable outbuilding located at least 10 metres from the dwelling) must be setback at least 25 metres from a line that is continuous with a projection of the western boundary of Lot 1, PS.813145 as shown on this plan.</p> <p>Construction – Bushfire Attack Level (BAL)</p> <p>The construction of the dwelling and any outbuilding located less than 10 metres from the dwelling must comply with the requirements for BAL-29 in accordance with Sections 3 and 7 of AS.3959-2018 – <i>Construction of buildings in bushfire-prone areas.</i></p>	<p>Defendable space/vegetation management</p> <p>Vegetation located in the defendable space envelope shown on this plan, including vegetation that is landscaped or naturally regenerated, must be modified and managed to comply with the following requirements:</p> <ol style="list-style-type: none"> 1. Grass must be short cropped and maintained during the declared fire danger period. 2. All leaves and vegetation debris must be removed at regular intervals during the declared fire danger period. 3. Within 10 metres of the building, flammable objects must not be located close to the vulnerable parts of the building. 4. Plants greater than 10 centimetres in height must not be placed within 3 metres of a window or glass feature of the building. 5. Shrubs must not be located under the canopy of trees. 6. Individual and clumps of shrubs must not exceed 5 square metres in area and must be separated by at least 5 metres. 7. Trees must not overhang or touch any elements of the building. 8. The canopy of trees must be separated by at least 5 metres. 9. There must be a clearance of at least 2 metres between the lowest tree branches and ground level. 	<p>Static water supply</p> <p>A static water supply must be provided that complies with the following requirements:</p> <ol style="list-style-type: none"> 1. A minimum of 10,000 litres of water must be stored and reserved for firefighting purposes in an above ground metal or concrete water tank. 2. The tank must be located within 4 metres of the driveway with unobstructed access for firefighters. 3. A ball or gate valve (British Standard Pipe (BSP) 65 mm) and coupling (64 mm CFA 3 thread per inch male fitting) must be fitted to the wall of the tank and must face towards the driveway. 4. All water pipes and fittings must be a minimum of 65 mm nominal bore (excluding the CFA coupling). 5. An additional ball or gate valve that suits the requirements of the occupants of the dwelling must be fitted to the wall of the tank. 6. All fixed above-ground water pipes and fittings required for firefighting purposes must be made of corrosive resistant metal. 7. The tank must be visible from the building or appropriate signage to the satisfaction of the CFA must be provided. 	<p>Vehicle access</p> <p>The design and construction the vehicle access to the dwelling and the static water supply outlet must comply with the following requirements:</p> <ol style="list-style-type: none"> 1. All-weather construction. 2. A load limit of at least 15 tonnes. 3. Provide a minimum trafficable width of 3.5 metres. 4. Be clear of encroachments for at least 0.5 metres on each side and at least 4 metres vertically. 5. Curves must have a minimum inner radius of 10 metres. 6. The average grade must be no more than 1 in 7 (14.4%) (8.1°) with a maximum grade of no more than 1 in 5 (20%) (11.3°) for no more than 50 metres. 7. Dips must have no more than a 1 in 8 (12.5 per cent) (7.1 degrees) entry and exit angle.
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Legend

--- BAL-29 setback line which is 25 metres from a projection of the western boundary of Lot 1, PS.813145

- - - Defendable space envelope – applies to all parts of the lot that are located east of a line that is continuous with a projection of the western boundary of Lot 1, PS.813145 as shown on this plan

⊙ Existing tree to be retained



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9 Conclusion

148. It is proposed to develop Low Density Residential land known as 83 Blakeley Road Castlemaine with a place of worship building and associated car parking and works and to subdivide the land into two lots. The smaller of the two lots (approximately 2,006 square metres) will contain a future dwelling and a larger balance lot (approximately 2.578 hectares) to contain the place of worship, car parking and bushland.
149. The land is in a designated Bushfire Prone Area and is partly mapped in the BMO which means the decision maker has an obligation under Planning Policy Clause 13.02-1S and the BMO to ensure that the risks to life and property from bushfire can be reduced to an acceptable level.
150. A key aspect of the assessment criteria in Clause 13.02-1S and the BMO is to assess the bushfire hazard at the landscape and site scale to determine the nature of the bushfire risks to the site and the occupants of the proposed buildings and to evaluate the adequacy of the bushfire protection measures to be implemented.
151. The assessment set out in this report identifies that while there is a significant bushfire risk in the wider landscape surrounding Castlemaine that the nature of the bushfire hazards located closer to the site are such that extreme fire behaviour is not possible at the site under credible bushfire scenarios. It has also been identified that the review site is situated at the edge of and is continuous with the township area of Castlemaine which means that access is readily available to a place that can provide shelter from bushfire.
152. The proposed development and subdivision of the land has been assessed against the requirements of the BMO provisions (Clauses 44.06 and Clause 53.02-5) as these provisions are the key statutory implementation that give effect to the Objective and Strategies of Clause 13.02-1S.
153. Based on my assessment and subject to the implementation and maintenance of the bushfire protection measures prescribed in the BMPs together with the development and implementation of appropriate emergency management procedures for the place of worship it is my opinion that the proposed development and subdivision complies with the bushfire policies and provisions of the Planning Scheme and will ensure that the risk to life and property from bushfire will be reduced to an acceptable level.

10 References


Author	Date	Publication / document	Source / viewed at
ABCB	May 2019a	<i>National Construction Code Volume Two – Building Code of Australia 2019</i>	https://ncc.abcb.gov.au/ncc-online/NCC
ABCB	May 2019b	<i>National Construction Code Volume One – Building Code of Australia 2019</i>	https://ncc.abcb.gov.au/ncc-online/NCC
CFA	7 September 2021	<i>Neighbourhood Safer Place – Bushfire Place of Last Resort – Designated sites state-wide as at 07/09/2021 (alphabetical by Township)</i>	file:///C:/Users/localadmin/Downloads/Designated%20NSP-BPLR%20-%20CFA%20Website%20complete%20list%20-%2007-09-2021.pdf
CFA	Version 3, September 2018	<i>Guideline – Applying the Bushfire Hazard Landscape Assessment in a Bushfire Management Overlay</i>	https://www.cfa.vic.gov.au/ArticleDocuments/392/guidance-applying-the-landscape-assessment_V3.pdf.aspx?Embed=Y
CFA	5 August 2014	<i>FSG LUP 006 Land Use Planning – Tank Connections Explained, Bushfire Management Overlay (BMO)</i>	https://www.cfa.vic.gov.au/ArticleDocuments/392/FSG006-LUP-BMO-Water-Tank-Connections-Outlet-Pipe-Work-aug14.pdf.aspx?Embed=Y
CFA	February 2014	<i>Vegetation Classes – Victorian Bushfire Management Overlay</i>	https://www.cfa.vic.gov.au/ArticleDocuments/392/Vegetation-Classes-Victorian-Bushfire-Management-Overlay-v0-3.pdf.aspx?Embed=Y
DELWP	2 October 2021	<i>Planning Property Report – 83 Blakeley Road Castlemaine 3450</i>	http://mapshare.maps.vic.gov.au/vicplan/
DELWP	20 May 2021a	<i>Clause 02.03-3 – Environmental risks and amenity</i>	https://planning-schemes.api.delwp.vic.gov.au/schemes/mountalexander/ordinance/02_03.pdf
DELWP	20 May 2021b	<i>Clause 11.01-1L-02 – Castlemaine and Diamond Gully</i>	https://planning-schemes.api.delwp.vic.gov.au/schemes/mountalexander/ordinance/11_01-1L-02.pdf
DELWP	December 2019	<i>Bushfire Mapping Methodology and Criteria – Fact Sheet</i>	https://www.planning.vic.gov.au/data/assets/pdf_file/0027/447921/Fact-sheet-Bushfire-mapping-methodology-and-criteria.pdf
DELWP	24 January 2020 (VC160)	<i>Clause 53.02 – Bushfire planning</i>	http://planning-schemes.delwp.vic.gov.au/schemes/vpps/53_02.pdf
DELWP	8 August 2019 (VC159)	<i>Clause 44.06 – Bushfire Management Overlay</i>	http://planning-schemes.delwp.vic.gov.au/schemes/vpps/44_06.pdf

10 References *continued*

Author	Date	Publication / document	Source / viewed at
DELWP	31 July 2018a (VC148)	<i>Clause 71.02-3 – Integrated decision making</i>	https://planning-schemes.api.delwp.vic.gov.au/schemes/vpp/71_02.pdf
DELWP	31 July 2018b (VC148)	<i>Clause 13.02-1S – Bushfire planning</i>	https://planning-schemes.delwp.vic.gov.au/schemes/vpps/13_02-1S.pdf
DELWP	September 2017	<i>Technical Guide Planning Permit Applications Bushfire Management Overlay</i>	https://www.planning.vic.gov.au/data/assets/pdf_file/0029/107669/Technical-Guide-Planning-Permit-Applications-Bushfire-Management-Overlay.pdf
DPCD	April 2012	<i>Regional Bushfire Planning Assessment – Loddon Mallee Region</i>	https://www.planning.vic.gov.au/data/assets/pdf_file/0013/102307/Loddon-Mallee-Region-Part-1.pdf ; and https://www.planning.vic.gov.au/data/assets/pdf_file/0014/102308/Loddon-Mallee-Region-Part-2.pdf
Standards Australia	18 December 2020*	<i>Australian Standard AS 3959:2018 Construction of buildings in bushfire-prone areas (AS.3959-2018)</i>	www.saiglobal.com (May be subject to a fee to access and download)
<p>* Incorporating Amendment Nos 1 and 2</p> <p>ABCB – Australian Building Codes Board CFA – Country Fire Authority DELWP – Department of Environment, Land, Water and Planning DPCD – Department of Planning and Community Development</p>			

Appendix 1: Planning Property Report – Designated Bushfire Prone Area


PLANNING PROPERTY REPORT



Environment,
Land, Water
and Planning

Designated Bushfire Prone Areas

This property is in a designated bushfire prone area. Special bushfire construction requirements apply. Planning provisions may apply.



Designated Bushfire Prone Areas

Railway line

Water area

0 — 200 m

Water course

Designated bushfire prone areas as determined by the Minister for Planning are in effect from 8 September 2011 and amended from time to time.

The Building Regulations 2018 through application of the Building Code of Australia, apply bushfire protection standards for building works in designated bushfire prone areas.

Designated bushfire prone areas maps can be viewed on VicPlan at <https://mapshare.maps.vic.gov.au/vicplan> or at the relevant local council.

Note: prior to 8 September 2011, the whole of Victoria was designated as bushfire prone area for the purposes of the building control system.

Further information about the building control system and building in bushfire prone areas can be found on the Victorian Building Authority website <https://www.vba.vic.gov.au>.

Copies of the Building Act and Building Regulations are available from <http://www.legislation.vic.gov.au>.

For Planning Scheme Provisions in bushfire areas visit <https://www.planning.vic.gov.au>.

Native Vegetation

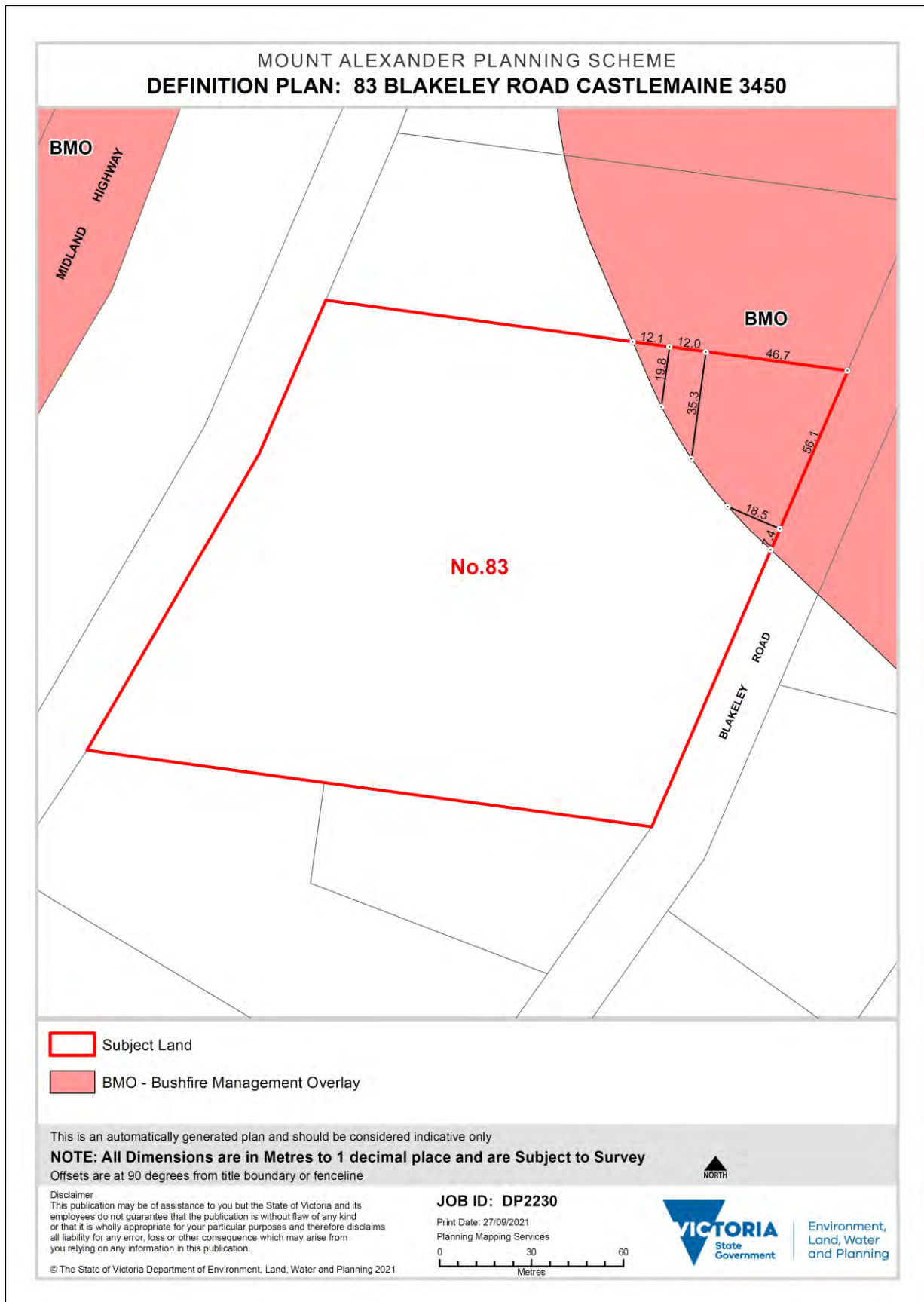
Native plants that are indigenous to the region and important for biodiversity might be present on this property. This could include trees, shrubs, herbs, grasses or aquatic plants. There are a range of regulations that may apply including need to obtain a planning permit under Clause 52.17 of the local planning scheme. For more information see [Native Vegetation \(Clause 52.17\)](#) with local variations in [Native Vegetation \(Clause 52.17\) Schedule](#).

To help identify native vegetation on his property and the application of Clause 52.17 please visit the Native Vegetation Information Management system <https://nvm.delwp.vic.gov.au/> and [Native vegetation \(environment.vic.gov.au\)](#) or please contact your relevant council.

You can find out more about the natural values on your property through NatureKit [NatureKit \(environment.vic.gov.au\)](#).

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 Read the full disclaimer at <https://www2.delwp.vic.gov.au/disclaimer>
 Notwithstanding this disclaimer, a vendor may rely on the information in this report for the purpose of a statement that land is in a bushfire prone area as required by section 32C (b) of the Sale of Land 1962 (Vic).
PLANNING PROPERTY REPORT: 83 BLAKELEY ROAD CASTLEMAINE 3450 Page 6 of 6

Appendix 2: Definition Plan – Bushfire Management Overlay



EXPERT LIGHTING ASSESSMENT

for

CAR PARK LIGHTING

at

83 Blakeley Road

Castlemaine. Vic 3450

VCAT APPLICATION FOR REVIEW

P409/2021

Instructed by

Planning & Property Partners

13/1 Collins Street

Melbourne. Vic 3000



Expert Witness

Dr Richard Dluzniak

Dr Richard Dluzniak Consulting Pty Ltd

6 Locksley Avenue, Kew. Vic 3101



4 October 2021



Dr Richard Dluzniak Consulting Pty Ltd
6 Locksley Avenue, Kew. Victoria 3101
Tel 03 9817 6677 Mbl 0409 968 603
email dluzniak@bigpond.net.au
ABN 61 863 974 697

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8	Summary of the opinions of the Expert	5
9	Conclusion	6



Dr Richard Dluzniak Consulting Pty Ltd
6 Locksley Avenue, Kew Victoria 3101
Tel 03 9817 6677, Mbl 0409 968603
Email : dluzniak@bigpond.net.au

1 NAME AND ADDRESS OF EXPERT

Dr Richad Dluzniak
6 Locksley Avenue
Kew Victoria 3101

2 QUALIFICATIONS

Academic	Dip EE, FRMIT, BSc, MSc, PhD (Melb) (Electrical Eng)
Professional	MIEAust, MIES, CPEng

3 PROFESSIONAL EXPERIENCE

Academic Experience

Twenty (20) years' experience as Lecturer, Senior Lectures and Principal Lecturer in Electrical Engineering at Swinburne University of Technology. Main areas of teaching and research were electrical design, lighting design and computer simulation of lighting systems and computer simulation of dynamic systems.

Consulting Experience

Thirty (30) years' experience as consulting electrical and lighting engineer comprising:

Five (5) years with Simpson Kotzman and Partners, Consulting Engineers, Collins Street, Melbourne. Main field of experience was in street and public lighting, highway and bridge lighting and general floodlighting.

Twenty (20) years as self-employed consulting engineer as Dr Richard Dluzniak Consulting Pty Ltd. Main field of experience and expertise is in lighting design and analysis for

- o Street and public lighting including car park lighting
- o Major road, highway and tunnel lighting
- o Lighting for night sports including football, soccer, tennis, baseball, hockey and horse, harness and greyhound racing.
- o Development and sales of PC based software for streetlighting, car park lighting and office lighting
- o Development and sales of microprocessor based hardware for control of discharge lamps used in street and sports lighting.

Completed Relevant projects

The following are projects that have been completed relevant to this review:

- o Web Dock Melbourne terminal lighting
- o Coode Island Melbourne security lighting
- o DP World Brisbane terminal lighting
- o ANL Sydney terminal lighting
- o Ford Motor Company Broadmeadows car park lighting
- o Bendigo station car park lighting
- o Ringwood Market car park lighting
- o Melbourne Pavilion car park lighting

Other minor car park lighting installations (not listed) have also been completed.

4 AREA OF EXPERTICE

The area of expertise of the Author is in all aspects of street, public, sports and outdoor lighting. Expertise is in the design, documentation and supervision of lighting projects and analysis of lighting systems.

The Author is quite versed in the design of car park lighting and has experience in very large shipping terminal lighting to small local council car park lighting.

5 INSTRUCTIONS THAT DEFINE THE SCOPE OF THIS REPORT

The report has been prepared following verbal and written instructions from Planning & Property Partners Pty Ltd. I have no business or private relationship with the permit applicant or Planning & Property Partners Pty Ltd other than being instructed to prepare this statement.

6 ASSUMPTIONS ON WHICH THIS REPORT PROCEEDS

This report assumes that the dimensions and drawings provided by Orbit Architecture are correct and these have been used as the basis for this report and associated drawings.

7 DOCUMENTS VIEWED IN PREPARING REPORT

The main documents consulted in preparing the report are:

Car Park Lighting Proposal
83 Blakeley Road
Castlemaine Vic 3450

Dr Richard Dluzniak Consulting Engineer

Australian Standard
AS/NZS 1153.3.1.: 2000- Lighting for Roads and Public Spaces: Category P
Lighting.
Abbreviated in the report as the Lighting for Roads
code.

Australian Standard
AS 4282: 2019 Control of the obtrusive effects of outdoor lighting
Abbreviated in the report as the Obtrusive Lighting
code.

Lighting manufacturers photometric data
Sylvania data on Road LED car park luminaire
Holophane data on Bollard LED luminaire

8 SUMMARY OF THE OPINIONS OF THE EXPERT

Governing Lighting Parameters

The governing Australian codes for the lighting of the car park at the site are the Lighting for Roads and Obtrusive Lighting codes.

The car park is set in a rural setting, and as such, falls into the specific light categories

Lighting Category P11b for lighting levels in the main car park
Lighting Category P11c for lighting levels in the overflow car park
Environmental Zone A2 for obtrusive light determination

Lighting category P11b requires the car park to be illuminated to
an average value of 7.0 lux
a minimum value 1.5 lux

Lighting category P11c requires the car park to be illuminated to
an average value of 3.5 lux
a minimum value 0.7 lux

Environmental Zone A2 (low district brightness category) requires
spill light to be limited to 5 lux
luminous intensity to be limited to 7500 candela
sky glow to be limited to upward light ratio of 0.01

Proposed Lighting Design

The proposed lighting design for the car park is presented in the attached Report. The Report contains the report body, attachments and drawing. The Report shows:

- o The main car park lighting uses 5 x 8m steel poles located in the positions shown on Drawing CP01. Each pole accommodates a single 100W LED luminaire. In addition, the entrance to the car park is illuminated by 5 x 1m high bollards.

- o The overflow car park uses 8 x 1m high bollards located in the positions shown on the Drawing. Each bollard houses a 24W LED light source.
- o Both the pole mounted luminaires and bollards are high efficiency LED products having excellent photometric characteristics for obtrusive light mitigation.

Lighting Results

The lighting results, as presented in the report, are summarized in the Tables below:

Table for Car Park Illuminances

	Proposed Design		Australian Standards		Pass/Fail
	Eave	Emin	Eave	Emin	
Main Car Park	14 lux	2 lux	7.0 lux	1.5 lux	PASS
Overflow Car Park	8 lux	1 lux	3.5 lux	N/A	PASS

Clearly all the illuminances comply with the Australian Standard. Refer to Drawing CP01 for the lux plots over the car parks and the calculated illuminance values.

Table for Obtrusive Light Parameters

	Proposed Design			Australian Standards			Pass/Fail
	Spill light	Intensity	Sky glow	Spill light	Intensity	Sky glow	
Main Car Park	<0.5 lux	5,100 cd	0.0	5 lux	7500 cd	0.01	PASS
Overflow Car Park	<0.5 lux	700 cd	0.0	5 lux	7500 cd	0.01	PASS

Clearly all the obtrusive light technical parameters comply with the Australian Standard. Refer to the Report for calculations and comments on these parameters.

9 CONCLUSION

The assessment of the car park lighting at 83 Bakeley Road, Castlemaine shows:

- o The lighting of the car park fully complies with the Australian Standard for street (and carpark) lighting for the safe night use of the facility for both the general public and disabled users.

- o The obtrusive effect of the car park lighting, including spill light, lighting intensity and sky glow, will be minimal and fully compliant with the Australian Standard for obtrusive light .

With the Author's experience in lighting, and obtrusive light being a serious environmental consideration, the proposed car park lighting installation should have minimal impact on the local residents and community as a whole.

I have made all inquiries that I believe are desirable and appropriate and no matters of significance which I regard as relevant have to my knowledge been withheld from the Tribunal.



Dr Richard Dlugniak
Consulting Engineer
DipEE, BSc, MSc, PhD (Elec Eng)
MIEAust, MIES, CPEng

4 October 2021



Dr Richard Dluzniak Consulting Pty Ltd
6 Locksley Avenue, Kew Victoria 3101
Tel 03 9817 6677, Mbl 0409 968 603
Email : dluzniak@bigpond.net.au

PLACE OF WORSHIP
83 BLAKELEY ROAD, CASTLEMAINE 3450

CAR PARK LIGHTING PROPOSAL

A INTRODUCTION

The compliance of car park lighting with Australian Standards comes under the Australian Standard **AS/NZS 1153.3.1.: 2020** - Lighting for Roads and Public Spaces : Category P Lighting.

The main car park at the Place of Worship site in Castlemaine falls under the lighting Category PC2 which requires lighting satisfying the following values:

Average horizontal illuminance	7.0 lux
Minimum point horizontal illuminance	1.5 lux
Minimum point vertical illuminance	1.0 lux

The overflow car park at the Place of Worship site falls under the lighting Category PC3 which requires lighting satisfying the following values:

Average horizontal illuminance	3.5 lux
Minimum point horizontal illuminance	0.7 lux
Minimum point vertical illuminance	N/A

Drawing and Attachments

The following Drawing and Attachment are included which form part of this proposal:

Drawing	CP01	Car Park Lighting and Lux Plot
Attachments	A1	100W Road LED luminaire
	A2	24W Bollard luminaire
	A3	Polar Curve for Road LED luminaire
	A4	Polar Curve for Bollard luminaire

B PROPOSED LIGHTING FOR CAR PARKS

Main Car Park

This option uses medium height poles, low height bollards and LED lights to produce the required illuminance on the car park.

