

NOTICE OF AN APPLICATION FOR PLANNING PERMIT

The land affected by the application is located at:	28 Patterson Road, Officer South VIC 3809 L1 LP118377
The application is for a permit to:	Use of the land for a Place of Worship and associated works (car park)
The applicant for the permit is:	Baba Budha Ji Charitable Association
The application reference number is:	T230414
You may look at the application and any documents that support the application at the office of the Responsible Authority:	<p>Cardinia Shire Council 20 Siding Avenue Officer 3809</p> <p>This can be done during office hours and is free of charge.</p> <p>Documents can also be viewed on Council's website: https://www.cardinia.vic.gov.au/advertisedplanningapplications</p>

Any person who may be affected by the granting of the permit may object or make other submissions to the responsible authority.

- An objection must
- * be sent to the Responsible Authority in writing, at Cardinia Shire Council, PO Box 7, Pakenham, Vic, 3810 or email at mail@cardinia.vic.gov.au.
 - * include the name and address of the objector/ submitter.
 - * include the application number and site address.
 - * include the reasons for the objection, and
 - * state how the objector would be affected.

The Responsible Authority will not decide on the application before:	12 March 2024
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If you object, the Responsible Authority will tell you its decision.

Please be aware that copies of objections/submissions received may be made available to any person for the purpose of consideration as part of the planning process.

For additional information or advice contact Cardinia Shire Council, Planning Department on 1300 787 624 or mail@cardinia.vic.gov.au.

Your objection/submission and personal information is collected by Cardinia Shire Council for the purposes of the planning process as set out in the *Planning and Environment Act 1987*. If you do not provide your name and address, Council will not be able to consider your objection/submission. Your objection/submission will be available free of charge at the Council office for any person to inspect and copies may be made available on request to any person for the relevant period set out in the *P&E Act*. You must not submit any personal information or copyright material of third parties without their informed consent. By submitting the material, you agree that the use of the material as detailed above does not breach any third party's right to privacy and copyright.

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Request to amend a current planning permit application

This form is used to request an amendment to an application for a planning permit that has already been lodged with Council, but which has not yet been decided. This form can be used for amendments made before any notice of the application is given (pursuant to sections 50 / 50A of the *Planning and Environment Act 1987*) or after notice is given (section 57A of the Act).

PERMIT APPLICATION DETAILS

Application No.:	T230414 PA
Address of the Land:	28 Patterson Road, Officer South

APPLICANT DETAILS

Name:	[REDACTED]
Organisation:	M&D Town Planning
Address:	23 Ellis Street Frankston
Phone:	9016 0416
Email:	info@mndtownplanning.com.au

AMENDMENT TYPE

Under which section of the Act is this amendment being made? (select one)	
Section 50 – Amendment to application at request of applicant before notice:	<input checked="" type="checkbox"/>
Section 50A – Amendment to application at request of responsible authority before notice:	<input type="checkbox"/>
Section 57A – Amendment to application after notice is given:	<input type="checkbox"/>

AMENDMENT DETAILS

What is being amended? (select all that apply)		
What is being applied for <input type="checkbox"/>	Plans / other documents <input checked="" type="checkbox"/>	Applicant / owner details <input type="checkbox"/>
Land affected <input type="checkbox"/>	Other <input type="checkbox"/>	
Describe the changes. If you need more space, please attach a separate page.		
Amended Development plans for relocated car parking spaces		

Specify the estimated cost of any development for which the permit is required:		
Not applicable <input type="checkbox"/>	Unchanged <input checked="" type="checkbox"/>	New amount \$

DECLARATION

I declare that all the information in this request is true and correct and the owner (if not myself) has been notified of this request to amend the application.	
Name:	
Signature:	
Date:	22-2-24

LODGEMENT

<p>Please submit this form, including all amended plans/documents, to mail@cardinia.vic.gov.au</p> <p>You can also make amendments to your application via the Cardinia ePlanning Portal at https://eplanning.cardinia.vic.gov.au/</p> <p>If you have any questions or need help to complete this form, please contact Council's Statutory Planning team on 1300 787 624.</p>
--

IMPORTANT INFORMATION

<p>It is strongly recommended that before submitting this form, you discuss the proposed amendment with the Council planning officer processing the application.</p> <p>Please give full details of the nature of the proposed amendments and clearly highlight any changes to plans (where applicable). If you do not provide sufficient details or a full description of all the amendments proposed, the application may be delayed.</p> <p>No application fee for s50/s50A requests unless the amendment results in changes to the relevant class of permit fee or introduces new classes of permit fees. The fee for a s57A request is 40% of the relevant class of permit fee, plus any other fees if the amendment results in changes to the relevant class (or classes) of permit fee or introduces new classes of permit fees. Refer to the <i>Planning and Environment (Fees) Regulations 2016</i> for more information.</p> <p>The amendment may result in a request for more under section 54 of the Act and/or the application requiring notification (or re-notification). The costs associated with notification must be covered by the applicant.</p> <p>Council may refuse to amend the application if it considers that the amendment is so substantial that a new application for a permit should be made.</p> <p>Any material submitted with this request, including plans and personal information, will be made available for public viewing, including electronically, and copies may be made for interested parties for the purpose of enabling consideration and review as part of a planning process under the <i>Planning and Environment Act 1987</i>.</p>
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Application Summary