The car park lighting layout and lux plot are shown on Drawing CP01. The lighting system comprises:

- 1 5 x 8m fixed steel poles (labeled P1-P5) installed in the positions shown on the Drawing.
- 2 5 x 100W Road LED luminaires mounted on the poles. These are low glare high cut off fittings, aimed horizontally out from the pole. Attachment A1.1 gives the luminaire details.
- 3 To alleviate poles being close to the worship building, low height bollards are proposed for the drive-in to the car park. Four bollards 1.0m high with 24W LED lights are proposed as shown with symbol B1-B4 on the Drawing. Attachment A.2 gives the bollard details.
- 4 The disabled car park spaces are lit to a higher level of 16 lux (by the light at P5) as required in the Code.

The Results shown on Drawing CP01 show that the main car park average illuminance is 14 lux and the minimum point value is 2 lux; these values clearly satisfy the code requirements for the main car park.

Overflow Car Park

This car park can be characterized as a category PC3 car park, which requires a lower level of lighting as stated in Part A.

The lighting system comprises:

- 1 Low height bollards are proposed for the overflow car park. Eight bollards 1.0m high with 24W LED lights are proposed as shown with symbol C1-C8 on the Drawing. Attachment A.2 gives the bollard details.

The Results shown on Drawing CP01 show that the overflow car park average illuminance is 8 lux and the minimum point value is 1 lux; these values clearly satisfy the code requirements for the overflow car park.

Lighting control of the car parks would be achieved by using both a photocell light switch and bypass switch to enable lights to come on automatically or be switched manually with the bypass switch, as required.

C OBTRUSIVE LIGHT

The relevant standard for obtrusive light is Australian Standard **AS 4282:2019** - Control of the obtrusive effects of outdoor lighting. The relevant light technical parameters for the obtrusive light emanating from the car park lighting are spill light, luminous intensity and sky glow.

The applicable Environmental Zone for the site is Zone A2 – low district brightness, sparsely inhabited rural and semi-rural area.

Spill Light

The maximum allowable value of spill light on a residential dwelling for Zone A2 is 5 lux. Since the closest dwellings are set well back (>50m) from the lighting poles (P1-P5) then the spill light at this distance will be negligible, typically < 0.5 lux. Note the bollards will contribute insignificant spill light at this distance

Hence spill light criteria is satisfied.

Maximum Luminous Intensity

The maximum luminous intensity is the luminous intensity (the brightness) of the luminaire in the vertical plane at 10 deg below horizontal. This intensity is to be limited to 7,500 candela to ensure the luminaire is not “glary”.

From the polar curve for the car park luminaire (the ROADLED) in Attachment A.3, the intensity at 10 deg below the horizontal is 5,100 candela. The brightness of the Bollard luminaire at this angle is even lower as shown in Attachment A.4

Hence the maximum luminous intensity criteria is satisfied.

Sky Glow

The sky glow is determined by the upward light ration of the luminaire used for the lighting. For Zone A2 the value of this ratio is 0.01, that is 1% of total lamp flux is allowed to escape above the horizontal.

Attachments A3 and A4 show the Polar Curves (light distributions) of both the Road LED and Bollard. The diagrams show that no light is emitted from these luminaires above the horizontal, specifically

The Road LED has a 5.0 deg cutoff below the horizontal

The Bollard has a 2.5 deg cutoff below the horizontal

Since the LED luminaires used in the car park lighting are all mounted horizontally (no tilt), there is no upward light and hence the sky glow limit is satisfied

D SUMMARY

The proposed car park lighting installation at 83 Blakeley Road, Castlemaine satisfies the relevant conditions of the Australian Public Lighting code and Obtrusive Light codes and will have minimal impact on the local community amenity.

The lighting levels on the car park is relatively low, the spill light is negligible, the intensity of the luminaires is well below allowable values and there is no sky glow.

END OF REPORT

Dr Richard Dluzniak
Consulting Engineer

4 October 2021

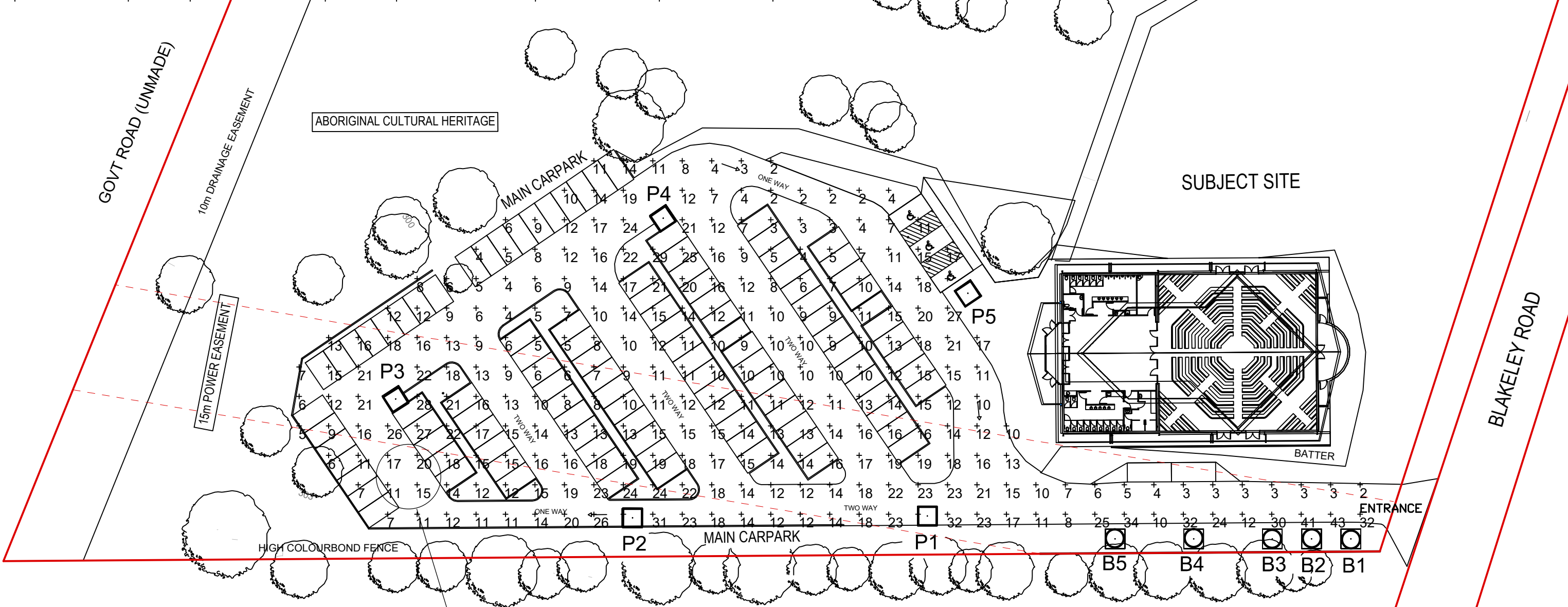
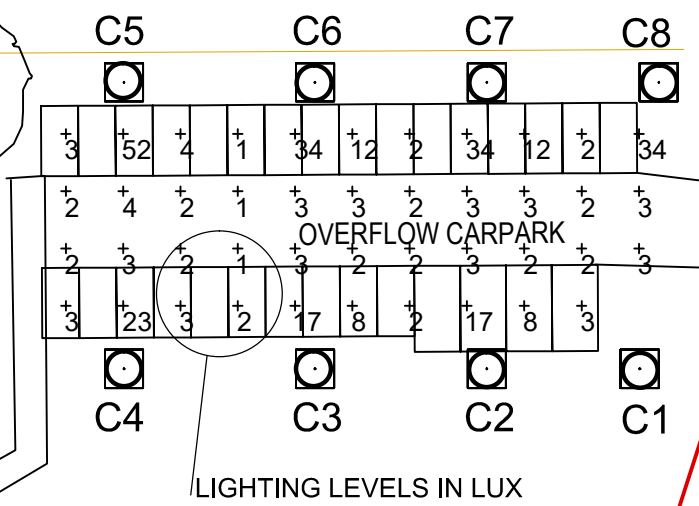
LIGHTING DESIGN RESULTS

Calculation Summary

Label	CalcType	Units	Avg	Max	Min
E1 MAIN CARPARK	Illuminance	Lux	14	43	2
E2 OVERFLOW CARPARK	Illuminance	Lux	8	52	1

Luminaire Schedule

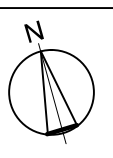
Symbol	Qty	Label	LLF	Luminaire Lumens	Luminaire Watts	Total Watts
□	8	Bollard S 24W	0.90	1073	23	184
□	5	Bollard D 24W	0.90	1433	23	115
□	5	Road LED 100W	0.90	13240	100	500



LEGEND

- P1-P5 8m LIGHTING POLE WITH 100W LED LIGHT
- B1-B4 1.0m LED BOLLARD WITH 24W LED LIGHT
- C1-C8 1.0m LED BOLLARD WITH 24W LED LIGHT

REV.	ISSUES / AMENDMENTS	DATE	DRN.	AUTH.



Dr RICHARD DLUZNIAK
 CONSULTING ENGINEER
 6 LOCKSLEY AVENUE, KEV. VIC 3101
 Tel 03 9817 6677; Mbl 0409 968 603
 Email: dluzniak@bigpond.net.au

DRAWN	RD	DATE	SEPT 2021
DESIGNED	RD	CAD FILE	CP01.DWG
SCALE	1:500 @ A3 SHEET		

CLIENT
PLACE OF WORSHIP
 PROJECT
 83 BLAKELEY ROAD, CASTLEMAINE
 CAR PARK LIGHTING

DRAWING TITLE
CAR PARK LIGHTING LAYOUT AND LUX PLOT

DRAWING No.
CP01
 REVISION



100W Road LED Luminaire

Mounted on 8m steel pole with 0.5m outreach arm

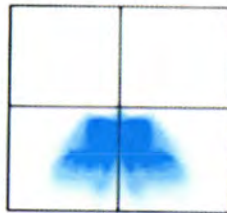




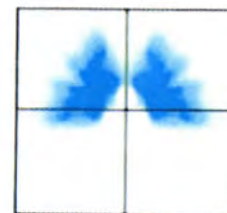
Detail Bollard Top

Lighting Distributions

Symmetric
single lens



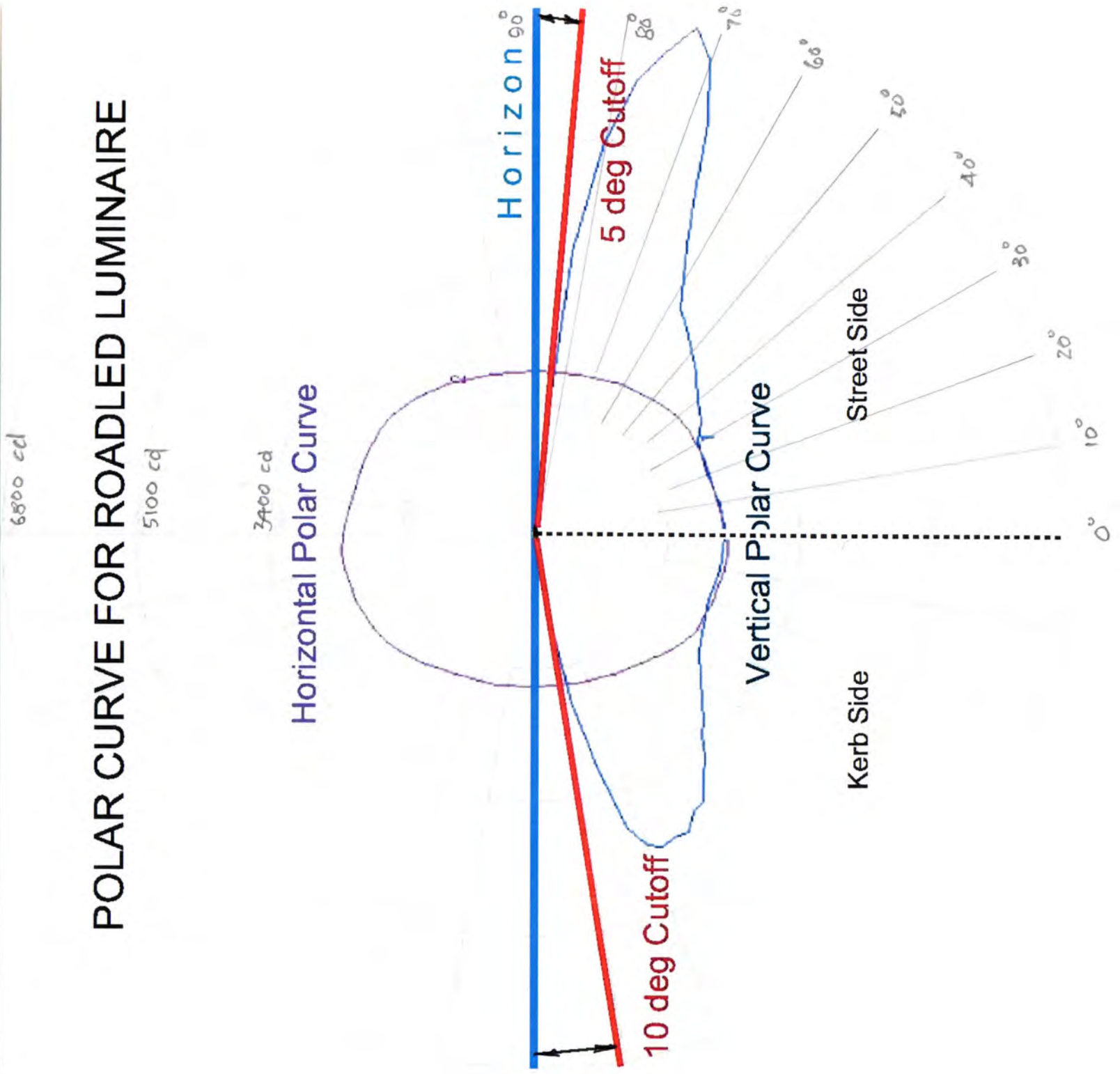
Bisymmetric
double lens



Front View

24W BOLLARD LUMINAIRE

POLAR CURVE FOR ROADLED LUMINAIRE

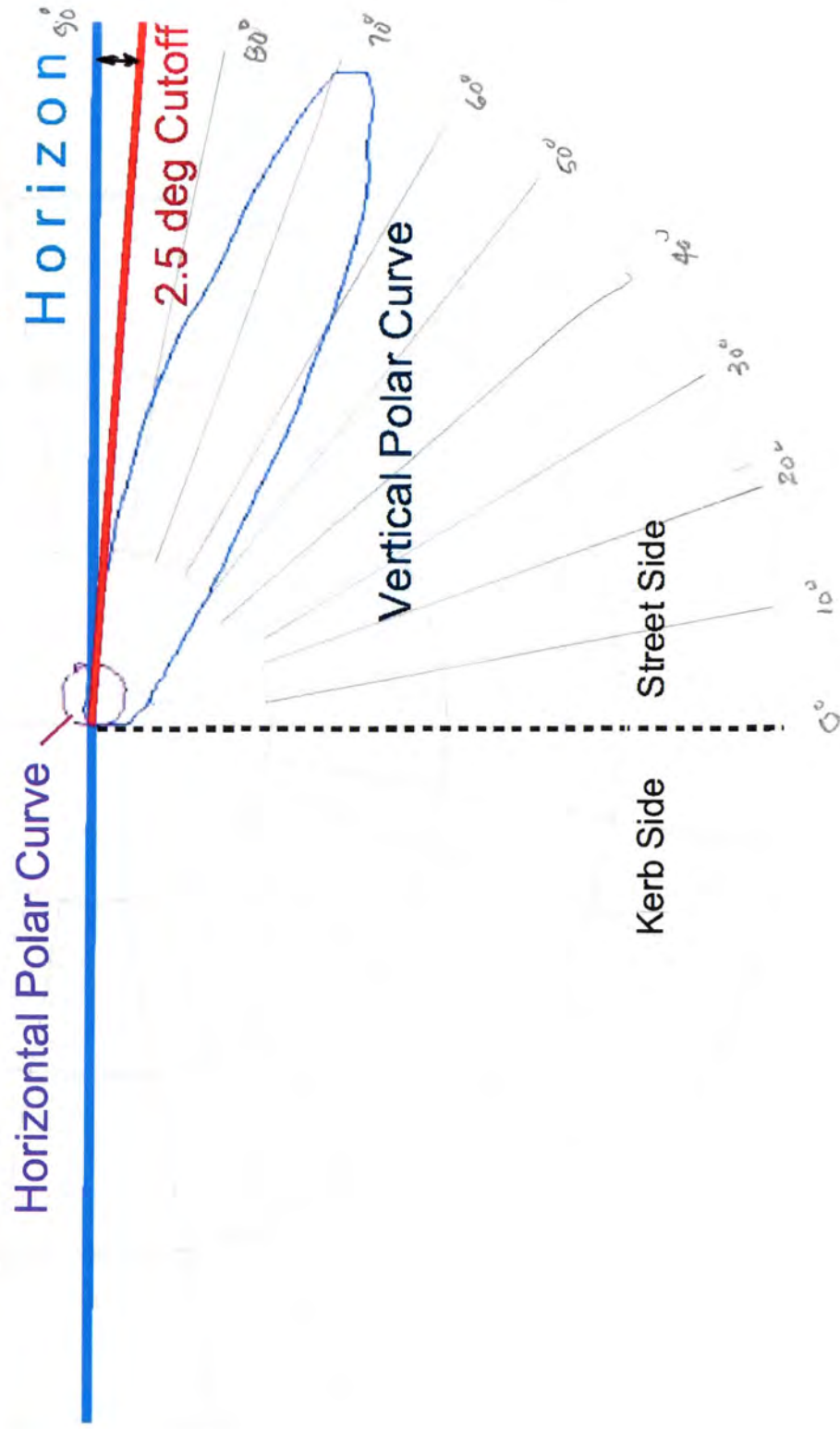


1500 cd

1120 cd

750 cd

POLAR CURVE FOR BOLLARD LUMINAIRE





Expert Report

83 Blakeley Road, Castlemaine

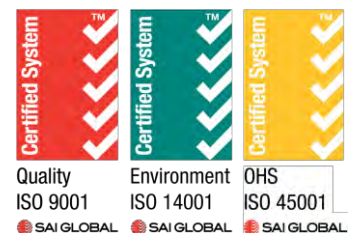
The Trustee for Castlemaine Gospel Trust
05 October 2021





Report Author:	Warwick Bishop
Title:	Expert Report
Address of Property:	83 Blakeley Road, Castlemaine
Report Prepared For:	The Trustee for Castlemaine Gospel Trust
Instructed By:	Planning & Property Partners
VCAT Proceeding:	P409/2021
Date of Inspection	17 August 2021
Date of Report	05 October 2021
Document Name	22010001_R01v01c.docx

15 Business Park Drive
Notting Hill VIC 3168
Telephone (03) 8526 0800
Fax (03) 9558 9365
ACN 093 377 283
ABN 60 093 377 283





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1 STATEMENT OF ENGAGEMENT, QUALIFICATION, EXPERIENCE AND EXPERTISE

1. I, Warwick Bishop, have prepared this report at the request of Planning & Property Partners.
2. I am a Senior Principal Engineer and Director of Water Technology Pty Ltd. I have over 28 years experience as a consulting water engineer.
3. A copy of my Curriculum Vitae is provided in Appendix A.
4. The report is prepared as an independent and impartial report.
5. I have read and understood the VCAT Practice Note – PNVCAT2 Expert Evidence and agree to be bound by it.
6. This report is given independently to assist the Tribunal in relation to the determination and resolution of the matter. I accept my paramount duty is to the Tribunal and not to any individual party to dispute who is liable to pay my fees or otherwise.
7. I have relied upon many documents in formulating my opinion. A non-exhaustive list of those documents is included in Section 6 of this report.
8. With my qualifications and experience, I believe I am well qualified to provide an expert opinion in this matter.



2 REPORT AUTHOR

Warwick Bishop

Senior Principal Engineer and Director

15 Business Park Drive

Notting Hill VIC 3168

Telephone (03) 8526 0800

Fax (03) 9558 9365

ACN 093 377 283

ABN 60 093 377 283

Qualifications

- B.E. (Hons), University of Melbourne, 1993
- MEngSci, Monash University, 2000

Affiliations

- Fellow, Institution of Engineers Australia, Chartered Professional Engineer
- Member, River Basin Management Society
- Member, International Association for Hydro-Environment Engineering and Research
- Member, Society for Sustainability and Environmental Engineering of Engineers Australia
- Member, Stormwater Victoria
- Member, Australian Water Association

Areas of Expertise

Key areas of expertise relevant to this report are summarised below:

- Assessment of drainage related issues associated with proposed development;
- Expert witness for drainage related issues at environmental effects panels, planning panels and civil hearings.

Statement of Expertise

With my qualifications and experience, I believe that I am well qualified to provide an expert opinion on stormwater and waterway management for the proposed development.



3 REPORT CONTRIBUTORS

Bertrand Salmi

Principal Engineer

15 Business Park Drive, Notting Hill, VIC 3168

Qualifications

- MSc water Resource Engineering Management, Heriot Watt (Scotland), 2005
- BSc Ecological Sciences (Hon: Environmental Sciences), University of Edinburgh (Scotland), 2006

Affiliations

- Member, Stormater Victoria

Areas of Expertise

Key areas of expertise relevant to this report are summarised below:

- Assessment of surface water related issues associated with proposed development;
- Hydrological and water quality assessment for drainage and stormwater studies, including assessment of existing problems and evaluation of alternative management options.

Scope of Contribution

Bertrand assisted in the preparation of the report, including data review and figure preparation, under my supervision.



4 GLOSSARY

TERM	DEFINITION
Annual Exceedance Probability (AEP)	The probability of exceedance of a given discharge within a period of one year. Can be expressed as a percentage (e.g. 1% change in any one year) or 1 in 100 [years] (e.g. a probability of 1 in 100). This report will generally use ARI terminology.
Average Recurrence Interval (ARI)	The average or expected period between exceedances of a given discharge expressed in years. This is another method of expressing the magnitude of a particular event in probabilistic terms (e.g. a “100 year ARI flood” can also be described as a flood with an AEP of “1%” or “1 in 100” or ARI 100 Year). The ARI of a flood event is a statistical estimate that gives no indication of when a flood of that size or larger will occur next.
Catchment	The area of land contributing stormwater runoff to a particular site or point under consideration. It always relates to a particular location and includes the catchments of tributary streams as well as the main stream.
Consequence	Outcome or impact of an event.
Drainage System	A system of gully [street or field] inlets, pipes, overland flow paths, open channels, culverts and detention basins used to convey runoff to its receiving waters.
Freeboard	The difference in height between the calculated water surface elevation and the top, obvert, crest of a structure or the floor level of a building, provided for the purpose of ensuring a safety margin above the calculated design water elevation.
Flood	The covering of normally dry land by water that has escaped or been released from [i.e. has exceeded the capacity of] the normal confines of any lake, or any river, creek or other natural watercourse, whether or not altered or modified; or any reservoir, canal, or dam. A flood can be caused by excessive rainfall, storm surge, dambreak or a tsunami.
Floodplain	A floodplain is defined as the extent of land inundated by the Probable Maximum Flood.
Hazard	A source of potential harm.
Hydraulic Design	The component of drainage design that involves the determination of velocities, heads and water levels as storm runoff passes through the drainage system.
Hydrologic Design	The component of drainage design that involves determination of stormwater runoff, either discharge or volume.
Local Authority	Any local or regional external authority—whether government or non-government, including local governments and the State Government—that has a legal interest in the regulation or management of a given activity, or the land on which the activity is occurring, or is proposed to occur. Reference to “the local authority” shall also imply the plural.
Local Government	The local city or shire council with jurisdiction over the land in which the activity in question is occurring or is proposed to occur.
Manning's 'n' Roughness Coefficient	A measure of the surface roughness of a conduit or channel to be applied in the Manning's equation.



TERM	DEFINITION
Rainfall Intensity	The rate at which rain falls, typically measured in mm/hour. Rainfall intensity varies throughout a storm. This variation is called a temporal pattern.
Risk	The chance of something happening that will have an impact on objectives. It is measured in terms of a combination of the consequences of an event and their likelihood.
Runoff	<p>That part of rainfall which is not lost to infiltration, evaporation, transpiration or depressions in the ground.</p> <p>For the purposes of investigating or studying a flood it is the amount of rainfall that drains along the surface and into the “drainage system” or directly into receiving waters. Local runoff is that which occurs locally to a point in question (i.e. within a lot) and has not yet reached a drainage system.</p>
Sedimentation Basin	A permanent sediment collection basin as opposed to a temporary construction site “sediment basin”. A tank or basin designed for low-velocity, low-turbulent flows suitable for settling coarse sediment particles from stormwater runoff.
Stormwater Flooding	Inundation by local runoff caused by heavier than usual rainfall. Stormwater inundation is caused by local runoff before it has entered a watercourse or joined watercourse flow. In a rural setting and within large rural allotments, we define stormwater flooding as sheet flow caused by local runoff before it has concentrated into a watercourse, including a drainage channel, stream, gully, creek, river, estuary, lake or dam, or any associated water holding structure.
Surface Water or Inundation	Any water collecting on the ground or in an open drainage system or receiving water body. In this report we use these terms to discuss water before it is categorised into flood, stormwater or other.



5 SCOPE OF THIS REPORT

This report has been prepared in response to a request for expert advice from Planning & Property Partners on 29th June 2021 on behalf of The Trustee for Castlemaine Gospel Trust. The request for advice relates to Planning permit application PA012/2020 ('Permit Application') lodged with Mount Alexander Shire Council ('Council') for 'Use and development of a place of worship including associated car park, a two-lot subdivision, removal of native vegetation and reduction of car parking requirements' at 83 Blakeley Road, Castlemaine ('Subject Site').

Specifically, I have been instructed to provide independent expert evidence at the Victorian Civil and Administrative Tribunal (VCAT).



6 BASIS OF THIS REPORT

This report is based on:

1. Observations from site visit undertaken on the 17th August 2021.
2. Planning application and VCAT submission, supporting documentation, including:
 - a. Planning Report prepared by The Planning Professionals (January 2020)
 - b. Biodiversity Assessment Report prepared by Abzeco (May 2020)
 - c. Feature Survey of the subject site by Survey 4D (August 2021)
 - d. Amended Architectural Plans by Orbit Architecture (01 September 2021)
3. Mount Alexander Shire Council's Delegate Report for Planning Application No: PA012/2020 (December 2020);
4. Mount Alexander Shire Council's Notice of Decision to Refuse to Grant a Permit (Application No: PA012/2020), dated 15 December 2021.
5. Goulburn Murray Water letter to Council, 21 October 2020
6. North Central CMA letter dated 18 June 2019
7. Statements of Grounds, from referral authorities and objectors.
8. Survey and other background data layers from the Department of Environment, Land, Water and Planning (DELWP).
9. Expert ecological evidence of Mr Brett Lane, 4th October 2021.
10. Landscape Plan by CDA Design Group (October 2021).

This report has been prepared in accordance with VCAT Practice Note – PNVCAT2 Expert Evidence. I have read the Practice Note and am aware of my overriding duty to assist the Tribunal on matters relevant to my expertise.



7 SITE DESCRIPTION

7.1 Locality

The subject site is located at 83 Blakeley Road, at the northern end of the Castlemaine township, about 100 kilometres northwest of Melbourne CBD as shown in Figure 7-1. The site is bounded by Blakeley Road to the east, the Bendigo - Castlemaine Train line corridor to the west and rural residential land to the north and conventional residential further to the south. The Midland Highway is approximately 85 metres from its western boundary.

The site has an area of approximately 2.8 ha, is zoned Low Density Residential, and is partly affected by a Bushfire Management Overlay (BMO). It is also identified as a Designated Bushfire Prone Area and an area of Aboriginal Cultural Heritage Sensitivity.

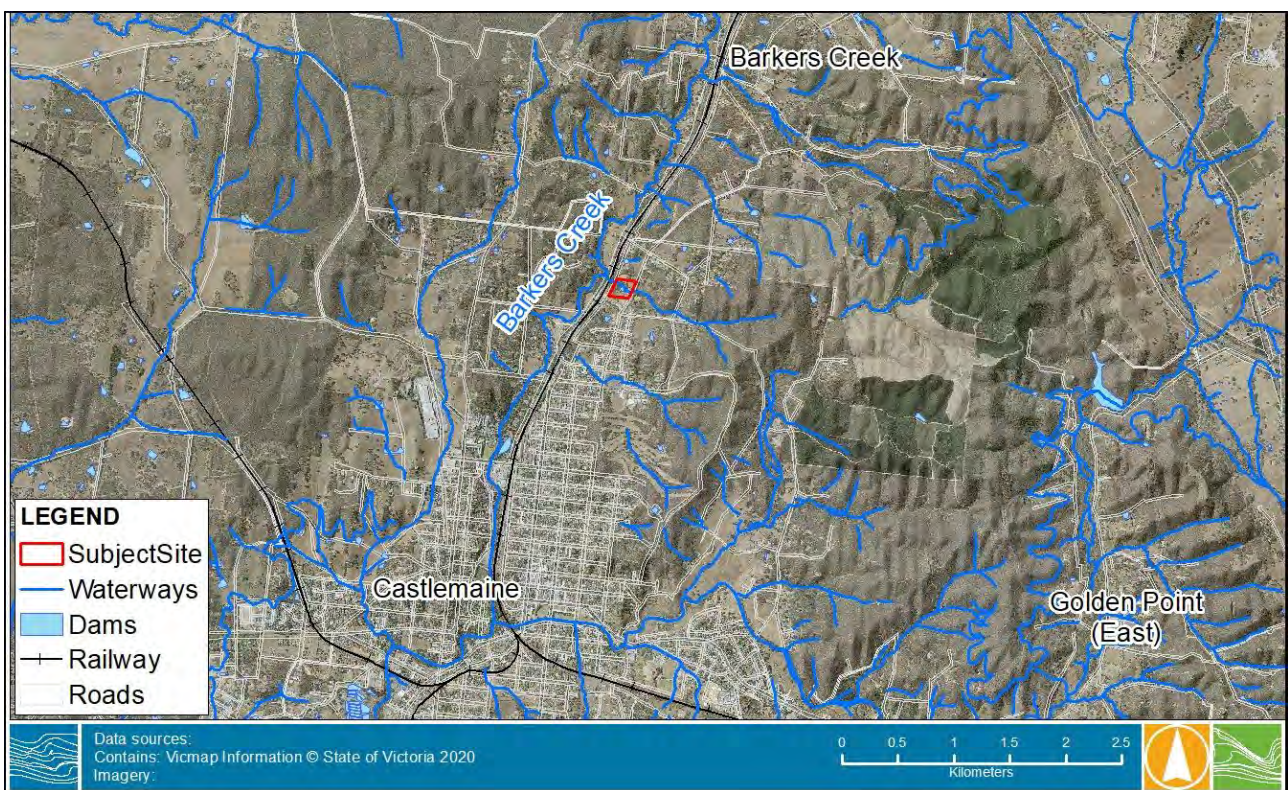


Figure 7-1 Subject Site Locality

There are currently no buildings or structures on the site. The key drainage features of the site are shown in Figure 7-2 and Figure 7-3, and listed as follows:

- A designated, unnamed waterway running east to west approximately through the centre of the site, which is referred to in this report as Barkers Creek Tributary; and
- A farm dam approximately in the centre of the site with a spillway at the south-west corner.

The site topography is also shown in Figure 7-2. This highlights that the site generally slopes from east to west and south to north. The north-east part of the site has lower slope, whilst the south-west corner is steeper. Elevations across the site vary from a low of approximately 294 m AHD at the north-west boundary at the Barkers Creek Tributary to a high of approximately 304 m in the south-west corner.



The Bakers Creek Tributary catchment is approximately 90 Hectares in area and extends to the east of the subject site for around 1.5 km, into state forest (Figure 7-4). Approximately half the catchment is within a rural residential area with the other half being predominantly covered by native box forest.

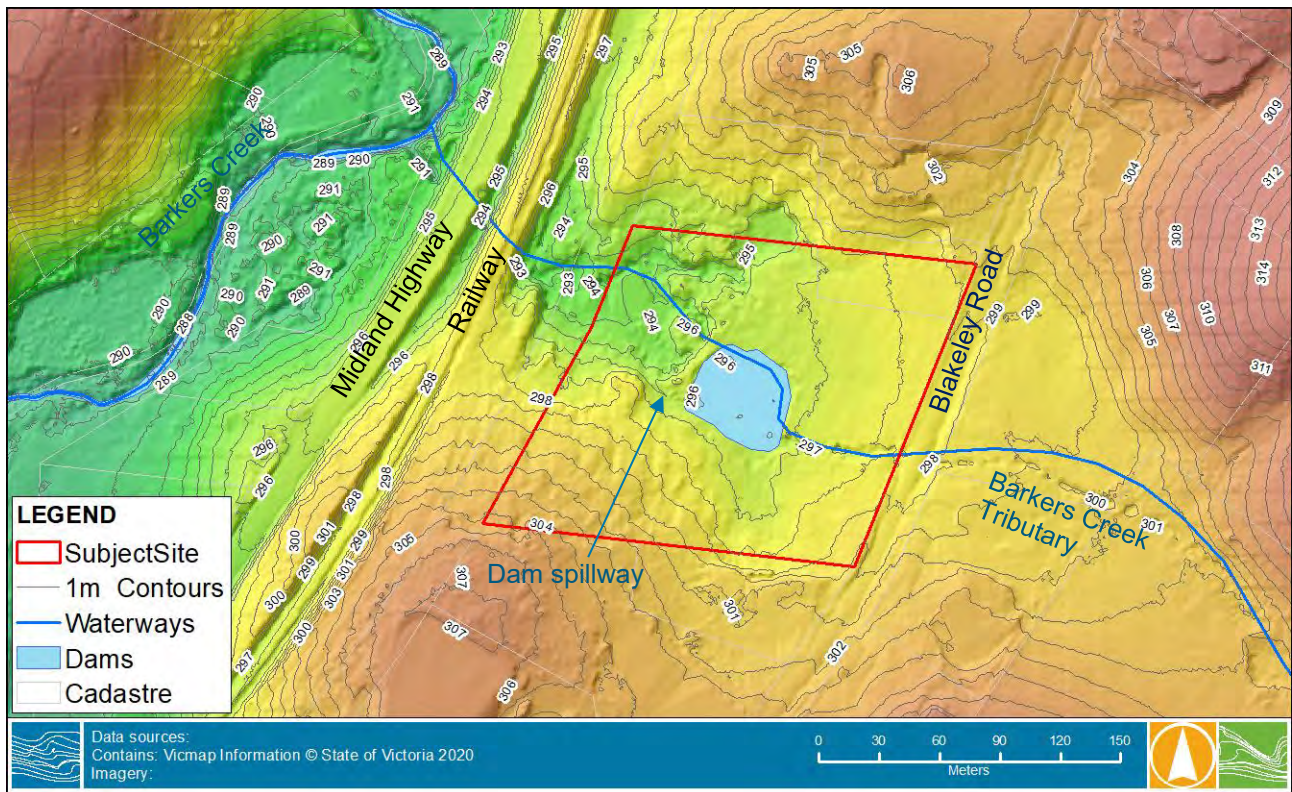


Figure 7-2 Key Drainage Features



Figure 7-3 Drainage Flow Paths (indicated by arrows)

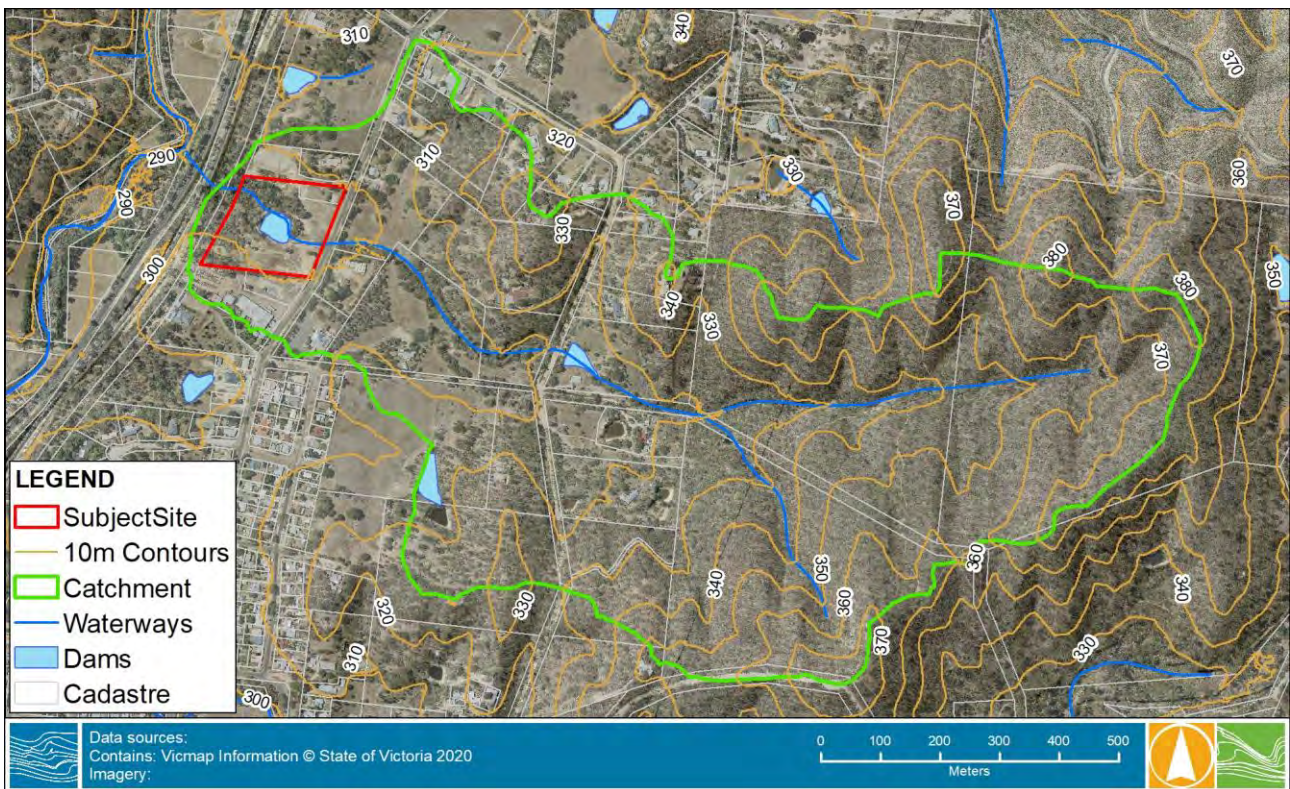


Figure 7-4 Barkers Creek Tributary Catchment



7.2 Site Inspection

A site inspection was carried out on the 17th of August 2021 at approximately 11 am. The weather was cool with some light showers, however there was no flow observed in the waterway. The photos below highlight a number of features observed on site (blue arrows indicating flow paths). Figure 7-5 shows the location of photos taken. Key points are:

- There are two sets of culverts flowing under Blakeley Road from east to west. One connects to the Barkers Creek Tributary waterway and the other (a short distance to the south) drains the roadside drain along Blakeley Road (draining from the south).
- The Barkers Creek Tributary waterway is degraded, contains weeds and exhibiting some minor surface erosion (erosion of banks evident as shown in Photo 9). There was also bare ground near the channel at Blakeley Road that would be prone to erosion as shown in Photo 1, Photo 2 and Photo 3.
- There is a significant stockpile of earth immediately east of the dam (Photo 8).
- The dam embankment appears stable and free of surface erosion.
- The dam spillway appears clear and free of any obvious erosion. The spillway channel appears to be connected to a rock substrate.
- The dam appears to have a high suspended sediment load. This is consistent with the minor surface erosion of clays observed on site.
- Overall the site appears to have been significantly disturbed in the past, with evidence of terraforming including the dam construction, the waterway channel (which does not look natural), and other areas of fill. As with much of the land in the goldfields area, there is a high possibility of previous disturbance related to historic mining practices along waterways.



Figure 7-5 Photo locations



Photo 1 – View SE towards culverts under Blakeley Road



Photo 2 –Blakeley Road Culverts on Barkers Creek Tributary (twin ~375mm RCP)



Photo 3 – Blakeley Road Culvert South (375mm RCP)



Photo 4 – View E (upstream) of Barkers Creek Tributary



Photo 5 – View N along Blakeley Road, 2 sets of culverts flowing west under road



Photo 6 – View S along Blakeley Road, culvert on roadside drain, flowing to site



Photo 7 – View SE towards culverts under Blakeley Road



Photo 8 – View SW towards mounds in front of dam



Photo 9 – Looking S at Barkers Creek Trib. Waterway, rilling erosion on bank



Photo 10 – View E along Barkers Creek Trib. Towards Blakeley Road



Photo 11 – View S along dam embankment



Photo 12 – View E across dam



Photo 13 – View E towards dam spillway channel



Photo 14 – View W along dam spillway channel



Photo 15 – View S along dam spillway channel



Photo 16 – Panorama view of Barkers Creek Tributary looking south towards proposed place of worship building location



8 PROPOSED DEVELOPMENT

8.1 Overview

The proposed development is for the use and development of the land for a place of worship (meeting hall) including car parking, and a two-lot subdivision. The place of worship would be located along the southern part of the site. The proposed development layout plan, as included in the VCAT substituted plans dated April 2001, is shown in Figure 8-1.

In the course of preparing for this VCAT hearing, the plans have been amended as shown in Figure 8-2. The primary change in the layout has been the movement of the building to flatter ground closer to Blakeley Road and the carpark is now located towards the rear of the property. There is also an additional area of carpark proposed on the north side of the waterway, connected by a pedestrian bridge.



Figure 8-1 Proposed Development Layout (April 2021)

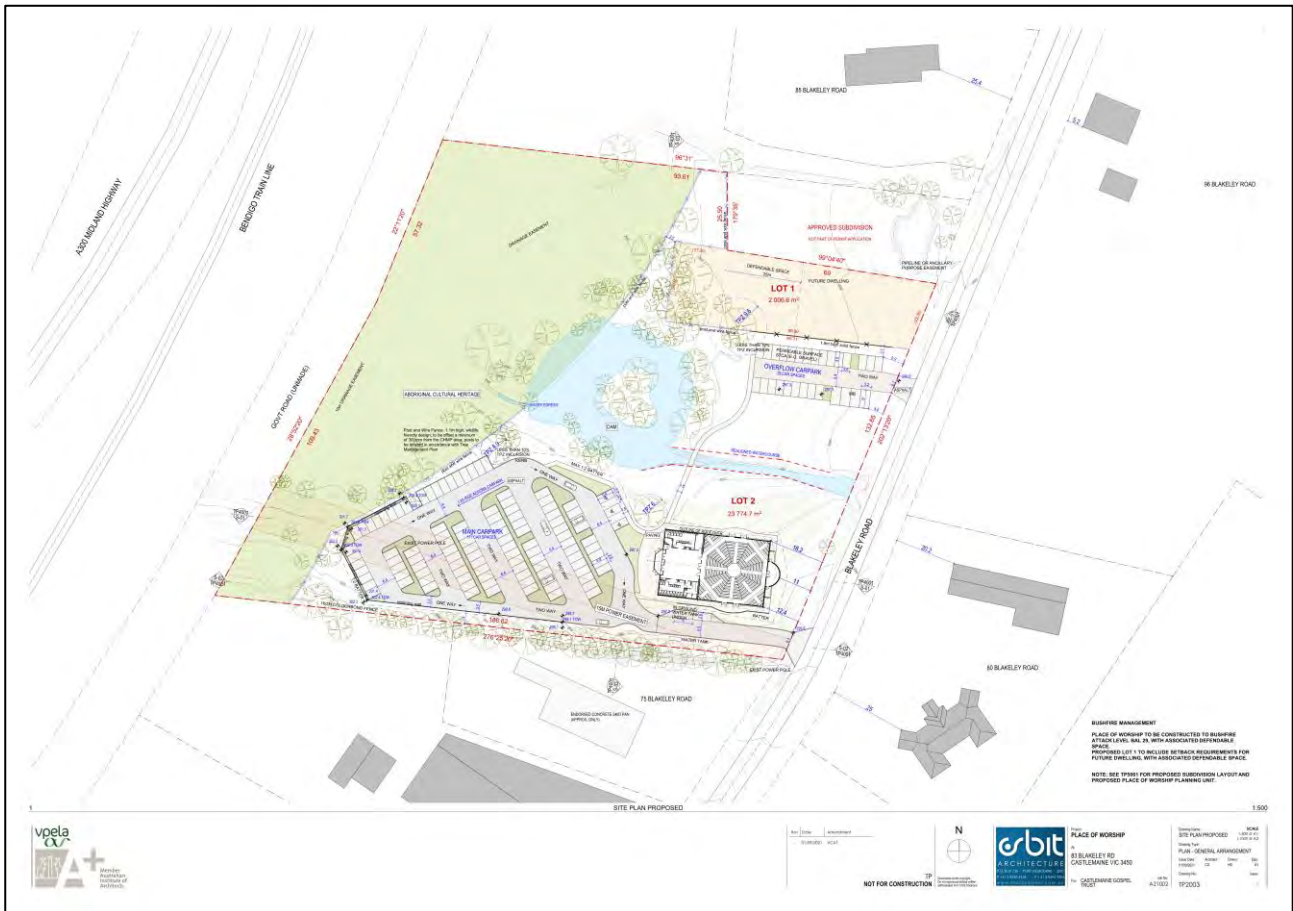


Figure 8-2 Revised Development Proposal, September 2021

8.2 Stormwater Management

On-site stormwater detention and bio-filtration will be implemented to manage stormwater from the site. Runoff from the site will consist of the driveway, carpark and the building. Runoff from the building can be routed through a rainwater tank for toilet flushing and irrigation purposes. Overflow from the tanks can be discharged to the waterway with appropriate erosion control measures.

The carpark area will be directed into a bio-retention system prior to discharge to the waterway or dam. The proposed development can achieve best practice stormwater management requirements through these measures. It is expected that a Stormwater Management Plan (SMP), to the satisfaction of the Responsible Authority, would be a condition requirement on any permit granted for the site.

8.3 Waterway Management

A slight realignment and reconfiguration of a 60 m length of the Barkers Creek Tributary waterway is proposed. This would essentially involve widening of the overall channel to promote stability and facilitate rehabilitation. A low flow pilot channel can be incorporated in the base for low flows with additional channel capacity for high, flood flows. The landscape plan showing the waterway and bioretention areas highlighted, is shown in Figure 8-3.



Figure 8-3 Landscape Plan, October 2021

8.4 Council's Decision

Council resolved to issue a Notice of Refusal despite delegate support recommending the issue of a Notice of Decision to Grant a Planning Permit.

I note that none of the grounds of refusal relate to stormwater and waterway management. Stormwater matters could also be addressed through appropriate permit conditions.

8.5 Goulburn Murray Water

Goulburn-Murray Water, a statutory referral authority, has no objection to this planning permit being granted subject to the following conditions:

1. Any Plan of Subdivision lodged for certification must be referred to Goulburn-Murray Rural Water Corporation pursuant to Section 8(1)(a) of the Subdivision Act.
2. All construction and ongoing activities must be in accordance with sediment control principles outlined in EPA Publication 275, Construction Techniques for Sediment Pollution Control (May 1991).
3. A Plan of Subdivision must be provided for Certification showing building exclusion zones at least 30m from the waterway on either side (including the dam on the waterway).
4. Each lot must be provided with connection to the reticulated sewerage system in accordance with the requirements of the relevant urban water authority.



5. All stormwater discharged from the site must be directed to Council's legal point of discharge. No stormwater is to be directly discharged to any waterways. All stormwater must meet the urban run-off objectives and Standard C25 as specified in Clause 56.07-4 of the Victorian Planning Provisions. All infrastructure and works to manage stormwater must be in accordance with the requirements of the Responsible Authority.

I note that these five conditions were notionally listed in the Delegate Report, as conditions to the planning permit (should it have been granted).

With respect to the 30m waterway offset, the reasoning for this was not articulated by GMW. This is a standard or default buffer set for all waterways in Victoria. It is not responsive to the characteristics and needs of different waterways in terms of their size, condition and the nature of the adjacent floodplain. Experience suggests that appropriate buffers can vary depending on the circumstances of each waterway and may vary along the length of a waterway.

In separate correspondence, North Central Catchment Management Authority proposed a 20 m setback. I note there are numerous examples of waterway set-backs of less than 20 m in the area. I agree that 20 m is a desirable set-back distance. For the subject site there are some constraints in achieving 20 m in all areas around the waterway including the dam. From the layout plans the building achieves a 20 m setback from the revised waterway alignment, however there are sections of the carpark which are less than 20 m from the southern line of the dam. This is not necessarily a concern as there is significant buffer around the northern side of the dam and the water treatment measures for runoff from the carpark are sufficient to protect water quality outcomes.



9 DEVELOPMENT ASSESSMENT

9.1 Stormwater Management

The increase of impervious area due to the construction of the new building, driveway and car parking areas will increase stormwater runoff frequency and pollution entering the designated waterway located within the site. Water Sensitive Urban Design (WSUD) treatment assets can be used to treat urban stormwater runoff to meet best practice performance objectives and the Victorian State Environment Protection Policy (SEPP):

- 80% retention of the typical urban annual load for Total Suspended Sediments (TSS);
- 45% retention of the typical urban annual load for Total Nitrogen (TN);
- 45% retention of the typical urban annual load for Total Phosphorous (TP); and,
- 70% retention of the typical urban annual load for gross pollutants.

This section quantifies the area of treatment required to treat the hard stand areas of the proposed development. In order to allow some flexibility in the design, treatment areas were assessed pro-rata to hard stand areas. As such, it provides an indication of WSUD sizes, which could be finalised during the detailed design process.

Biofiltration/Raingardens are proposed to be implemented as stormwater treatment assets as they are:

- Flexible in design and can be easily integrated into the landscape; and
- Provide relatively high stormwater treatment within a smaller footprint than wetlands.

Biofilters treat stormwater through vegetation and soil filtration media (Figure 9-1 and Figure 9-2). Stormwater is first temporarily ponded on the biofiltration surface (extended detention storage) before percolating through a sand-based filter media, where dissolved pollutants are absorbed by filter media and plant roots. Treated stormwater can be either collected through perforated underdrains or exfiltrates to the surrounding soil.

A standard biofiltration configuration consists of a loamy sand filter media and underdrain to collect stormwater. The asset is fully lined, and hence no exfiltration is allowed. Conveyance to these end-of-line assets will be via pipes and/or swales in the carpark, noting that swales would provide additional water quality improvement.

Alternatively, a bio-infiltration system can consist of the same filter media configuration (loamy sand, 300/500 mm depths) without a collection pipe or liner. As a result, the bio-infiltration system allows exfiltration of treated stormwater into the surrounding soils. The final WSUD design should investigate the benefits of exfiltration to surrounding soils rather than linings and slotted pipes, to reduce maintenance and clogging of underground drains. This would be dependent on soil characteristics, with sand and sandy loam soils ideal for infiltration systems.

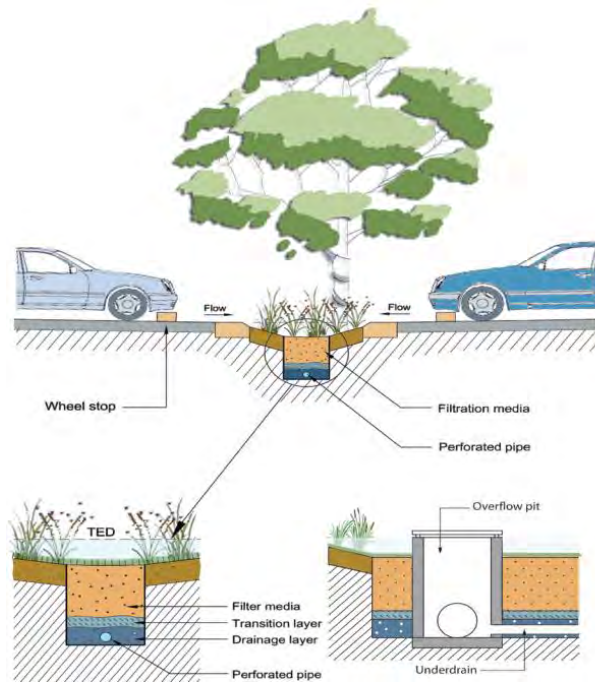


Figure 9-1 Vegetated Bioretention Carpark Design¹

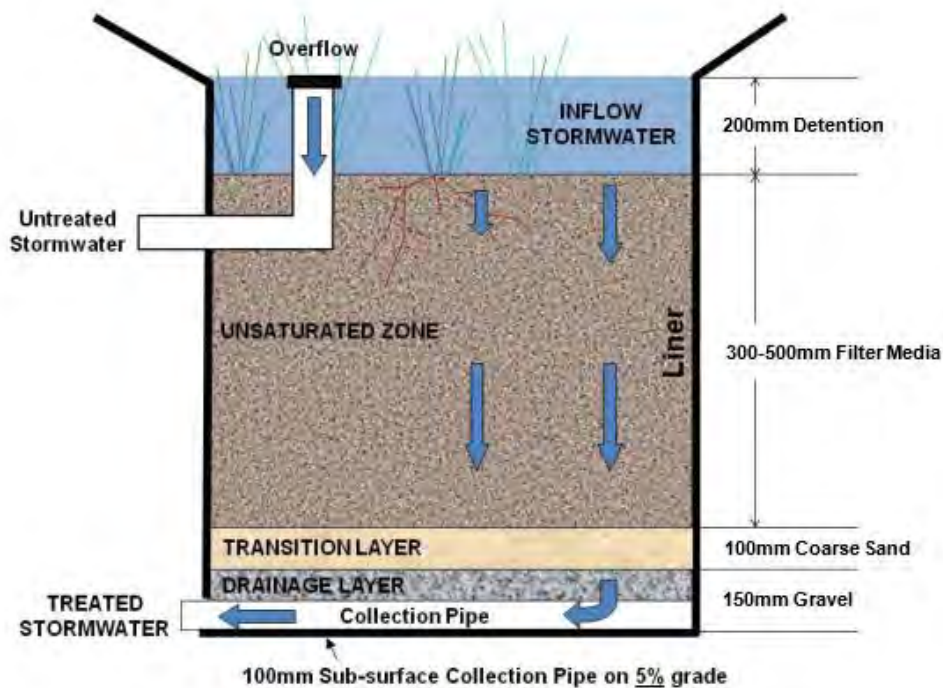


Figure 9-2 Standard lined biofiltration with an underdrain (adopted from FAWB Guidelines²)

¹ https://www.townsville.qld.gov.au/data/assets/pdf_file/0008/12212/WSUD-in-Car-Parks-V3.pdf [last accessed 23/04/2021]

² FAWB (2009). Adoption Guidelines for Stormwater Biofiltration Systems, Facility for Advancing Water Biofiltration, Monash University, June 2009.



A treatment surface area estimate for the proposed bioretention configuration is shown in Figure 9-3, with results showing that lined biofilters need to be sized to approximately 0.5% of the hardstand catchment area to meet Best Practice objectives. The landscape plan by CDA Design Group shows an area of approximately 50 m² at the northern edge of the main car park. This is well in excess of the minimum estimated area to achieve best practice which is approximately 20 m².

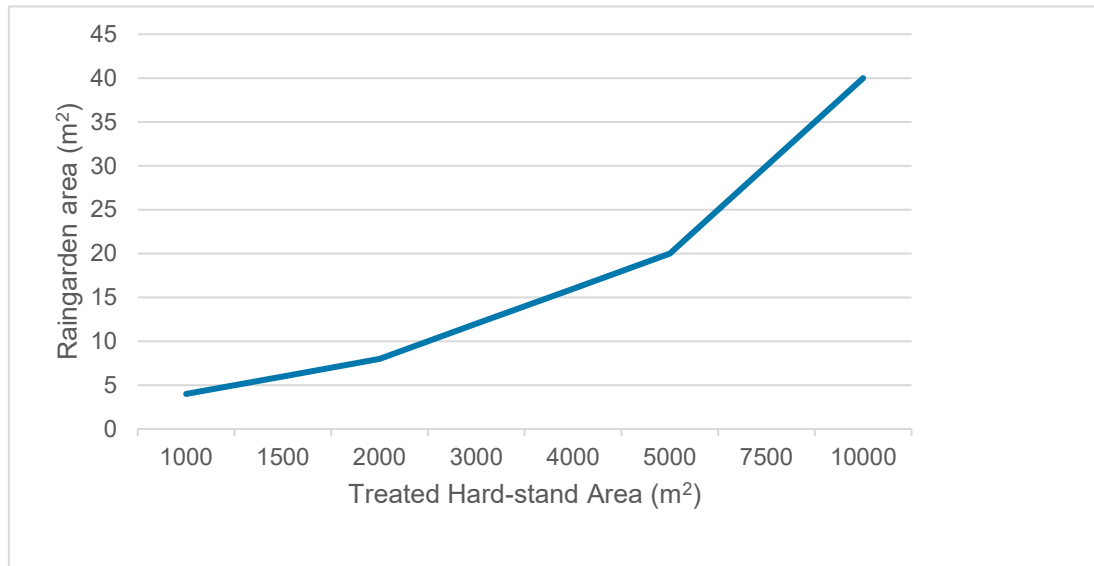


Figure 9-3 Pro-rata Bioretention Surface Area to meet Best Practice

Additional measures, such as rainwater tanks to capture and re-use roof water, could also be included into the design, noting there is sufficient land available around the building footprint and wider development area to integrate a water quality treatment train meeting Best Practice. The same applies for onsite detention and peak flow management. There is ample land within the subject site to accommodate retardation drainage assets.

There is sufficient area within the subject site to provide confidence that a suitable water quality design can be achieved to meet best practice. Should there be any concerns regarding stormwater works, these can be addressed through appropriate permit conditions, requiring a detailed stormwater management plan to be developed to the satisfaction of Council.

9.2 Waterway Management

Based on the design layout plan and landscape plan, a 20 m buffer to the waterway has been provided from the building and the northern carpark. The main carpark has a minimum offset from the dam of just under 10 m. As confirmed in the ecology evidence of Mr Brett Lane, the present waterway is in poor condition with many weeds and no canopy cover.

The development of the site provides an opportunity to improve the condition of the waterway through revegetation and stabilisation of the channel. The landscape plan (Figure 8-3) shows that canopy and ground cover planting will be undertaken along the waterway. This should result in a more natural waterway corridor with greater waterway values than at present. The risk of erosion can also be reduced through landscape and maintenance of the site. This will in turn result in a better water quality outcome for the waterway downstream.

Based on the above, I consider that a 20 m setback from either bank of the waterway, in conjunction with the other stormwater measures (see section 9.1), will be sufficient to mitigate potential impact of runoff from the site. The offset of the carpark from the dam is considered to be an acceptable outcome, in particular considering the high level of treatment proposed with the bio-retention system for runoff from the carpark. This is expected to provide an outcome superior to the present situation.



A Waterway Management Plan could be conditioned in a planning permit and prepared to include:

- Existing environmental values
- Details of any initial stabilisation and vegetation works
- A specific landscape plan for revegetation of the waterway, drainage corridor and all water quality works, including a species list and proposed density of the plantings. The vegetation should be representative of the Ecological Vegetation Class for the site; and
- A maintenance plan detailing the sequencing and periods of short, medium and long-term actions, including inspections, and the parties responsible for each action.

A works on waterways permit will be required from the North Central CMA to undertake the rehabilitation works on the Barkers Creek Tributary waterway.



10 DESIGN RESPONSE TO FLOOD RISK

A designated waterway runs east to west approximately through the centre of the site. Although not covered by a flood overlay (e.g., Land Subject to Inundation Overlay), there is an active floodplain within the site which may be activated during extreme rainfall event.

A high-level hydraulic model was constructed to assess possible flood extent, based on the following assumptions:

- 3.9 m³/s 1% AEP design flow, based on an 87 ha catchment (10% fraction imperviousness);
- A notional hydrograph;
- 2006 LiDAR, as sourced from DELWP.

Figure 10-1 shows, indicatively, modelled flood extent for the site. Site design would need to allow for this flood risk, in accordance with DELWP's *Guidelines for Development in Flood Prone Areas* (2019). A small amount of filling may be required at the west end of the building.

Freeboard to building floors is typically between 300 mm and 600 mm, depending on local floodplain characteristics and floodplain authority requirements. Melbourne Water, for example, typically apply 300 mm freeboard to overland flow from drainage systems and 600 mm freeboard for flooding from waterways.

The preliminary flood levels below suggest there is around 300 mm freeboard to the presently nominated floor level of 297.5 AHD. The floodplain is relatively broad in nature at this location and peak flood levels are controlled by the dam spillway and potentially the railway culverts. Hence, I expect that 300 mm freeboard would be adequate.

The freeboard should be confirmed with the North Central CMA (the responsible floodplain authority) and, if necessary, the building floor level may be raised to meet their requirement. I understand that raising of the building floor level by 300 mm would have no material impact on the plans for the site. A permit could be conditioned to ensure the floor level height was set to the satisfaction of the North Central CMA.



Figure 10-1 Indicative 1% AEP Flood Extent and Flood Depths



11 OBJECTIONS

A number of objections have been received regarding the proposed development. Table 11-1 lists the objections that relate to my area of expertise (i.e. stormwater and waterway management) and summarises my opinion on those. Where appropriate, objections similar in nature were grouped together in the table.

Table 11-1 Statements of Grounds related to Surface Water Management

Statement of Grounds	Comment
Stormwater Management Plan - insufficient room for an appropriate retention dam and proposal to overflow into existing natural watercourse.	Stormwater management can be achieved for the site through the implementation of rainwater tank(s) for the main building and a bioretention system for the carpark area. The stormwater design and engineering plans must be submitted to Council for approval.
Environmental Impact	<p>I consider that the impact of the development on waterway values, including riparian habitat and water quality, can be addressed with the implementation of suitable mitigation measures.</p> <p>The details of these measures can be finalised at the detailed design stage and subject to the proponent providing a stormwater management plan, to council's satisfaction, demonstrating that stormwater runoff stormwater is appropriately managed prior to discharge to the waterways. There will therefore be other opportunities for Council to ensure that the development design is an appropriate response to site constraints.</p>



Statement of Grounds	Comment
Waterway management and 30 m buffer zone	<p>The Victoria Planning Provision 14.02-1S (Catchment planning and management) specifies vegetated buffer zones at least 30 m wide along each side of a waterway.</p> <p>As discussed in Sections 8.5 and 9.2 the practical application of waterway setbacks results in variations to this requirement depending on local conditions. I consider the treatment of the waterway in this application provides an adequate buffer between the built form and the natural assets. The waterway condition will be improved as a result of the development.</p> <p>The details of the waterway measures can be finalised at the detailed design stage and subject to the proponent providing a waterway management plan, to the satisfaction of the responsible authority. There will therefore be other opportunities for Council to ensure that the development design is an appropriate response to the existing waterway.</p>



12 CONCLUSIONS

With respect to the proposed development at 83 Blakeley Road, Castlemaine, the following can be concluded:

- The proposed development is located adjacent to the Barkers Creek Tributary waterway, which has a catchment of approximately 87 hectares east of the site.
- The Barkers Creek Tributary waterway is presently in poor condition through the site, in particular in the area between Blakeley Road and the dam.
- The proposed development provides an opportunity to rehabilitate the Barkers Creek Tributary waterway and improve waterway outcomes through revegetation with appropriate plantings and stabilisation of the channel.
- The proposed waterway buffer distances, together with landscaping and planting will provide an appropriate outcome and enhance the waterway corridor.
- Appropriate stormwater management can be achieved for the site through capture of roof runoff into a rainwater tank for re-use and treatment of car-park runoff through a bio-filtration system.
- The site is subject to flooding from the Barkers Creek Tributary waterway. The siting of the building should protect it from flooding and safe access can be maintained to the carpark areas during a flood.
- The detailed design of surface water management for the site can be guided by a stormwater management plan and waterway management plan to the satisfaction of the responsible authorities.



13 DECLARATION

I confirm the following:

- a. The factual matters stated in this report are, as far as I know, true;
- b. I have made all enquiries that I consider appropriate;
- c. The opinions stated in this report are genuinely held by me;
- d. The report contains references to all matters I consider significant; and,
- e. I understand my duty to the tribunal and have complied with that duty.

Warwick Bishop
Senior Principal Engineer and Director
Warwick.bishop@watertech.com.au
WATER TECHNOLOGY PTY LTD

05 October 2021



APPENDIX A CURRICULUM VITAE



WARWICK BISHOP

warwick.bishop@watertech.com.au | 15 Business Park Drive, Notting Hill VIC 3168
Phone: 03 8526 0800 | 0403 055 338

Director

BE (Hons), MEng Sci (Water)

FIEAust, CPEng, NER



QUALIFICATIONS

- Bachelor of Engineering with Honours (Civil), University of Melbourne, 1992
- Masters of Engineering Science (Water), Monash University, 1999

AFFILIATIONS

- Fellow, Institution of Engineers, Australia, Chartered Professional Engineer
- Member, International Association for Hydraulic Research
- Member, Australian Water Association
- Member, River Basin Management Society
- Member, Stormwater Victoria
- Member, Engineers Australia Victorian Water Engineering Branch Committee

SUMMARY

Warwick is a Director of Water Technology and has over 25 years' experience in hydrologic and hydraulic investigations, specialising in the development and calibration of rural and urban hydrologic and hydrodynamic models and their application to flooding, water quality, sediment transport and environmental values. He also has extensive experience in coastal and estuary modelling including wave, current and oil spill investigations. He has worked extensively in the Murray Darling Basin, principally on environmental hydraulic investigations for the Living Murray Program. Warwick was contributed to the most recent revision of Australian Rainfall and Runoff, providing input to the reference document on 2D hydraulic modelling of rural and urban areas. Warwick worked in the Flood Intelligence Unit of SES during the 2011 floods and is regularly called on to provide expert evidence in surface water matters at VCAT and planning panels.

PROFESSIONAL HISTORY

2009 to present	Director, Senior Principal Engineer, Water Technology Pty Ltd
2003-2009	Senior Engineer, Water Technology Pty Ltd
2001-2003	Victorian Water Resources Manager, Lawson and Treloar Pty Ltd
1997-2001	Senior Engineer, Lawson and Treloar Pty Ltd
1993-1997	Engineer, Lawson and Treloar Pty Ltd

SPECIALIST AREAS OF EXPERTISE

- Wetland, WSUD and water quality investigations
- Surface water investigations of urban and rural floodplains, rivers and wetlands
- Modelling of flooding, environmental flows, water quality and sediment transport
- Urban flood mapping, flood mitigation and stormwater treatment
- Integrated Water Management
- Investigations of estuary and coastal hydraulics
- Expert witness reports

RECENT MAJOR PROJECTS

STORMWATER PROJECTS (FLOODING, DRAINAGE AND WSUD) WATER TECHNOLOGY

Glen Eira WSUD Opportunities – Project director for an options study looking at the potential effectiveness of WSUD measures for flood mitigation. A local case study was undertaken with preliminary hydrologic and hydraulic modelling.

PNG LNG Condensate Fate Modelling – Project Director for hydrologic and hydraulic assessment of potential condensate spill scenarios for Gas Pipeline Development. One and two-dimensional models as well as mixing zone calculations were performed.

Buckland Park Development, Lower Gawler River – Detailed hydraulic investigation of a large new residential area in a floodplain environment. Development of flood mitigation measures including levees and channels.

Inverloch, Broadbeach Resort – Management of flooding issues related to a coastal development on the South Gippsland Coast. Hydrodynamics of the ocean, estuary, creek and township drainage systems have been taken into account to develop an overall flood risk assessment and appropriate land development level. Also included full drainage and WSUD design for the development.

Hoppers Lane (Werribee) – Development of a surface water management strategy for a mixed-use development including full WSUD treatment.

Keysborough South – Development of surface water management strategy for a large residential rezoning. This strategy has been adopted by Melbourne Water as input to their drainage scheme.

Stamford Park – Floodplain and wetland design for an industrial development adjoining a community park area for Knox Council.

The Strand Traralgon – Development of surface water models and WSUD design (wetlands) to provide treatment for a challenging site, constrained by existing drainage infrastructure and major easements.

Ocean View Lakes Entrance Stormwater Management Plan - Project director for development plan for a residential subdivision. Included design of wetland systems and retarding basin controls.

Cowes WEMP – Project Director in the development of a Water Efficiency Management plan for development in Cowes, use of probabilistic rainfall model PURRS.

Darebin Creek –1d Model (HEC-RAS) construction of waterway and analysis of bridge level assessment for Darebin Creek. Project Director.

Azola Waters, Pakenham – Functional design of Wetlands system for retirement village. Ongoing water quality assessment using various monitoring equipment. Project Manager/Director.

Cuttriss Street Flood investigation, Inverloch – Use of Mike Storm Pipe (Mouse) and two-dimensional (Mike21) linked model for urban storm water flooding. Project Director.

Brookfield Lakes, Bairnsdale, Stormwater Management Plan - Development plan for residential subdivision. Included design of wetland systems and retarding basin controls. Project Director.

Donga Road main drain catchments drainage study (City of Greater Geelong) - GIS analysis and hydraulic modelling of urban floodplain. Use of TUFLOW as predominate 2d/1d modelling package. Project Director.

STORMWATER PROJECTS (FLOODING, DRAINAGE AND WSUD) LAWSON AND TRELOAR

Sanctuary Lakes Water Quality – Management of a detailed water quality investigation including complex eutrophication modelling of the large lake system and analysis of the upstream wetlands

Sandhurst Estate – Management of hydrologic, hydraulic and water quality investigations for a large residential and golf course development in Melbourne's SE. This investigation included two-dimensional hydraulic analysis, a dynamic-pump system for lake top-up and eutrophication modelling in order to predict future water quality impacts.

Knox Golf Course – Development, calibration and application of a detailed MIKE 21 model of Monbulk Creek/Ferny Creek floodplain to assess flood impacts of a proposed golf course.

Oyster Cove Development, Coomera River QLD – Development of detailed MIKE 21 sub-models to calibrate roughness over residential developments.

Nerang River Floodplain – Major involvement in the development and application of a large, detailed 2-dimensional model of the Nerang River Floodplain. Analysis of impact of developments on flooding and investigation of mitigation options.

Heritage Golf and Country Club – Development of a MIKE 11 model to assess flood conditions in the Yarra River floodplain for design input.

Graceburn Creek, Healesville – development and application of a two-dimensional numerical model of a floodplain for risk assessment, regarding a proposed development. Believed to be the first application of two-dimensional hydraulic modelling on a floodplain in Victoria (1994).

FLOODPLAIN INVESTIGATIONS WATER TECHNOLOGY

Project Director for a hydraulic modelling study of the Pike River floodplain (SA MDB NRM Board). Development and calibration of a MIKE FLOOD model of the floodplain and use to inform the concept design of environmental regulators.

Project Director for a hydraulic modelling study of the South Australian Katfish Demonstration Reach (DEH). Development and calibration of a MIKE FLOOD model of the floodplain. This model was used to test a number of management scenarios.

Lyndhurst Drainage Strategy - Project Director of modelling waterway works for design of Retarding basins and wetlands for the Lyndhurst drainage scheme. Innovative use of linear waterways/wetlands for storage using two-dimensional hydraulic modelling.

Chowilla Floodplain Hydrodynamic Model – Supervision of the provision of detailed modelling services for this important floodplain system on the Murray River in South Australia, near the Victorian/NSW Border.

Port Fairy Flood Regional Study – A comprehensive review of flood risk to the township of Port Fairy and surrounding areas was undertaken. This included detailed hydrologic and hydraulic modelling, mapping and flood damages analysis. In addition, an extensive investigation of the potential impacts of climate change was undertaken.

Boggy Creek Wetland Review – Hydrologic and hydraulic review of translocated high-value wetland plots in Seaford adjacent to major road development. Working with ecologists to determine appropriate hydrologic regime.

Swan Hill Levee Audit – Investigation of the status of the existing town levee around Swan Hill through the use of a detailed two-dimensional hydraulic model. Assessment of levee system performance and recommendations for future flood mitigation works.

Beaufort Flood Study – Management of a comprehensive hydrologic and hydraulic study of the Beaufort township including investigation of 4 creeks that flow through the town. Resolution of complex design hydrology inputs to the township.

Dennington Flood Study – Detailed two-dimensional hydraulic model developed to describe inundation of the Merri River floodplain and provide planning information for future growth area near Warrnambool in south-west Victoria.

Applying Modelling Tools to Investigate Water Management in the Gunbower Forest – Project manager for the development of a detailed hydraulic model of Gunbower Forest. The model has been calibrated against a number of historic flood events and will be used to assess the effectiveness of a number of potential water management options. These options seek to improve the flooding regime of the forest through the use of environmental flow allocations. The required flooding is determined through a set of ecological objectives. Working closely with ecologists to determine hydrologic regime.

Hydraulic Modelling for Lindsay, Mulcra and Wallpolla Islands – This project involves the development of a linked one and two-dimensional model of these important floodplain and wetland environments that are included as one of the significant environmental assets or “icon sites” along the Murray River. This area has significant environmental values that suffer from reduced flooding due to river regulation. The hydraulic model will be used to test different management scenarios for floodplain improvement.

Murray River Regional Flood Study – Cobram to Tocumwal – Specialist modelling input is being provided for this project with an extensive one and two-dimensional model being developed including the Murray River channel and floodplain. The study area features many man-made controls such as levee banks and irrigation supply channels that dominate the topography. Once established the modelling will be used to develop flood management scenarios on a regional scale.

Investigations into Preferred Water Management Options in Gunbower Forest, 2D Modelling - Project management of the hydraulic modelling of the impact and effectiveness of proposed management options to improve watering of the wetlands and floodplain within Gunbower Forest.

Glenelg Hopkins CMA Rural Drainage Areas, Water Quality Impact Studies – Hydrologic and water quality analysis of four rural drainage areas specifically to examine the impacts of rural drainage on stream health of the main receiving waters.

Living Murray Hydraulic Investigation, Environmental flow for Barmah Millewa Wetland System – Project and technical management of this significant study within the Murray River system. The project involves the development and calibration of a detailed one and two-dimensional hydrodynamic model of the Barmah Millewa Forest for the purposes of determining the impact and effectiveness of various environmental flow management scenarios.

Lower Gawler Flood Mitigation Study – Detailed hydraulic modelling of the Lower Gawler River floodplain to investigate the effectiveness of various flood mitigation measures. A combined one and two-dimensional hydraulic model was employed.

Scoping Study for Best Management Options for Rural Drainage, Eumeralla and Nullawarre Drainage Areas – Major rural drainage study covering some 18,000 Hectares in south-west Victoria. Processing of ALS/Lidar survey data to assist in detailed hydrologic and hydraulic modelling. Investigation of water quality and environmental impacts of drainage practices and options for implementation of best management practices.

South Warrnambool Flood Study – Management of an urban hydraulic and flood mapping study of a major coastal township. Integration of a variety of survey data sources and a development of a two-dimensional hydrodynamic model.

Geelong Bypass Hydrology and Hydraulics – Management of the investigations of waterway requirements for this major freeway planning study. Numerous crossings analysed with a variety of techniques ranging from simple one-dimensional to fully two-dimensional models.

FLOODPLAIN INVESTIGATIONS LAWSON AND TRELOAR

Point Roadknight Drainage Investigation – Development of a detailed pipe and overland flow model for the assessment of flood extents and investigation of potential mitigation options.

Lake Burrumbeet and Burrumbeet Creek Floodplain Management Plan – Project and technical management of a comprehensive hydrologic and hydraulic modelling study. Assessment of economic, social and environmental impacts also determined.

Morambro Creek Surface Water Allocation – A rigorous hydrological approach was applied to a large catchment in south-east SA utilising a spatially distributed, GIS based hydrologic Model (SWAT). The results will be used in determining future allocation of water rights in the catchment.

Glass's Creek and Bell Street Flood Mitigation Studies – Detailed hydrology and hydraulic modelling has been undertaken in order to develop appropriate mitigation strategies for two densely developed urban areas in Melbourne. The two-dimensional overland flood models are coupled with detailed pipe network modelling to provide a robust and accurate analysis tool.

Princes Freeway (Pakenham Bypass), Cardinia Creek Crossing – Detailed hydrologic and hydraulic investigation of a proposed crossing of a particularly sensitive creek environment was undertaken. This involved fine-grid two-dimensional modelling.

Little Lang Lang River Waterway Mapping – A combined one and two-dimensional hydrodynamic model of this rural catchment was developed and results integrated into Melbourne Water's GIS system.

Albury-Wodonga Bypass Hydrology and Hydraulics – Development of a detailed two-dimensional hydraulic model for the assessment of alignment options. The development of detailed hydraulic performance criteria for alignment assessment was also undertaken.

City of Kingston, Flood Mitigation Assessment – Detailed flood modelling of various mitigation options. Utilising local catchment hydrologic and hydraulic models requiring detailed assessment at the block level combined with complex pump systems.

Breakwater Road Hydrology and Hydraulics – Review of hydrology and detailed hydraulic modelling of a proposed crossing of the Barwon River floodplain. An innovative hydraulic design was necessary in order to provide zero afflux within this sensitive floodplain area.

Shepparton Floodplain Management Investigation for Shepparton City Council – Project management of the hydraulic modelling aspects of the largest rural township flood study undertaken in Victoria.

Princes West Project - Detailed hydrologic and hydraulic assessment of the existing status of the Princes West freeway between Melbourne and Geelong via VicRoads. Crossing upgrades were designed for varying levels of immunity and various configurations.

Data Consistency Project Stages 7-10 – These projects involved detailed one and two-dimensional urban flood modelling of stormwater surcharges from the various main drain systems.

City of Kingston – Flood Mapping of various locations to supplement Melbourne Water Mapping. Development of local catchment hydrologic and hydraulic models requiring detailed assessment at the block level.

Data Consistency Project Stage 6 – This project involved detailed two-dimensional urban flood modelling of stormwater surcharges from the main drain system. This work formed a pilot study in which Melbourne Water were able to evaluate the benefits of applying two-dimensional modelling to urban areas.

Tambo River Geomorphic Investigation – The 1998 Tambo River event caused significant damage in the floodplain. Specialist two-dimensional hydraulic modelling was undertaken as part of an integrated study approach considering flooding, longer term geomorphological processes and potential waterway management options.

Tuppal and Bullatale Creek Flood Study – Development and calibration of an extensive model of the Tuppal/Bullatale Creek system as well as the Murray and Edward Rivers between Tocumwal and Deniliquin. This model was set-up for the subsequent analysis of floodplain management options through DLWC (NSW).

Strathmerton Route Investigation – Development and calibration of hydraulic models (ranging from steady state backwater to full two-dimensional unsteady models) for subsequent hydraulic design. Both Murray River and floodplain areas have been investigated.

Swan Hill Regional Flood Strategy – Extensive MIKE 11 modelling of Murray/Loddon River system upstream of Swan Hill to assess effects of proposed regional flood strategies.

Traralgon Floodplain Management Study for Shire of Traralgon – As for the Euroa Study, a comprehensive understanding of the flooding mechanisms is being gained through this state of the art fully two dimensional, dynamic flooding investigation.

Euroa Floodplain Management Study for Shire of Strathbogie – This Floodplain Management Study aimed initially at providing a comprehensive understanding of the damaging and complex flooding regime at Euroa, and subsequently at assessing potential flood protection measures (mitigation schemes, both structural and non-structural and flood warning systems). Full two-dimensional hydraulic modelling was undertaken.

Wangaratta Flood Study, Stage 2 – Application of MIKE 11 model to assess various flood mitigation measures.

Cairns Airport Drainage Study – Development and application of a detailed 2-dimensional model of the Cairns Airport and Lower Barron Delta in order to assess flood/cyclone hydrodynamic conditions at the Airport. Analysis of mitigation options.

Wangaratta Flood Study, Stage 1 – Development and calibration of a MIKE 11 model covering the extensive Ovens/King Rivers floodplain.

Yarra River, Melbourne – Development of a detailed MIKE 21 (two-dimensional) model of the Yarra River to investigate the hydraulic features of a small turning basin/wharf.

Gippsland Lakes System – One-dimensional model developed to analyse the potential impact of sea-level rise on lake levels.

Yarra River, Yarra Glen (VicRoads) – Set up and calibration of both one and two-dimensional models to investigate the impact of a proposed bridge replacement on flood levels.

Lower Loddon River Flood Study – development and calibration of MIKE 11 model covering an extensive floodplain network.

COASTAL/ESTUARINE INVESTIGATIONS WATER TECHNOLOGY

Gippsland Lakes Coastal Hazard Assessment – Project manager for a major hazard assessment project looking at impacts of sea level rise on coastal vulnerability throughout the Gippsland Lakes and Ninety Mile Beach.

Environmental Water Requirements of the Gippsland Lakes – Managed the input of scientific knowledge around hydrodynamics of the lakes and the freshwater/saltwater interface as well as the impacts of reduced freshwater inputs on these flow mechanisms.

Ecological Characterisation of the Gippsland Lakes – Provided hydrodynamic input to a broader characterisation project looking at the various habitats and bio-dependencies in the Gippsland Lakes.

Numerous Coastal Hazard Vulnerability Risk Assessments – assessing the change in risk to coastal inundation and stability due to sea level rise and the resulting change in coastal processes.

COASTAL/ESTUARINE INVESTIGATIONS LAWSON AND TRELOAR

Bass Strait – Three-dimensional model (Delft3D) development and calibration for pipeline design currents prediction.

Tropical Cyclone Thelma, Three-dimensional Current Model – This project involved the set-up and calibration of a three-dimensional hydrodynamic model of the Timor Sea and extraction of currents data.

Mooney Ponds Creek three-dimensional Water Quality Modelling – This project involved modelling of the detailed hydrodynamics of the fresh/salt-water interface in the Yarra River and how this effected the movement of pollutants from storm-water inflows.

Port Catherine Development, W.A. – Detailed three-dimensional hydrodynamic and water quality modelling of a proposed harbour development south of Perth.

Palm Springs Marina, Malaysia – Development of a two-dimensional model to assess effects of marina on local hydraulics.

Corio Bay Sediment Model Verification – Comparison of model predicted and recorded sediment plumes in Corio Bay during channel dredging.

Lake Illawarra/Botany Bay – Application of a two-dimensional water quality model to two large waterways. Long term water quality simulations performed and analysed for risk assessment.

South China Sea – Two and three-dimensional modelling to determine design currents for oil/gas pipelines.

Manila Bay – Analysis of flood behaviour, dredged sediment impacts and flushing characteristics of a proposed area of reclamation in Manila Bay, using one and two-dimensional models.

West Point Wilson hazardous chemicals storage facility – Environmental Effects Statement. Investigation of proposed facilities effect on nearby coastal processes.

East Coast Armaments Complex – Set up of two-dimensional current and wave models to investigate the impacts of proposed port facility.

Port Hedland – Set up and operation of numerical model to investigate Cyclone driven winds and wave set up.

Western Port – Two-dimensional model investigations of the dispersion of pollutants and the flushing characteristics of Western Port under tidal and wind driven currents.

Oil Spill Modelling/Response – Development of oil spill response procedures to perform real-time modelling of oil slick movements in Bass Strait and Western Port.

Western Port – Set up and calibration of a numerical model for the development of tidal and wind driven current fields as input to oil spill modelling.

Port of Geelong – Application of a two-dimensional numerical model to assess impact of a proposed dredging program on suspended sediment loads in Corio Bay.

Bass Strait – Numerical modelling of the flushing characteristics of Bass Strait over a typical year.

EXPERT WITNESS REPORTS

Adams Creek, Lang Lang – Expert evidence related to rural flooding and drainage issues

Donald, NW Victoria – Expert evidence and analysis of flooding issues related to channel networks on farmland in the Wimmera area

St Georges Road Northcote - Expert advice and modelling of an apartment development within SBO

Duncans Road South Werribee – Review of hydraulic conditions, flooding and drainage for a horticulture area. Provision of expert evidence report.

Nunawading – Expert evidence on flooding issues including modelling, for a multi-storey apartment building in a floodway zone

Hagen Park Bangholme – Expert advice and modelling of drainage issues in SE Melbourne

Noonan Grove Woodend - Expert advice and report on surface water management for a residential subdivision

Industrial Subdivision Shepparton/Mooroopna – Expert advice on drainage and flooding issues for land valuation purposes

Dandenong Valley, Scoresby – Expert modelling and report on flooding issues and development capability for land valuation

Coastal Development Paynesville – Expert report and evidence at VCAT on coastal hazard vulnerability for a residential subdivision

School Site Monbulk – Expert report on drainage issues in the Dandenong Ranges

Broken River, Stewarton – Expert modelling/report and evident at VCAT for a rural flooding issue

Toorak Road South Yarra – VCAT report and evidence in relation to redevelopment of a site within an urban area subject to flooding

Hopkins River Warrnambool – Flooding and coastal hazard vulnerability expert report and VCAT evidence

Apartment Development Port Fairy – Expert report on flooding issues associated with a proposed apartment complex

Port Fairy (2014) – Expert evidence to VCAT on coastal hazard and flooding for a proposed sub-division in Port Fairy.

Kerang East (2014) – Expert evidence to VCAT on flooding issues along Pyramid Creek arising from 2011 floods.

Woodend (2014) – Expert evidence to VCAT regarding flooding from Five Mile Creek and local stormwater impacts at a development site within Woodend.

Port Fairy Planning Scheme Amendment (2014) – Provided Expert Evidence on flooding to Planning Panels Victoria for Moyne Shire.

Victoria Street Richmond (2016) – Expert Evidence to VCAT on flooding issues related to a multi-storey apartment development next to the Yarra River.

Donnybrook/Woodstock PSP (2016) – Expert evidence to panel hearing in relation to drainage issues for a large greenfield development area.

Manningham (2016) – Provision of peer review of modelling and expert advice to City of Manningham regarding a planning scheme amendment to implement SBO layers into their planning scheme.

Amendment C121 Planning Panel - Leneva Baranduda Precinct – expert advice to the City of Wodonga

PUBLICATIONS

CONFERENCE PRESENTATIONS

BISHOP, W.A., McCOWAN, A. D., SUTHERLAND, R. J., WATKINSON, R. J. - “Application of Two-Dimensional Numerical Models to Urban Flood Studies”, 2nd International Symposium on Urban Stormwater Management, Melbourne 1995.

SOMES, N.L.G., BISHOP, W.A., WONG, T.H.F. - “Numerical Simulation of Wetland Hydrodynamics”, MODSIM 97 International Congress on Modelling and Simulation, Hobart.

BISHOP, W.A., COLLINS, N. I., CALLAGHAN, D. P., and CLARK, S. Q. - “Detailed Two-Dimensional Flood Modelling of Urban Developments”, 8th International Conference on Urban Storm Drainage, Sydney 1999.

SOMES, N.L.G., BISHOP, W.A., WONG, T.H.F. - “Numerical Simulation of Wetland Hydrodynamics”, Environment International, Vol. 25, No. 6/7 pp. 773-779, 1999.

BISHOP, W.A. – “Two-dimensional Modelling for Urban Flood Mapping and Drainage Analysis”, Proceedings, Victorian Flood Management Conference, 2001.

BISHOP, W.A. and CATALANO, C.L., “Benefits of Two-dimensional Modelling for Urban Flood Projects”, 6th Conference on Hydraulics in Civil Engineering, Hobart 2001.

McCOWAN, A.D., BERTON, F.M. and BISHOP, W.A. – “The Application of a Three-dimensional Variable Density Model to Assess Water Quality in an Urban Waterway”, 6th Conference on Hydraulics in Civil Engineering, Hobart 2001.

REHMAN, H.U., ZHANG, S.Y., BISHOP, W.A., BERKFELD, J., “Water Resources Assessment using Soil Water Assessment Tool - A Case Study”, in Proceedings of ICam Catchment Management Conference, University of Western Sydney, Australian Water Association, Sydney, 26-28 November 2003.

McMASTER, M.J., PROVIS, D.G., GRAYSON, R.B. & BISHOP, W.A., “Calibration and testing of a hydrodynamic model of the Gippsland Lakes” in Proceedings of MODSIM 2003, Townsville, Australia 14-17 July 2003.

BISHOP, W.A., WOMERSLEY, T.J. & TIERNEY, G, “Flooding Forests - the Hydraulics of Environmental Flows”, Proceedings, 4th Victorian Flood Management Conference, Shepparton 2005.

MUNCASTER, S.H., BISHOP, W.A. and MCCOWAN, A.D., “Design flood estimation in small catchments using two-dimensional hydraulic modelling –A case study”, 30th Hydrology and Water Resources Symposium, Launceston, TAS, December 2006.

BISHOP, W.A. and WOMERSLEY, T.J., “The use of hydraulic models to inform the management of flood dependent ecosystems on the River Murray, South-Eastern Australia”, 6th International Symposium on Ecohydraulics, Christchurch, February 2007.

MUNCASTER, S. H., BISHOP, W. A. and DUGGAN, S.J., “Making the best with what you have - Design flood estimation with and without observed data”, 5th Victorian Flood Management Conference, Warrnambool, October 2007

BISHOP, W.A., CHARTERIS, A.B., MUNCASTER, S.H., WOMERSLEY, T.J., “Impacts of Climate Change on Floodplain Management in Coastal Communities”, 5th Victorian Flood Management Conference, Warrnambool, October 2007.

BISHOP, W.A. and TATE, B. “The Use of Eco-Hydraulics in Managing the River Murray”, 17th QLD Water Symposium, Griffith University, November 2008.

BISHOP, W.A. and WOMERSLEY, T.J., “Port Fairy Regional Flood Study - Dealing with Risk in a Coastal Floodplain”, Joint 49th Annual Floodplain Management Authorities Conference (NSW) & 6th Biennial Victorian Flood Conference, Albury, February 2009.

BISHOP, W.A., RUSSELL, K.L. and LITTLE, M.J., “Impacts of Sea Level Rise on Flooding in an Estuarine Environment”, Climate Change 2010: Practical Responses to Climate Change Conference, Melbourne, 2010.

MARTIN, J.C., ARROWSMITH, C.L., and BISHOP, W.A., Hydraulic Implications associated with the Placement of Timber Snags in a Developing Anabranch. Proceedings of the Sixth Australian Stream Management Conference, Canberra, Australian Capital Territory, 2011.

BISHOP, W.A., LAW, S.E., NEWTON, J.L., GODFREY, M., “Integrated Water Management Opportunities for Inner Suburban Areas”, WSUD 2013, 8th International Water Sensitive Urban Design Conference, Gold Coast, November 2013.

WOMERSLEY, T.J., LEAHY, C., HUDSON, K., ANDERSON, B., KAZAZIC, E., BISHOP, W.A., & MAWER, J., “Proof of concept hydrodynamic model and marine and atmospheric forecast data integration for flood forecasting in the Gippsland Lakes”, 54th Floodplain Management Association Conference, 20-23 May 2014, Deniliquin RSL Club, Deniliquin, NSW

MCCOWAN, A.D., LAUHLAN-ARROWSMITH, C., BISHOP, W.A., “Estimating Future Coastal Inundation and Erosion Hazards”, Australian Coastal Councils Conference, March 2015

COUSLAND, T.J., and BISHOP, W.A., “Transport modelling to verify constructed wetland residence times”, Stormwater 16 – National Stormwater Association Conference, Gold Coast, QLD, September 2016.

CLARK, S., BISHOP, W., CUNNINGHAM, L., TATE, B., DALY, A., “Utilising Hydraulic Grade Line rather than water surface levels for Flood Planning Levels”, 13th Conference on Hydraulics in Water Engineering, Sydney, Nov 2017.

CLARK, S., CUNNINGHAM, L., TATE, B., DALY, A., BISHOP, W., “Flood Planning Levels: Incorporating residual risk considerations”, 13th Conference on Hydraulics in Water Engineering, Sydney, Nov 2017.



APPENDIX B

NCCMA LETTER OF ADVICE

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NCCMA Ref: NCCMA-F-2018-01113
Date: 18 June 2019

Jon Eagle
PO Box 2050,
BENDIGO VIC 3550

Dear Jon,

Floodplain Management Advice

Development Description: Church and car park
Street Address: 83 Blakeley Road Castlemaine Vic 3450
Cadastral Location: Lot 2, Plan PS804722
Applicant: Jon Eagle

Thank you for your enquiry of 14 June 2019 seeking flood advice for the above property.

Flood Information

Flood levels for the 1% AEP probability (100 year ARI) have not been determined for this area under the *Water Act 1989*. However, information available at North Central CMA indicates that in the event of a 1% AEP flood event it is possible that the property may be subject to inundation from a tributary of Barkers Creek.

Development Advice

North Central CMA does not object in principle to the construction of **Church** and is likely to require the following minimum conditions as part of the future planning permit application:

1. All buildings and works (including the carpark) must be setback a minimum of 20 metres from the top of bank of the dam and waterway that traverses the site.

North Central CMA advises that it would likely also require the following conditions if it were referred a planning permit application from the local Council:

2. The finished floor level of the church must be constructed a minimum of 450 mm above the highest existing natural surface level beneath the church.

Please note, this document does not constitute approval or otherwise of any development at this location.

Should you have any queries, please do not hesitate to contact me on **(03) 5440 1896**. To assist the CMA in handling any enquiries please quote **NCCMA-F-2018-01113** in your correspondence.

Yours sincerely,



Peter O'Toole

Waterways and Floodplain Officer

Information contained in this correspondence is subject to the definitions and disclaimers below.

Attached: Definitions and Disclaimers

Definitions and Disclaimers

1. The area referred to in this letter as the 'proposed development location' is the land parcel(s) that, according to the Authority's assessment, represent(s) the location identified by the applicant. The identification of the 'proposed development location' on the Authority's GIS has been done in good faith and in accordance with the information given to the Authority by the applicant(s) and/or local government authority.
2. While every endeavour has been made by the Authority to identify the proposed development location on its GIS using VicMap Parcel and Address data, the Authority accepts no responsibility for or makes no warranty with regard to the accuracy or naming of this proposed development location according to its official land title description.
3. **AEP** as Annual Exceedance Probability – is the likelihood of occurrence of a flood of given size or larger occurring in any one year. AEP is expressed as a percentage (%) risk and may be expressed as the reciprocal of ARI (Average Recurrence Interval).

Please note that the 1% probability flood is not the probable maximum flood (PMF). There is always a possibility that a flood larger in height and extent than the 1% probability flood may occur in the future.

4. **ARI** as Average Recurrence Interval - is the likelihood of occurrence, expressed in terms of the long-term average number of years, between flood events as large as or larger than the design flood event. For example, floods with a discharge as large as or larger than the 100-year ARI flood will occur on average once every 100 years.
5. **AHD** as Australian Height Datum - is the adopted national height datum that generally relates to height above mean sea level. Elevation is in metres.
6. No warranty is made as to the accuracy or liability of any studies, estimates, calculations, opinions, conclusions, recommendations (which may change without notice) or other information contained in this letter and, to the maximum extent permitted by law, the Authority disclaims all liability and responsibility for any direct or indirect loss or damage which may be suffered by any recipient or other person through relying on anything contained in or omitted from this letter.
7. This letter has been prepared for the sole use by the party to whom it is addressed and no responsibility is accepted by the Authority with regard to any third party use for the whole or any part of its contents. Neither the whole nor any part of this letter or any reference thereto may be included in any document, circular or statement without the Authority's written approval of the form and context in which it will appear.
8. The flood information provided represents the best estimates based on currently available information. This information is subject to change as new information becomes available and as further studies are carried out.



Stormwater Management Strategy Report

83-85 Blakeley Road, Castlemaine

The Trustee for Castlemaine Gospel Trust

March 2022





Document Status

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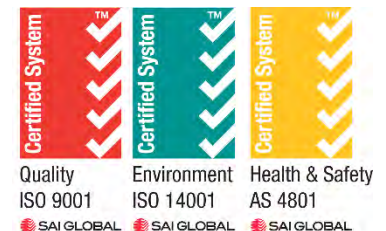
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Water Technology Project Manager	Bertrand Salmi
Water Technology Project Director	Warwick Bishop
Authors	Bertrand Salmi & Johanna Slijkerman
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15 Business Park Drive
Notting Hill VIC 3168
Telephone (03) 8526 0800
Fax (03) 9558 9365
ACN 093 377 283
ABN 60 093 377 283



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1 INTRODUCTION

This report sets out a recommended Stormwater Management Strategy (SWMS) for the proposed development and use of the land for a place of worship (meeting hall) including car parking, and a two-lot subdivision at 83 Blakeley Road at the northern end of the Castlemaine township. The SWMS presents a concept design to manage stormwater runoff from the proposed development, with consideration of existing constraints.

The report also details the Waterway Management Plan (WMP) prepared for the site. This Waterway Management Plan outlines restoration actions for the existing waterway and dam including the proposed revegetation and removal of noxious weeds.

We understand that this SWMS has been prepared to support a planning application to the Mount Alexander Shire Council.

1.1 Objectives

The objectives of the SWMP are to prepare a conceptual stormwater design for the site, that identifies:

- On-site detention requirements, with preliminary sizing of an underground tank.
- Water quality assets, to meet Best Practice objectives.

The objective of the WMP is to:

- Document proposed revegetation for the dam and instream areas.



2 BACKGROUND

The subject site is located at 83 Blakeley Road, at the northern end of the Castlemaine township, about 100 kilometres northwest of Melbourne CBD as shown in Figure 2-1. The site is bounded by Blakeley Road to the east, the Bendigo - Castlemaine Train line corridor to the west and rural residential land to the north and conventional residential to the south. The Midland Highway is approximately 85 metres from its western boundary, immediately west of the rail corridor. The nearest main waterway is Barkers Creek, located to the west of the Midland Highway.

The site has an area of approximately 2.57 ha, is zoned Low Density Residential, and is partly affected by a Bushfire Management Overlay (BMO). It is also identified as a Designated Bushfire Prone Area and an area of Aboriginal Cultural Heritage Sensitivity.

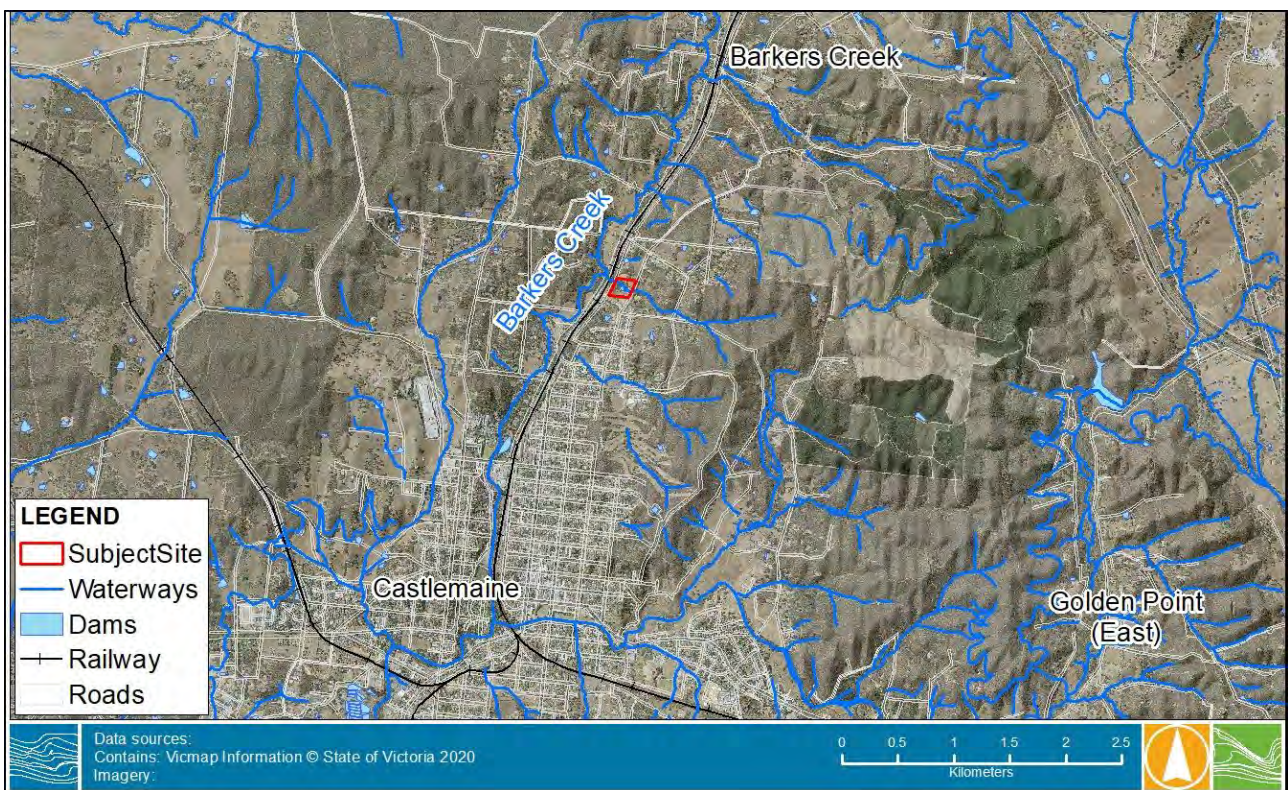


Figure 2-1 Subject Site

2.1 Site Constraints

The site and surrounding topography are shown in Figure 2-2. This highlights that the site generally slopes from east to west and south to north. The north-east part of the site has lower slope, whilst the south-west corner is steeper. Elevations across the site vary from a low of approximately 294 m AHD at the north-west boundary at the Barkers Creek Tributary to a high of approximately 304 m in the south-west corner.

The site is situated in a region of historical mining activity. It is evident from the surface contours and site observations that some historic changes to natural surface levels have occurred over time. This has likely involved some cut and fill and importation of material over parts of the site.

There are currently no buildings or structures on the site. The key drainage features of the site are shown in Figure 2-2 and Figure 2-3, and listed as follows:

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- A designated, unnamed waterway runs east to west approximately through the centre of the site, which is referred to in this report as Barkers Creek Tributary; and
- A farm dam approximately in the centre of the site with a spillway at the south-west corner.

The Barkers Creek Tributary catchment is approximately 90 Hectares in area and extends to the east of the subject site for around 1.5 km, past some rural residential properties and into state forest (Figure 2-4). Approximately half the catchment is within a rural residential area with the other half being predominantly covered by native box forest.

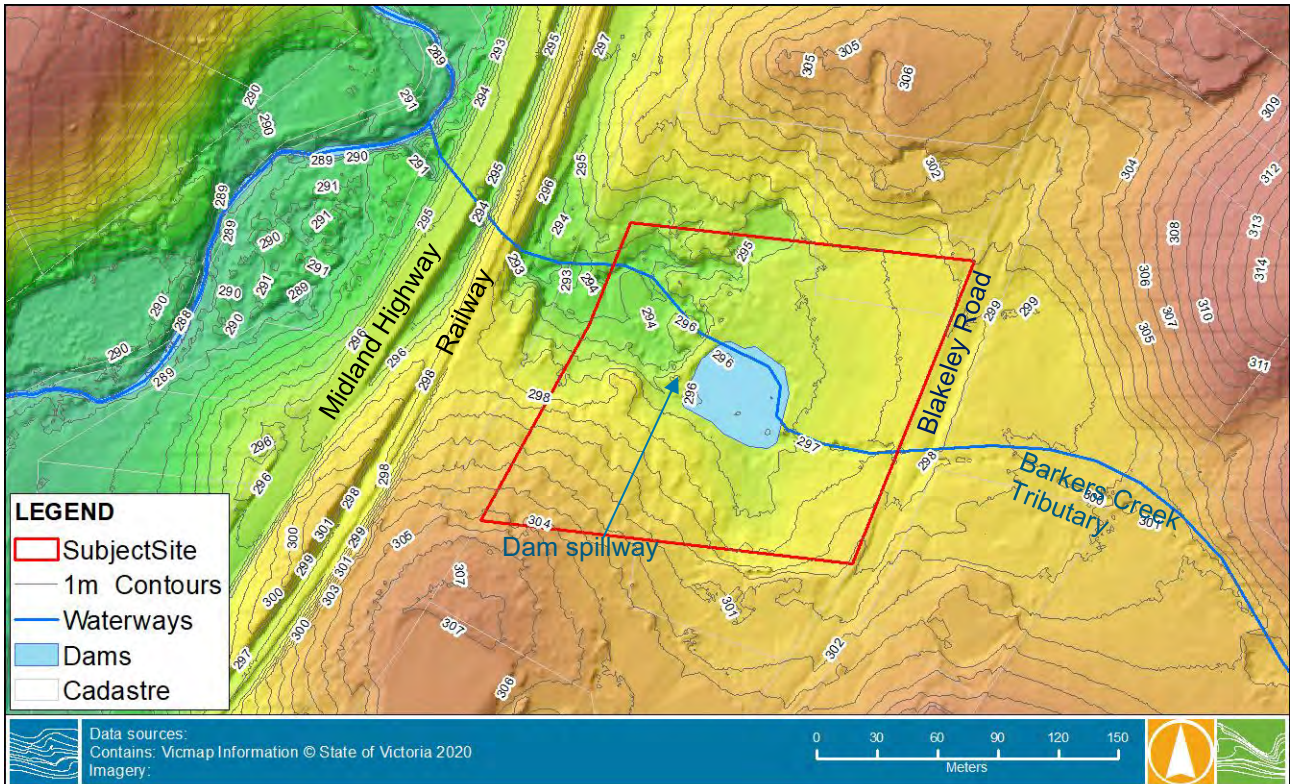


Figure 2-2 Local Topography & Key Drainage Features



Figure 2-3 Drainage Flow Paths (indicated by arrows)

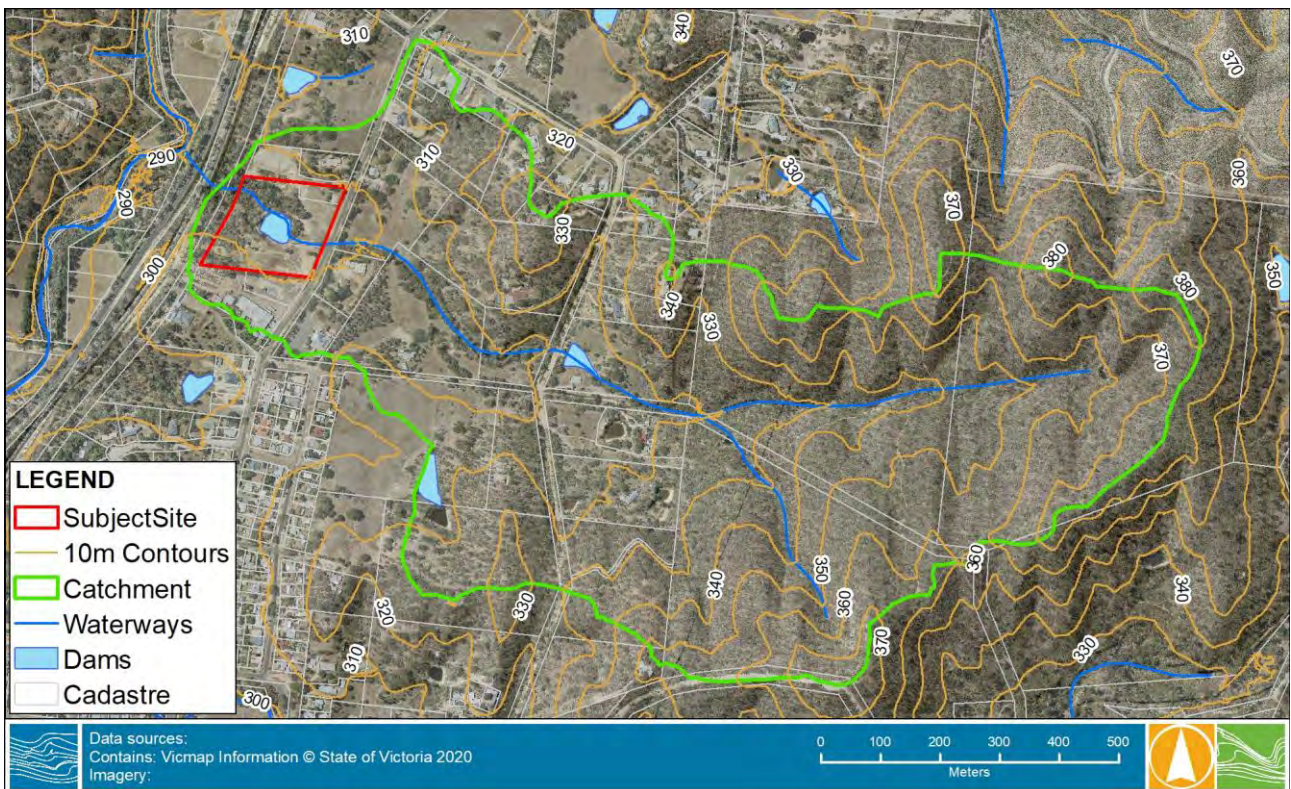


Figure 2-4 Barkers Creek Tributary Catchment

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3 STORMWATER MANAGEMENT

On-site stormwater detention and bio-filtration will be implemented to manage stormwater from the site. This section of the SWMP details internal drainage infrastructure required to meet water quantity and quality objectives.

3.1 Water Quality Management

The increase of impervious area due to the construction of the new building, driveway and car parking areas will increase stormwater runoff frequency and pollution entering the designated waterway located within the site. Water Sensitive Urban Design (WSUD) measures can be used to treat urban stormwater runoff to meet best practice performance objectives and the Victorian EPA General Environmental Duty:

- 80% retention of the typical urban annual load for Total Suspended Sediments (TSS);
- 45% retention of the typical urban annual load for Total Nitrogen (TN);
- 45% retention of the typical urban annual load for Total Phosphorous (TP); and,
- 70% retention of the typical urban annual load for gross pollutants.

This section quantifies the area of treatment required to treat the hard stand areas of the proposed development. In order to allow some flexibility in the design, treatment areas were assessed pro-rata to hard stand areas. As such, it provides an indication of WSUD sizes, which can be finalised during the detailed design process.

Biofiltration/Raingardens are proposed for stormwater treatment because:

- They are flexible in design and can be easily integrated into the landscape
- They provide relatively high stormwater treatment within a smaller footprint than wetlands
- There is already a significant online dam on the site and limited opportunity to site a wetland with the contours of the land.

Biofilters treat stormwater through vegetation and soil filtration media (Figure 3-1 and Figure 3-2). Stormwater is first temporarily ponded on the biofiltration surface (extended detention storage) before percolating through a (typically) sand-based filter media, where dissolved pollutants are removed through bio-physio-chemical processes in the filter media and directly by plant roots. Treated stormwater can be either collected through perforated underdrains or exfiltrates to the surrounding soil.

A standard biofiltration configuration consists of a loamy sand filter media and underdrain to collect stormwater. The asset is fully lined, and hence no exfiltration is allowed. Conveyance to these end-of-line assets will be via pipes and/or swales in the carpark, noting that swales would provide additional water quality improvement.

Alternatively, a bio-infiltration system can consist of the same filter media configuration (loamy sand, 300/500 mm depths) without a collection pipe or liner. As a result, the bio-infiltration system allows exfiltration of treated stormwater into the surrounding soils and unconfined groundwater table. The final WSUD design should investigate the benefits of exfiltration to surrounding soils rather than linings and slotted pipes. This can reduce maintenance and clogging of underground drains, but also provide benefits to recharge of local groundwater and minimise outflows to the waterway. This would be dependent on soil characteristics, with sand and sandy loam soils ideal for infiltration systems.

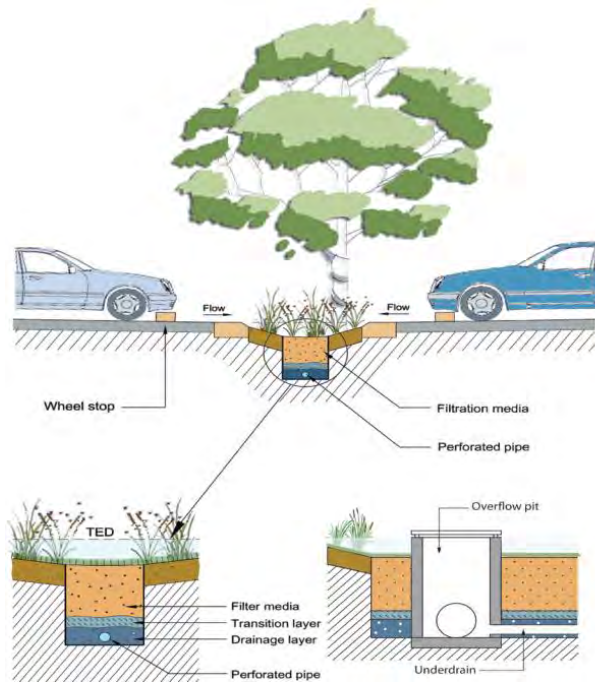


Figure 3-1 Vegetated Bioretention Carpark Design³

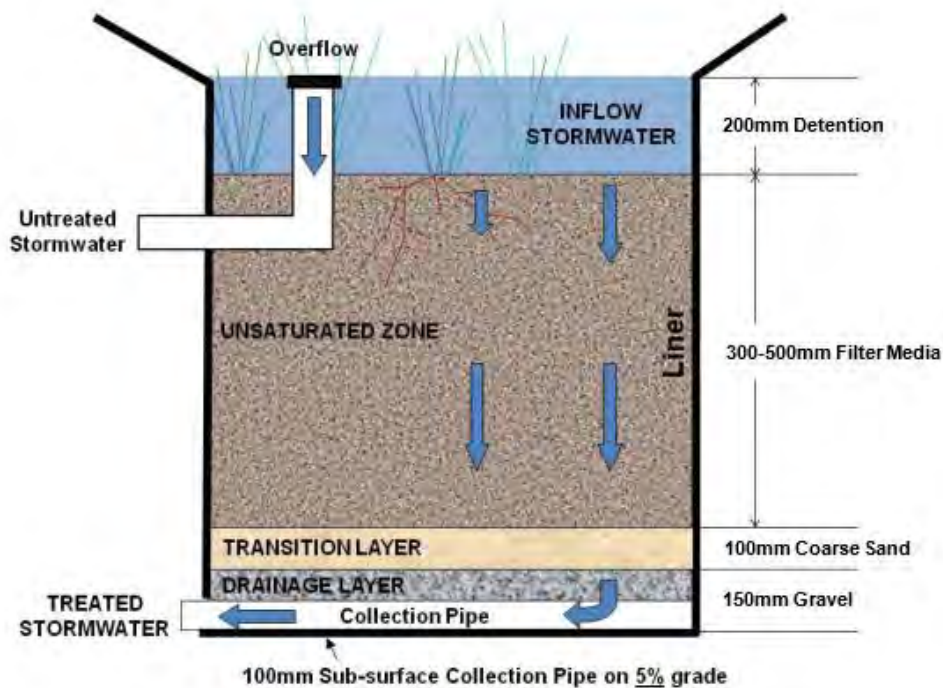


Figure 3-2 Standard lined biofiltration with an underdrain (adopted from FAWB Guidelines⁴)

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³ https://www.townsville.qld.gov.au/data/assets/pdf_file/0008/12212/WSUD-in-Car-Parks-V3.pdf [last accessed 23/04/2021]

⁴ FAWB (2009). Adoption Guidelines for Stormwater Biofiltration Systems, Facility for Advancing Water Biofiltration, Monash University, June 2009.



A treatment surface area estimate for the proposed bioretention system is shown in Figure 3-3, with results showing that a lined biofilter would need to be sized to approximately 0.5% of the impervious catchment area to meet Best Practice objectives. Based on the proposed building footprint and car park areas, a total of approximately 30 m² of biofiltration area will be required. This can be distributed across the two car parking areas (i.e., main and overflow car parks) and adjacent landscape areas.

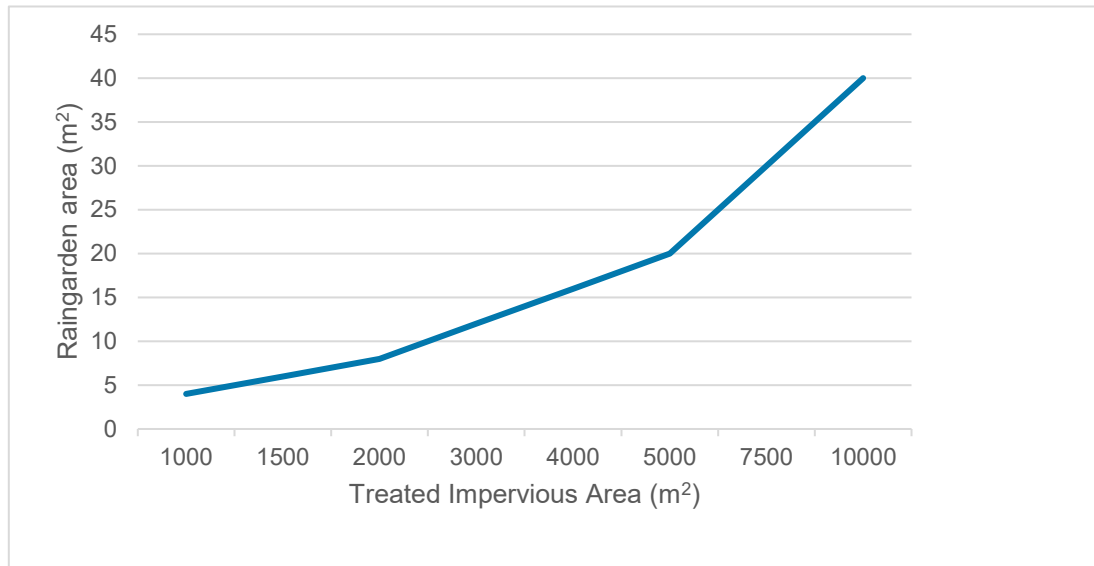


Figure 3-3 Pro-rata Bioretention Surface Area to meet Best Practice

Additional measures, such as rainwater tanks to capture and re-use roof water, could also be included into the design. This would have the benefit of potable water substitution for appropriate uses such as toilet flushing and irrigation.

There is sufficient area within the subject site to provide confidence that a suitable water quality design can be achieved to meet best practice. Potential locations for placing proposed raingardens are shown in Figure 3-4.



A Boyd’s method calculation was adopted to estimate OSD to retard flows from the development to pre-development levels. The Infrastructure Design Manual (IDM) considered that this methodology is appropriate for developments up to ~5ha in area, with certain adjustments.

The nominal permissible site discharge (PSD) was calculated using a pre-development fraction imperviousness of 43%, for the worship building and its car parking areas (see section 2.2).

Utilising the rational method, a PSD of 0.17 m³/s was estimated for the 1 % AEP critical duration event (9 min). In accordance with the IDM, the nominal PSD was reduced by 25%⁵ to 0.13 m³/s for the OSD calculation, assuming a storage tank with straight sides.

The maximum flood storage requirements - to retard to pre-development 1% AEP level - were estimated to be approximately 135 m³, as shown in Table 3-1. It is anticipated that OSD will be provided as underground storage, located in the proposed car parking areas. A 15 m long x 15 m wide x 1 m deep tank (allowing for 70% porosity) would be sufficient to meet OSD requirements.

Table 3-1 Storage Requirements for 1% AEP critical flows (Boyd’s calculation)

Storm Duration (min)	Rainfall Intensity 1% AEP (mm/hr)	Peak Inflow I _p (l/s)	Peak outflow Q _p (l/s)	Inflow Volume V _{dev} (m ³)	Storage Volume S _{max} (m ³)
1	313.0	0.70	0.12	42	35
2	265.0	0.60	0.12	72	57
3	238.0	0.54	0.12	96	74
4	218.0	0.49	0.12	118	88
5	202.0	0.45	0.12	136	99
6	188.0	0.42	0.12	152	107
7	177.0	0.40	0.12	167	115
8	167.0	0.38	0.12	180	121
9	158.0	0.36	0.12	192	125
10	151.0	0.34	0.12	204	129
15	122.0	0.27	0.12	247	135
20	104.0	0.23	0.12	281	131
25	90.9	0.20	0.12	307	120
30	81.1	0.18	0.12	329	104
45	62.1	0.14	0.12	377	40

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⁵ as storage would be provided in tanks whose plan shapes are constant with increasing depth, namely Rainwater Tanks (RWTs) and underground storage.



3.4 Flood Management

As per North Central Catchment Management Authority requirements, the finished floor level of the main building must be constructed a minimum of 450 mm above the highest existing natural surface level beneath the building.



4 WATERWAY DESIGN

This section outlines the concept design for the ~60 m long constructed waterway section through the site, between Blakeley Road and the existing dam. The design for this reach of the waterway has been undertaken generally in line with Melbourne Water's *Constructed Waterway Design Manual* (2019)⁶ and the North Central Catchment Management Authority (NCCMA) requirements.

4.1 Waterway Corridor

This waterway reach has been designed as a compound waterway (i.e., a low flow channel within a high flow channel), generally following the alignment of the existing waterway. Melbourne Water's *Waterway Corridors guidelines* (Melbourne Water 2013)⁷ provides guidance on the corridor widths for constructed waterways, which are based on the 1% AEP hydraulic width.

Figure 4-1 shows the typical cross section of a compound waterway system. Batter slopes along the low flow channel (LFC) should be no steeper than 1 in 3. The LFC will meander through the corridor. Batter slopes along the high flow channel (HFC) area and the edges of the reserve vary depending on the section of the waterway but should be around 1 in 8 and no steeper than 1 in 6, in accordance with the *Infrastructure Design Manual*. In areas where it is not feasible to achieve the recommended batter slopes, it is feasible to restrict access by providing dense vegetation and/or utilise retaining/gabion walls.

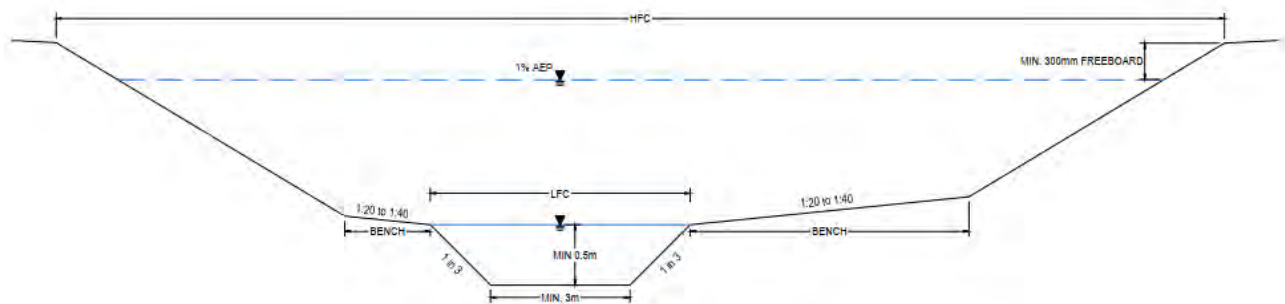


Figure 4-1 Typical Compound Waterway Cross-section (Melbourne Water's [Standard Drawings](#))

The existing longitudinal slope across the site is about 2% (1 in 50). It is proposed to use pool-riffle and pool-run sequences to:

- Have a flatter slope across the majority of the reach, bar steeper rock chute/riffle arrangements:
 - Design grades should be within the acceptable 'stable' range, being flatter than 1 in 200;
- Create a range of habitat along the reach:
 - The waterway will be planted with instream and riparian vegetation.
- Manage steeper sections of the reach via rock chutes and graded rocks.

The proposed pool-riffle and pool-run sequences comprise of large pools connected by riffle sections, as per the longitudinal section shown in Figure 4-2. The length of the waterway is approximately 60 m and the assumed longitudinal slope (for conveyance calculations) was assumed to be about 1 in 200, i.e., within the

⁶ Melbourne Water, 2019, *Constructed Waterway Design Manual*

⁷ Melbourne Water, 2013, *Waterway Corridors: guidelines for greenfield development areas within the Port Phillip and Westernport region*



acceptable 'stable' range. Rock chutes are likely to be required for sections with longitudinal grades steeper than 1 in 200.

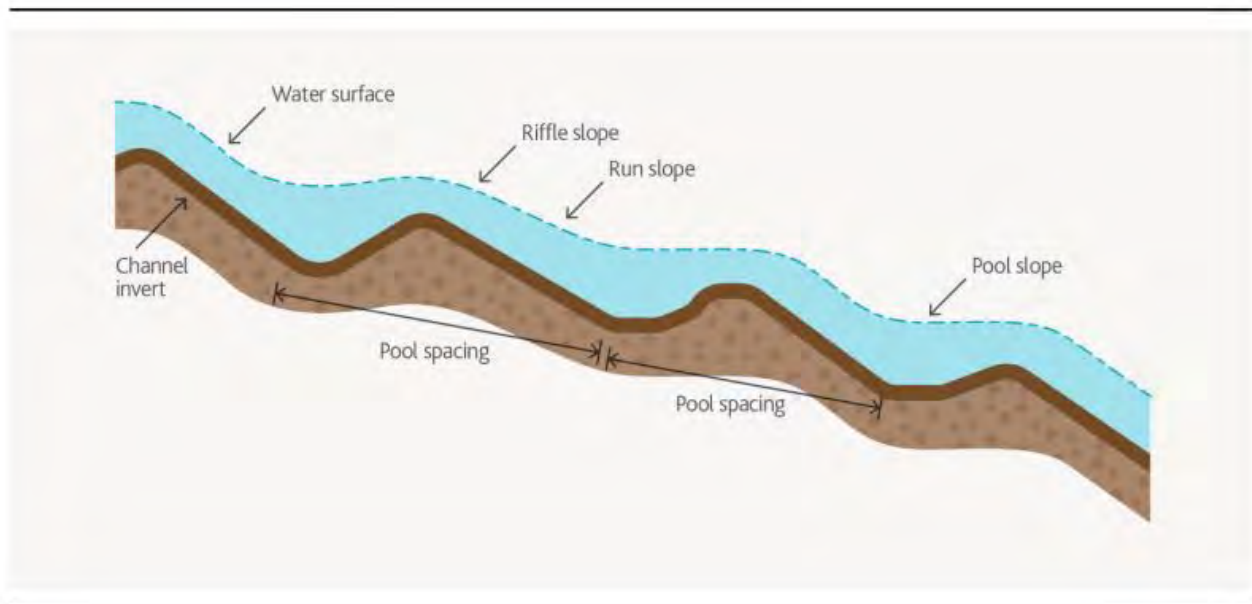


Figure 4-2 Typical Riffle-Pool Sequence (Melbourne Water's Constructed Waterway Design Manual, 2019)

The waterway corridor widths in this concept design exceed the sliding scale minimum waterway corridor requirements outlined in Melbourne Water's *Waterway Corridors guidelines* (2013) and is sufficient to meet the reserves batter slope requirements:

- The 1% peak flow for the site is about 3.9 m³/s, based on an 87 ha catchment (10% fraction imperviousness) and the Rational Method;
 - This would result in a hydraulic width of about 20 m (based on a 1 in 200 slope) as shown in and Appendix A;
- 40 m wide (minimum) waterway corridor would be required, which aligns with NCCMA minimum setback requirement:
 - The overall waterway corridor (40 m) provides ample width to ensure 300 mm freeboard.

4.2 Flow Capacity and Velocity Analysis

The hydraulic width along the waterway was determined through PC-convey analysis of representative waterway cross-sections at the upstream and downstream ends:

- The High Flow Channel with an ~18 m width would be sufficient to convey the 1% AEP peak flow of 4 m³/s, as shown in Figure 4-3:
 - The overall waterway corridor (40 m) provides ample width to ensure 300 mm freeboard.
- The Low Flow Channel, with a minimum width of 3 m, would have ample capacity to convey the 1 year-estimated flow of 0.7 m³/s.

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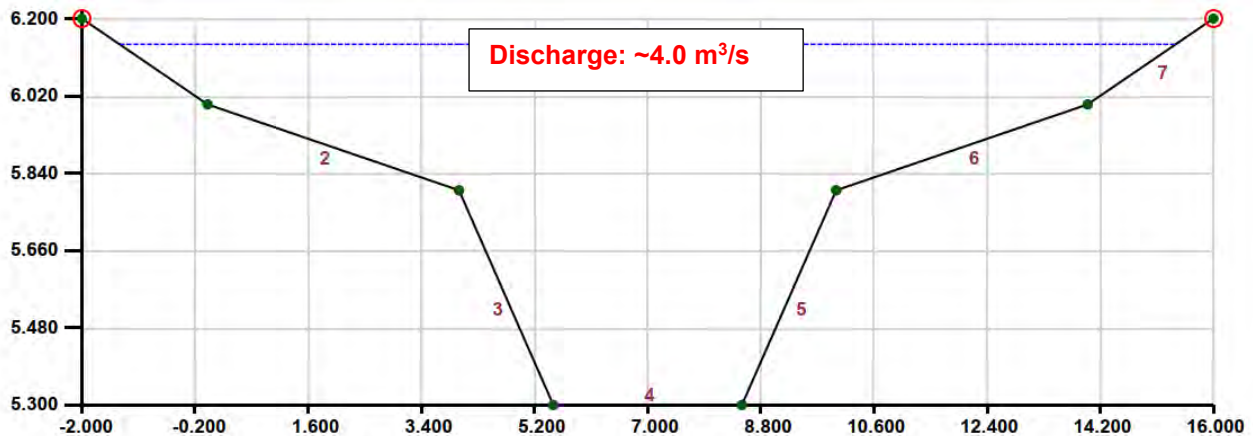


Figure 4-3 HFC PC Convey Analysis

PC-Convey analysis shows that the 1% AEP velocities are less than 1.0 m/s in the waterway (excluding riffle sections) and the 1-year equivalent velocities of about 0.5 m/s in the Low Flow Channel. PC-convey analysis results are summarised in Appendix A. Velocities will be higher along rock chutes however, shear stresses and further detailed analysis across the waterway and these sections will be checked during the functional design stage.

4.3 Deemed to Comply

This concept design responds to Melbourne Water's Deemed to Comply criteria, as follows:

- The waterway corridor alignment incorporates the existing low point at the upstream and downstream property boundary extents **[GN7]**:
 - Blakeley Road defines the upstream connecting point (i.e., its culvert);
 - Waterway will discharge into the existing dam (i.e., downstream boundary);
- A compound waterway (i.e., a low flow channel within a high flow channel) is proposed with a longitudinal grade no steeper than 1 in 200 **[WT3]**;
- Waterway alignment mostly follows existing waterway alignment **[P1]** and consider upstream and downstream constraints **[P2]**;
- LFC will allow for sinuosity, noting that it is appropriate to confirm this during functional design stage **[P4 to P9]**;
- Overall longitudinal grade will be no steeper than 1 in 200 **[LG1]** noting that:
 - Steeper sections will be required in place, to tie-in with upstream and downstream levels;
 - Rock chutes are likely to be required for sections with longitudinal grades steeper than 1 in 200:
 - Details of these chutes, including height, can be confirmed at the functional design stage;
 - Maximum rock chute coverage should be less than 25% of the waterway **[LG3]**;
- Peak design flows were estimated in accordance with methods in Australian Rainfall and Runoff 2019, using RORB **[MD1]**:
 - Based on a Rational Method, providing some conservatism;

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- PC Convey analysis demonstrated that the proposed compound channel can safely convey the 1% AEP flow event [**CS1 & CS3**] and LFC has a bankfull capacity to convey flows the 1EY (maximum) event (3 m minimum base) [**CS2**], noting that:
 - Adopted roughness parameters (0.05 and 0.07) are in accordance with Melbourne Water's guidelines.

It is appropriate for other elements of the design to be considered and confirmed at the functional and/or detailed design stages.

4.4 North Central Catchment Management Authority

In its letter dated 18 June 2018 as part of the original application for the site, the NCCMA advised it did not object in principle to the construction of the place of worship, subject to the following minimum conditions forming part of the planning permit:

- All buildings and works (including the carpark) must be setback a minimum of 20 m from the top of bank of the dam and waterway that traverses the site.
- The finished floor level of the church must be constructed a minimum of 450 mm above the highest existing natural surface level beneath the church.

We note that there are some constraints in achieving 20 m in all areas around the waterway including the dam. From the layout plans the building achieves a 20 m setback from the revised waterway alignment, however there are sections of the carpark which are less than 20 m from the southern line of the dam (refer to Figure 4-4). This is considered acceptable in the context of the site as there is a significant buffer around the northern side of the dam and the water treatment measures for runoff from the carpark are sufficient to protect water quality outcomes. The updated waterway will have greater amenity, environmental values and stability than the existing flow channel.



5 WATERWAY MANAGEMENT PLAN

Revegetation will be established along the waterway on site to prevent a decline in the quality of water entering the waterway through erosion prevention and bank stabilisation, as well as to provide biodiversity and habitat for flora and fauna values. The revegetation plan is detailed in the sections below.

5.1 Revegetation Plan

5.1.1 Zones to be Revegetated

The two areas to be revegetated are the instream (in-channel) zone and the adjacent riparian zone. These zones are indicatively shown in Figure 4-4, with a typical instream cross-section shown in Figure 4-1 and Figure 4-3. In addition to biodiversity benefits, vegetation in the channel will provide 'roughness' to slow flow and reduce the potential for erosion of the bed and banks. In the riparian zone, vegetation will act as a natural filter to reduce sediment and nutrients entering the waterway via overland flow. The two zones are described as follows:

- In-channel zone: This zone includes a mix of semi-aquatic and terrestrial species such as tufted rushes and sedges that are tolerant of inundation and wet soil conditions. This zone is narrow and linear, and only 0.03 hectares in area.
- Riparian zone: This zone extends from the top of the bank onto the floodplain surrounding the waterway and the section of the dam within the study area. It is 20 metres in width along both sides of the waterway. It is also referred to as the 'waterway buffer'. This zone includes a range of indigenous trees, shrubs and ground cover plants (e.g., tufted grasses, sedges and rushes). This diverse mix of native lifeforms extends over the majority of the waterway buffer. It is 0.46 hectares in area.

A concept landscape plan has been prepared by the CDA Design Group which includes proposed landscape concepts within the in-channel and riparian zones. The Landscape concept plan has been prepared having regard to bush fire planning defensible space criteria and the WSUD waterway management improvement considerations.

5.1.2 Species Selection

Proposed species have been selected based on modelled Ecological Vegetation Class (EVC) mapping (DELWP 2022a) and associated benchmarks (DELWP 2022b), along with information in the Biodiversity Assessment Report for the site (Abzeco 2020)⁸. There are two EVCs which are modelled to have historically occurred on the site (pre 1750s). These are described below:

- Alluvial Terraces Herb-rich Woodland/Creekline Grassy Woodland Mosaic (EVC 81) – This EVC is mapped as potentially having occurred along the drainage line and surrounding areas on site. It is a mosaic of two EVCs:
 - EVC 67: Alluvial Terraces Herb-rich Woodland - an open woodland to 15 m tall on broad alluvial plains and along ephemeral drainage lines. Soils are generally poorly drained duplex soils with sandy loam overlying a heavier clay subsoil. The understorey consists of few, if any shrubs. However, the EVC does feature high species-richness of the ground-layer and low biomass of this cover, particularly in summer. Characteristic canopy species are Grey Box, Yellow Gum, Yellow Box (*Eucalyptus melliodora*) and Buloke (*Allocasuarina luehmannii*).

⁸Abzeco (2020) *Biodiversity Assessment Report: 83-85 Blakeley Road, Castlemaine*. A report prepared for The Planning Professionals. Version 1.0. Eltham, Victoria.



- EVC 68: Creepline Grassy Woodland – a Eucalypt-dominated woodland to 15 m tall with occasional scattered shrub layer over a mostly grassy/sedgy to herbaceous ground-layer. It occurs on low-gradient ephemeral to intermittent drainage lines, typically on fertile colluvial/alluvial soils, on a wide range of suitably fertile geological substrates. These minor drainage lines can include a range of graminoid (grass) and herbaceous (herb) species tolerant of waterlogged soils, and are presumed to have sometimes resembled a linear wetland or system of interconnected small ponds. Characteristic canopy species are River Red Gum (*Eucalyptus camaldulensis*), Grey Box and Yellow Box.
- Box Ironbark Forest (EVC 61) – Mapped as potentially having occurred in the north-eastern and south-eastern corners of the site, but not along the waterway on site, this EVC generally occurs in low rainfall areas on gently undulating rises, low hills and peneplains on infertile, often stony soils derived from a range of geologies. The overstorey is open, to 20 m tall, and consists of a variety of eucalypts. Characteristic canopy species include Grey Box (*Eucalyptus 22acrocarpa*), Red Ironbark (*Eucalyptus tricarpa*), Red Box (*Eucalyptus polyanthemos*) and Yellow Gum (*Eucalyptus leucoxylon*). The mid-storey may form a dense to open small tree or shrub layer over an open ground layer ranging from a sparse to well-developed suite of herbs and grasses (DELWP 2022b).

Abzeco (2020) noted that, with the exception of the three scattered trees that are representative of former Box Ironbark Forest, little other indigenous vegetation remains on the site. Therefore, species selection for the revegetation has been guided by the benchmarks for the EVCs most likely to have historically occurred on site. These benchmarks provide a list of species typical of at least part of the EVC range.

Given the riparian nature of the area to be revegetated, and the position of the site in the landscape, the benchmark for EVC 68 Creepline Grassy Woodland was used for lifeform and cover information, and species selection. The Alluvial Terraces Herb-rich Woodland EVC has some similar characteristics, and species from this benchmark were also used, but to a lesser extent. These species are listed in the planting schedule below.

5.1.3 Planting Schedule

The planting schedule for EVCs outlined above is consistent with the Landscape Plan. Plant species are likely to be readily available locally (Goldfields Revegetation 2022) and are appropriate for the site conditions (RBG 2022). Key points for planting in each zone are:

- In-channel zone
 - Sedges and rushes tolerant of inundation and wet soil conditions to be planted in the bed and on the bank
 - Grasses such as Common Tussock-grass to be planted at the toe of the bank and on the bank slopes
 - Scattered River red gums to be planted at the toe of the bank and on the banks, grading to occasional Yellow Box and Golden Wattles along the upper section of the bank slope.
- Riparian zone
 - To be planted with a mix of trees, shrubs and ground cover plants, in amongst the (limited) remnant vegetation in the zone. Ground cover plants including Common Tussock-grass, sedges and rushes, should be used more densely planted along the waterway margin. Other plants, including other grasses which prefer dryer environments, should be well mixed by lifeform and species.
 - Planting densities have been based on the Statewide Vegetation Work Standards (DSE 2011). The density of plants per hectare have been calculated for EVC 68 – Creepline Grassy Woodland and those numbers have been distributed across each lifeform and species.

Following the planting, some losses may occur and these may need to be replanted or accounted for after one year. The proponent might ask the contractor to plant an extra 10% of the number of tubestock to offset losses and this may negate the requirement to replant after the first year. However, it may be more efficient to monitor



which plants are more successful and to replant those more reliable species, so long as the diversity is not compromised (e.g., try to maintain at least 80% proposed species). Natural regeneration of native plants within the area may also occur. More information on monitoring is provided below.

5.2 Site Preparation, Planning and Planting

Information on site preparation and planting techniques to maximise the success of the revegetation is provided below. Local revegetation contractors may recommend alternate methods or species appropriate to the site, however, these changes should be approved by the Responsible Authority.

5.2.1 Timing of Planting

It is recommended that plantings occur in autumn due the expected cooler and wetter weather present at this time of year. Plant availability may influence the choice of planting season and advice should be sought from local revegetation contractors as to which season is likely to be more reliable.

5.2.2 Pre-planting Preparation

The following should be undertaken prior to planting:

- Order stock – plants, guards, matting.
- At least 2 weeks prior to planting, spot spray a small 600mm diameter circle using a non-selective systemic herbicide (e.g. Glyphosate) at the recommended rate.
- Pest animal control – attempts should be made to reduce the abundance of rabbits, hares and grazing/browsing animals from the revegetation areas, if appropriate.

5.2.3 Plant Stock and Size

Plants should be pre-ordered to ensure stock are at the most desirable size and hardened off soon before planting. Standard nursery tubestock are recommended for all plants. The advantages of tubestock include:

- Tubestock plants grow better roots and usually establish more quickly than those potted up in size prior to planting.
- When supplied to best standard, tubestock will not be pot bound.
- They are cheaper to purchase, transport and install. This is also important when replacing losses.

5.2.4 Planting methods and plant protection

The planting method will be dependent upon the amount of soil moisture and hardness of the ground. Planting will need to occur by hand, using a combination of spade or Pottiputki. Other considerations include:

- Ensure tubestock are thoroughly watered prior to planting. If conditions are particularly dry prior to planting, consider pre-watering holes to create a moist subsoil for the tubestock. Plants will require watering-in immediately after planting, if dry conditions persist after planting, watering should be undertaken within 5 days after planting, and repeated weekly for the first month.
- All plants should be guarded at planting. Guards are useful for several reasons:
 - They provide some protection from frost and extreme sun.
 - They help to maintain a microclimate within the guard and reduce wind effects.
 - They help to identify the plant location for relocation and monitoring.



- They can protect the plant from pest animals such as rabbits.



5.3 Maintenance and Monitoring

Regular monitoring ensures that issues are identified early, and that maintenance can be undertaken to ensure the success of the revegetation works.

The following section provides advice for maintenance and monitoring of revegetation, including a schedule for these activities.

5.3.1 Monitoring

Plant monitoring and appropriate management actions should be undertaken regularly to minimise losses and replanting costs. Regular visual assessments should consider the following:

- Are the tree guards in place?
- Are the weeds being managed around plantings? Is manual weeding required?
- Are the plants looking thirsty and should they be watered?
- Are the plants free from insect pests and disease? Is action required to manage those threats?
- If installed, are fences in good working order?

5.3.2 Maintenance

5.3.2.1 Watering

Plants should be watered on planting and the amount of water applied will vary depending on the site and season/time of year (e.g. 0.5 to 1 litre). If conditions are dry and no rain is received, a second application may be required 5 days after planting. This may need to be repeated weekly in the first month. If the first summer is dry, periodic watering may be required to ensure plant survival.

5.3.2.2 Weed Control

Young seedlings do not need a lot of moisture or nutrients to grow, however they are not good at competing with weeds, hence it is important to control weeds, particularly within the first 12 months.

Ongoing weed control should be undertaken as necessary by carefully hand pulling emerging weeds in the immediate vicinity of the plant, without disturbing the root system of the new plant.

5.3.2.3 Top-up Revegetation

Any plant losses may need to be replaced to ensure that target plant densities are met in the works area. Some losses are expected even in the best managed revegetation programs. To make up for these losses a surplus number of plants can be planted, or dead plants can be replaced the following autumn. Monitoring of loss number, and observing the species that are successful, can inform you of which species to plant and how many; this may save costs by replacing a more precise number of more reliable plants for the site.

5.3.3 Maintenance and Monitoring Schedule

A five-year monitoring and maintenance schedule is presented below to assist with the successful establishment of the revegetated areas (Table 5-1).

This schedule assumes target numbers of plants will be successfully established after the second year (Yr2) top-up planting has occurred. It is recommended that simple concise records be kept of all monitoring and actions undertaken within this five-year period.



Table 5-1 Maintenance and Monitoring Schedule

Time	Monitoring	Maintenance action
Yr1		Order tubestock from nursery and request delivery prior to planned planting period (i.e. Autumn). Install fences if required.
Yr1 two weeks prior to planting	Check for potential issues (e.g. high threat weeds).	Spot spray planting locations and any high threat weeds. Repair fencing (if installed).
Yr1 Autumn		Undertake revegetation – plant, guard, water.
Yr1 one to two weeks post planting	Check if plants need watering.	Water if required.
Yr1 every month	Monitor plants for watering requirements, check for weeds, pests and diseases. Monitor fencing (if installed).	Water plants and control pests and diseases if required. Weed when/if it is deemed necessary. Repair fencing (if installed).
Yr2 late Summer	Monitor plant losses (count, note species and location to inform choice of replacement).	Order new tubestock if required.
Yr2 two weeks prior to planting		Spot spray planting locations and any high threat weeds.
Yr2 Autumn		Undertake top-up revegetation if required – plant, guard, water.
Yr2 two weeks post top-up planting	Check if plants need watering.	Water if required.
Yr2-5 every 3 months	Monitor weeds, pests and diseases. Check fencing (if applicable).	Control pests and diseases if required. Weed when/if it is deemed necessary. Repair fencing (if installed).
End Yr5	Review both revegetation areas.	Document process, learnings and successes of the revegetation program. Remove tree guards and remaining stakes.

22010001_R02v02_SWMS



6 SUMMARY AND CONCLUSION

This report sets out a recommended Stormwater Management Strategy (SWMS) for a proposed use and development of the land for a place of worship (meeting hall) including car parking, and a two-lot subdivision at 83 Blakeley Road at the northern end of the Castlemaine township. The SWMS presents a concept design to manage stormwater runoff from the proposed development, with consideration of existing constraints.

The stormwater management plan for the site has demonstrated that:

- Runoff from the development is retarded to pre-development level at the existing Legal Point of Discharge;
- All stormwater discharges from the subdivision will meet the 'Urban Stormwater Best Practice Environmental Management Guidelines (CSIRO, 1999) via the use of biofiltration assets; and
- The waterway management plan outlines restoration actions for the existing waterway and dam including the proposed revegetation and removal of noxious weeds.

Water Technology concludes that the proposed development will not have any unacceptable impacts on drainage infrastructure, flood safety and water quality.



7 REFERENCES

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Goldfields Revegetation (2022) *Goldfields Revegetation: Central & Northern Victoria's Native Plant Nursery, Wildflower Farm & Land Rehabilitation & Environmental Consultants*. A website accessed 22 February 2022

<http://www.goldfieldsrevegetation.com.au/index.asp>

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APPENDIX A

PC CONVEY ANALYSIS - WATERWAY

22010001_R02v02_SWMS

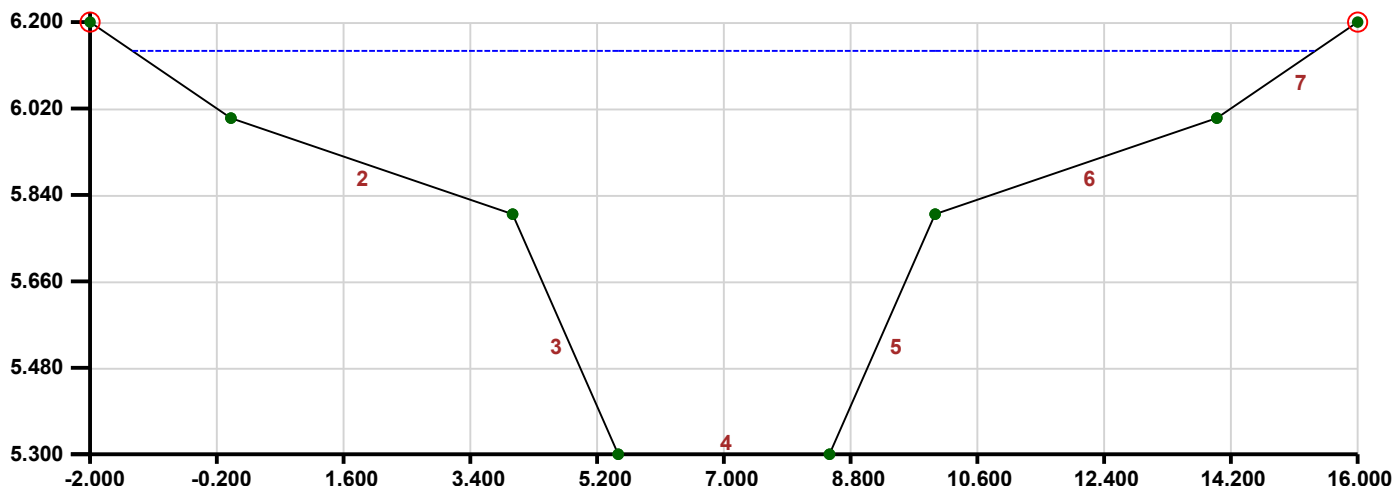
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1. CROSS-SECTION:



2. DISCHARGE INFORMATION:

100 year (1%) storm event

Total discharge = 4.00 cumecs

There is no pipe discharge

Overland / Channel / Watercourse discharge = 4.00 cumecs

3. RESULTS: Water surface elevation = 6.140 m

High Flow Channel grade = 1 in 200, Main Channel / Low Flow Channel grade = 1 in 200.

	LEFT OVERBANK	MAIN CHANNEL	RIGHT OVERBANK	TOTAL CROSS-SECTION
Discharge (cumecs):	0.000	4.018	0.000	4.018
D(Max) = Max. Depth (m):	0.000	0.840	0.000	0.840
D(Ave) = Ave. Depth (m):	0.000	0.381	0.000	0.381
V = Ave. Velocity (m/s):	0.000	0.627	0.000	0.627
D(Max) x V (cumecs/m):	0.000	0.527	0.000	0.527
D(Ave) x V (cumecs/m):	0.000	0.239	0.000	0.239
Froude Number:	0.000	0.324	0.000	0.324
Area (m ²):	0.000	6.406	0.000	6.406
Wetted Perimeter (m):	0.000	16.986	0.000	16.986
Flow Width (m):	0.000	16.800	0.000	16.800
Hydraulic Radius (m):	0.000	0.377	0.000	0.377
Composite Manning's n:	0.000	0.059	0.000	0.059
Split Flow?	-	-	-	No

4. CROSS-SECTION DATA:

SEGMENT NO.	LEFT HAND POINT		RIGHT HAND POINT		MANNING'S N
	CHAINAGE (m)	R.L. (m)	CHAINAGE (m)	R.L. (m)	
1	-2.000	6.200	0.000	6.000	0.070
2	0.000	6.000	4.000	5.800	0.070
3	4.000	5.800	5.500	5.300	0.050
4	5.500	5.300	8.500	5.300	0.050
5	8.500	5.300	10.000	5.800	0.050
6	10.000	5.800	14.000	6.000	0.050
7	14.000	6.000	16.000	6.200	0.070

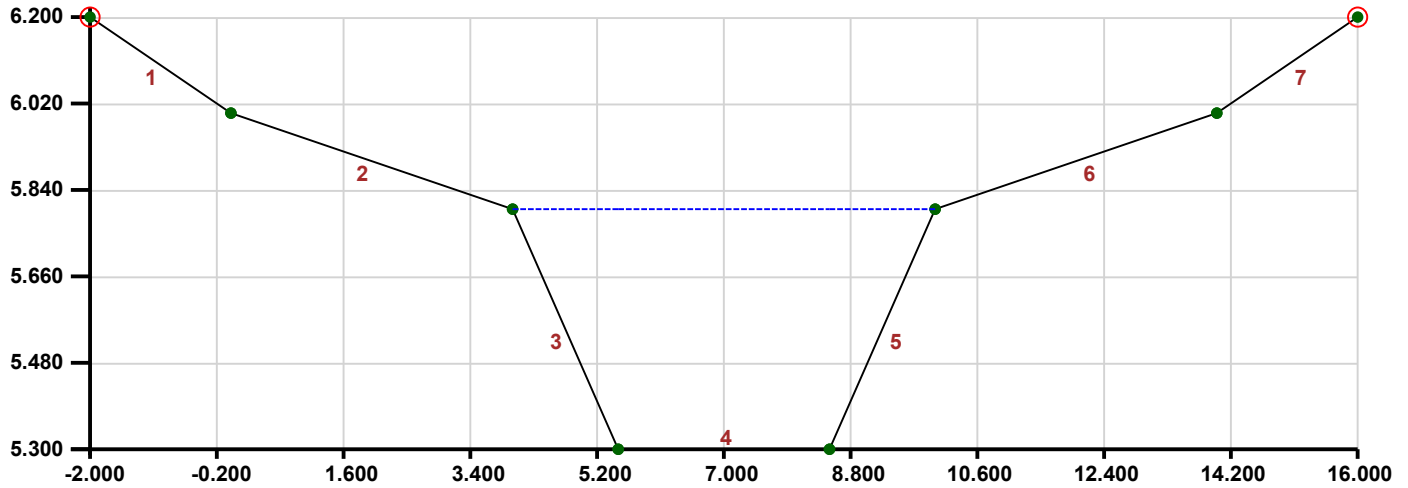
PROJECT: Castlmaine - Blakeley Road

Comment

Print-out date: 23/02/2022 - Time: 6:51

Data File: C:\Users\Bertrand.Salmi\Desktop\OMR\22010001_PC_Convey_Channel.dat

1. CROSS-SECTION:



2. DISCHARGE INFORMATION:

100 year (1%) storm event

Total discharge = 4.00 cumecs

There is no pipe discharge

Overland / Channel / Watercourse discharge = 4.00 cumecs

3. RESULTS: Water surface elevation = 5.800 m

High Flow Channel grade = 1 in 200, Main Channel / Low Flow Channel grade = 1 in 200.

	LEFT OVERBANK	MAIN CHANNEL	RIGHT OVERBANK	TOTAL CROSS-SECTION
Discharge (cumecs):	0.000	1.626	0.000	1.626
D(Max) = Max. Depth (m):	0.000	0.500	0.000	0.500
D(Ave) = Ave. Depth (m):	0.000	0.375	0.000	0.375
V = Ave. Velocity (m/s):	0.000	0.722	0.000	0.722
D(Max) x V (cumecs/m):	0.000	0.361	0.000	0.361
D(Ave) x V (cumecs/m):	0.000	0.271	0.000	0.271
Froude Number:	0.000	0.377	0.000	0.377
Area (m^2):	0.000	2.250	0.000	2.250
Wetted Perimeter (m):	0.000	6.162	0.000	6.162
Flow Width (m):	0.000	6.000	0.000	6.000
Hydraulic Radius (m):	0.000	0.365	0.000	0.365
Composite Manning's n:	0.000	0.050	0.000	0.050
Split Flow?	-	-	-	No

4. CROSS-SECTION DATA:

SEGMENT NO.	LEFT HAND POINT		RIGHT HAND POINT		MANNING'S N
	CHAINAGE (m)	R.L. (m)	CHAINAGE (m)	R.L. (m)	
1	-2.000	6.200	0.000	6.000	0.070
2	0.000	6.000	4.000	5.800	0.070
3	4.000	5.800	5.500	5.300	0.050
4	5.500	5.300	8.500	5.300	0.050
5	8.500	5.300	10.000	5.800	0.050
6	10.000	5.800	14.000	6.000	0.050
7	14.000	6.000	16.000	6.200	0.070

APPENDIX B
MUSIC MODEL PARAMETERS



The following section summarises the MUSIC modelling Parameters.

Meteorological Template

In absence of pluviograph station nearby the site, daily rainfall data from BOM weather station at Joyce's Creek (station number 88032) from the period between 1/10/1987 and 31/05/2014 was used for setting up MUSIC model. The monthly average Potential Evapotranspiration rates were also extracted from BoM website (available at <http://www.bom.gov.au/>). The modelled average annual rainfall was 515 mm and the average annual PET was 1041 mm.

Catchment

A simplified approach was adopted when modelling proposed development in MUSIC model. An 100% impervious catchment representing the new hardstand areas of the proposed development was used to estimate the increase in runoff volume and quality

Bioretention

A bioretention node with the following parameters were adopted to estimate the pro-rata Bioretention Surface Area to meet Best Practice (Figure 8).

- Extended detention depth = 0.2 m
- Unlined filter media perimeter = 0.01 m
- Saturate hydraulic conductivity = 100 mm/hr
- Filter depth = 300 mm
- Base lined = yes
- Vegetated with effective nutrient removal plants = yes
- Underdrain present = yes
- Submerged zone with carbon present = no

A schematic of the MUSIC model is shown in the Figure below.

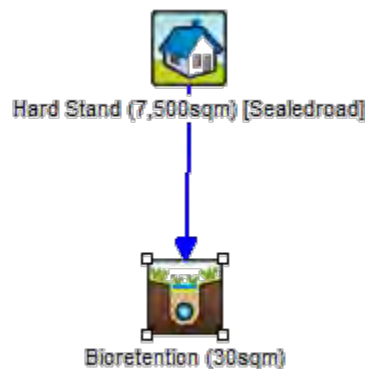


Figure B-1 MUSIC Model Schematic



Melbourne

15 Business Park Drive
Notting Hill VIC 3168
Telephone (03) 8526 0800
Fax (03) 9558 9365

Wangaratta

First Floor, 40 Rowan Street
Wangaratta VIC 3677
Telephone (03) 5721 2650

Geelong

PO Box 436
Geelong VIC 3220
Telephone 0458 015 664

Wimmera

PO Box 584
Stawell VIC 3380
Telephone 0438 510 240

Brisbane

Level 3, 43 Peel Street
South Brisbane QLD 4101
Telephone (07) 3105 1460
Fax (07) 3846 5144

Perth

PO Box 362
Subiaco WA 6904
Telephone 0438 347 968

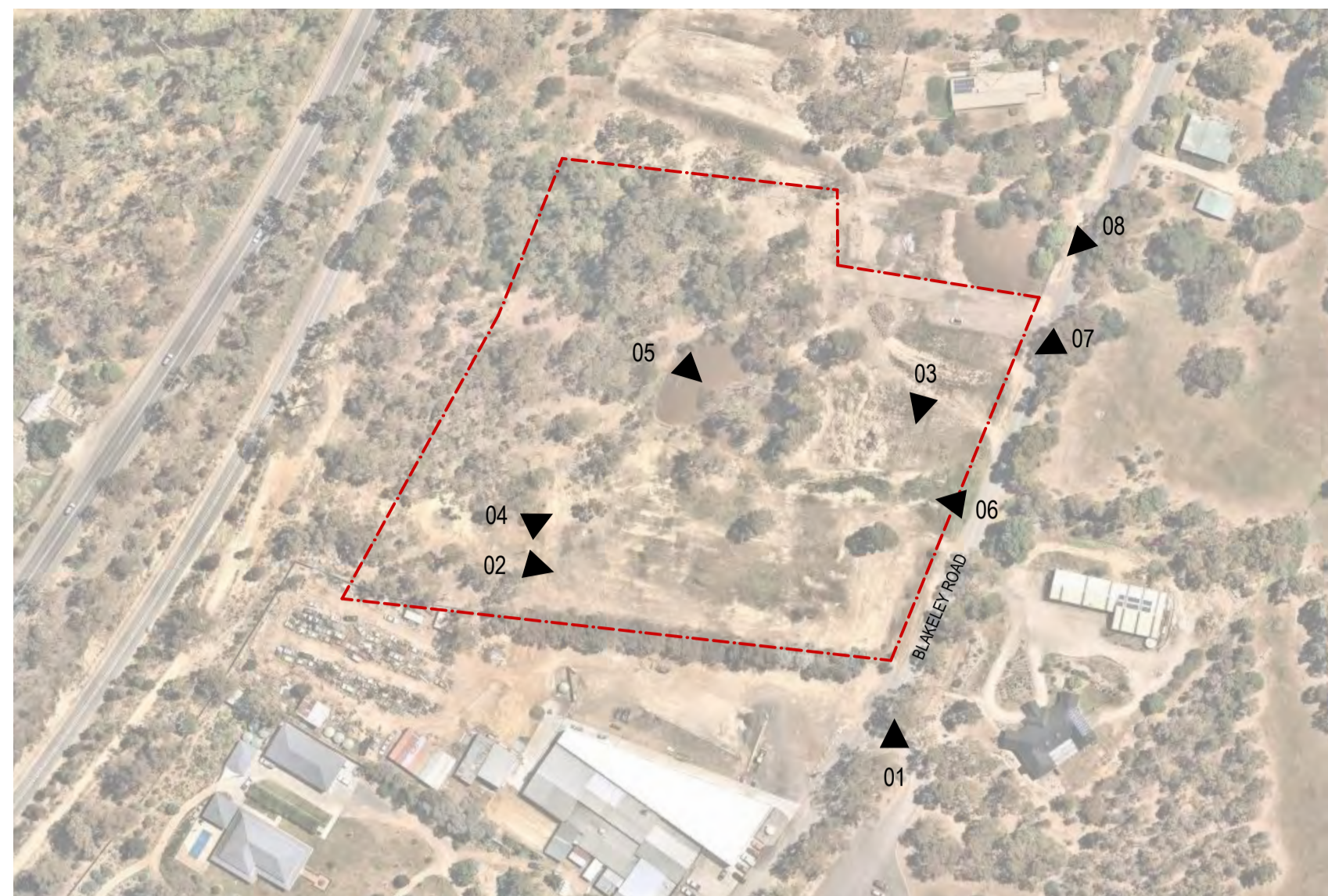
Gippsland

154 Macleod Street
Bairnsdale VIC 3875
Telephone (03) 5152 5833

www.watertech.com.au

info@watertech.com.au





VIEW PLAN



VIEW 01



VIEW 02



VIEW 03



VIEW 04



VIEW 05



VIEW 06



VIEW 07



VIEW 08

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For: CASTLEMAINE GOSPEL TRUST

Drawing Name: SITE PHOTOS
Drawing Type: SITE
Issue Date: 10/02/2022
Architect: CG
Drawn: HD
Size: A1
Drawing No.: TP1001
Issue: A



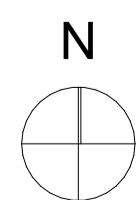
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LOCATION PLAN

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SITE	1:2000 @ A3
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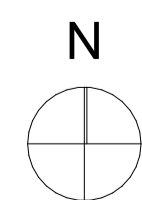
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SITE ANALYSIS

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Issue Date:	Architect:
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Drawn:	Size:
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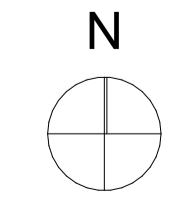
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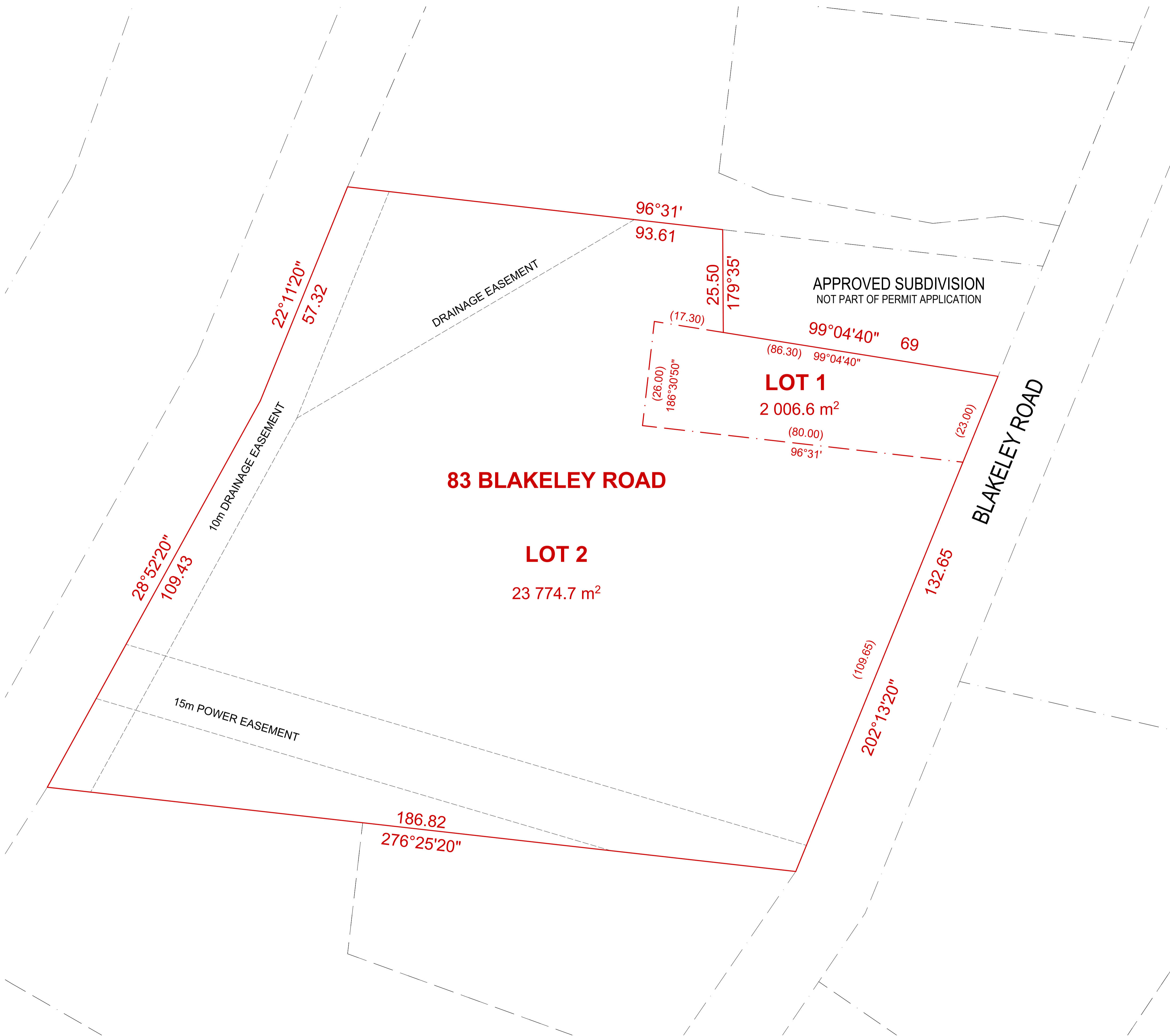
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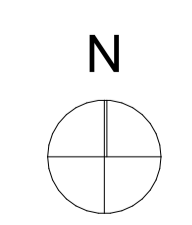
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1 PROPOSED SUBDIVISION 1:500



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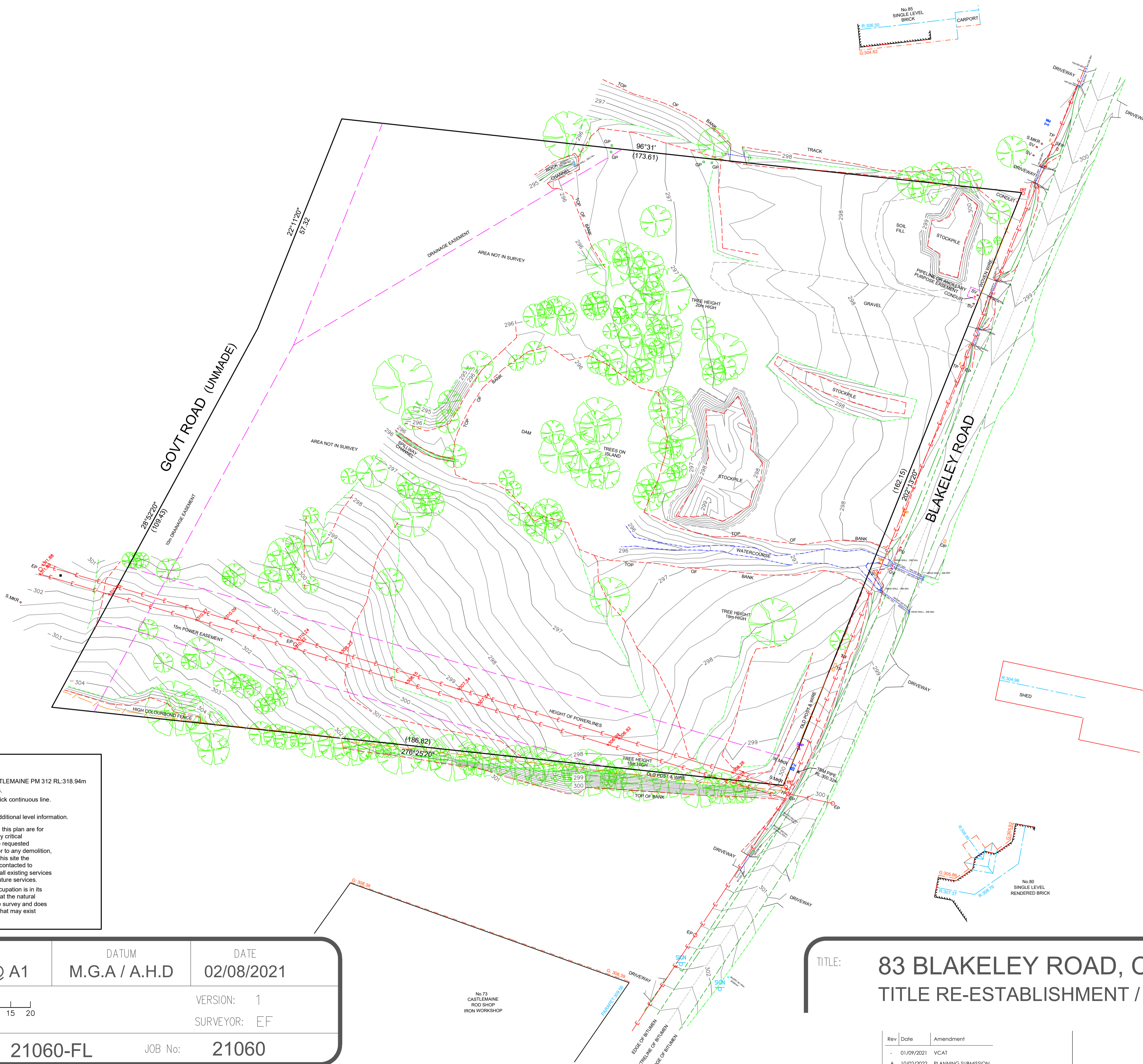
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LEGEND

- GP : GRATED PIT
- PU : PIT UNCLASSIFIED
- SV : SEWER VALVE
- SFP : SEWER FLUSHER PIT
- TP : TELSTRA PIT
- OP : OPTUS PIT
- EPIT : ELECTRICITY PIT
- EP : ELECTRICITY POLE
- FH : FIRE HYDRANT
- WMKR : WATER MARKER POST
- TMP : TELECOM MARKER POST
- SMKR : SEWER MARKER POST
- GMKR : GAS MARKER POST
- R : ROOF/RIDGE
- G : BOTTOM OF GUTTERLINE

REFER TO CERTIFICATE OF TITLE FOR ADDITIONAL EASEMENT DIMENSIONS & NOTATIONS.

- OVERHEAD POWERLINES
- TREE

Notations
 Lengths shown are in metres.
 Levels are to A.H.D. vide CASTLEMAINE PM 312 RL:318.94m
 Contour Interval is 0.25 metres.
 Title boundary is shown in a thick continuous line.
 Date of survey : 28/07/2021.
 Refer to autocad.dwg file for additional level information.

Features and Levels shown on this plan are for general design works only - any critical dimensions required should be requested independently of this plan. Prior to any demolition, excavation or construction on this site the relevant Authorities should be contacted to ascertain detailed locations of all existing services and the possible locations of future services.
 The position of fencing and occupation is in its true location, and only applies at the natural surface level on the date of the survey and does not show any encroachments that may exist below the natural surface.

Survey 4D PTY LTD
 A.C.N. 604 861 323
 67 Addison Street, Elwood 3184
 Phone: 0433 281 219
 Email: survey@survey4d.net



SCALE 1:500 @ A1	DATUM M.G.A / A.H.D	DATE 02/08/2021
		VERSION: 1
DRAWING No: 21060-FL		JOB No: 21060
SURVEYOR: EF		

TITLE: 83 BLAKELEY ROAD, CASTLEMAINE
TITLE RE-ESTABLISHMENT / LEVEL & FEATURE SURVEY

Rev	Date	Amendment
-	01/09/2021	VCAT
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Drawing Type: SURVEY	Issue Date: 10/02/2022	Drawn: HD	Size: A1
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