Portal Reference A323762M

Basic Information

Proposed Use Use of the land for a place of worship with ancillary community kitchen and minor buildings and works associated with gravel carpark

Current Use Single Residence

Site Address 28 Patterson Road Officer South 3809

Covenant Disclaimer

Does the proposal breach, in any way, an encumbrance on title such as restrictive covenant, section 173 agreement or other obligation such as an easement or building envelope?

No such encumbrances are breached

☐ Note: During the application process you may be required to provide more information in relation to any encumbrances.

Contacts

Type	Name	Address	Contact Details
Applicant	Baba budha ji charitable association	28 Patterson Road, Officer South VIC 3809	W: 3-9016-0416 E: info@mndtownplanning.com.au
Preferred Contact	M & D Town Planning PTY LTD	23 Ellis Street, Frankston VIC 3199	W: 9016-0416 E: info@mndtownplanning.com.au

Fees

Regulation Fee Condition	Amount	Modifier	Payable
9 - Class 1 Change of use only	\$1,415.10	100%	\$1,415.10
Total			\$1,415.10

Meetings

Meeting Type	Officer Name	Date of Meeting
Pre Application		14 Feb 2023



Civic Centre
20 Siding Avenue, Officer, Victoria

Council's Operations Centre (Depot)
Purton Road, Pakenham, Victoria

Postal Address
Cardinia Shire Council
P.O. Box 7, Pakenham VIC, 3810

Email: mail@cardinia.vic.gov.au

Monday to Friday 8.30am–5pm
Phone: 1300 787 624
After Hours: 1300 787 624
Fax: 03 5941 3784

Documents Uploaded

Date	Type	Filename
22-08-2023	A Copy of Title	Title.pdf
22-08-2023	Encumbrance	Title Plan.pdf
22-08-2023	Site plans	Set Of Plans.pdf
22-08-2023	Written Explanation	Town Planning Report - 28 Patterson Road, Officer South Vic 3809.pdf
22-08-2023	Additional Document	Survey Plan Docs - 28 Patterson Road Officer South.pdf

☐ Remember it is against the law to provide false or misleading information, which could result in a heavy fine and cancellation of the permit

Lodged By

Site User	M & D Town Planning PTY LTD	14 Hayward Road, Ferntree Gully VIC 3156	W: 0413-673-830 E: info@mndtownplanning.com.au
Submission Date	22 August 2023 - 10:41:AM		

Declaration

☒ By ticking this checkbox, I, , declare that all the information in this application is true and correct; and the Applicant and/or Owner (if not myself) has been notified of the application.

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REGISTER SEARCH STATEMENT (Title Search) Transfer of Land Act 1958

Page 1 of 1

VOLUME 09246 FOLIO 086

Security no : 124108502913E

Produced 22/08/2023 10:33 AM

LAND DESCRIPTION

Lot 1 on Plan of Subdivision 118377.
PARENT TITLE Volume 08717 Folio 050
Created by instrument G750080 17/08/1977

REGISTERED PROPRIETOR

ENCUMBRANCES, CAVEATS AND NOTICES

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section 24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan or imaged folio set out under DIAGRAM LOCATION below.

DIAGRAM LOCATION

SEE LP118377 FOR FURTHER DETAILS AND BOUNDARIES

ACTIVITY IN THE LAST 125 DAYS

NIL

-----END OF REGISTER SEARCH STATEMENT-----

Additional information: (not part of the Register Search Statement)

Street Address: 28 PATTERSON ROAD OFFICER SOUTH VIC 3809

ADMINISTRATIVE NOTICES

NIL

DOCUMENT END

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Imaged Document Cover Sheet

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Document Type	Plan
Document Identification	LP118377
Number of Pages (excluding this cover sheet)	1
Document Assembled	22/08/2023 10:35

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LP 118377

EDITION 1

APPROVED 31/5/76

COLOUR CODE

E-1 = YELLOW

APPROPRIATIONS

THE LAND COLOURED YELLOW
IS APPROPRIATED OR SET
APART FOR EASEMENTS OF
ELECTRICITY SUPPLY

NOTATIONS

THE UNDERLINED DIMENSIONS
ARE NOT A RESULT OF THIS
SURVEY

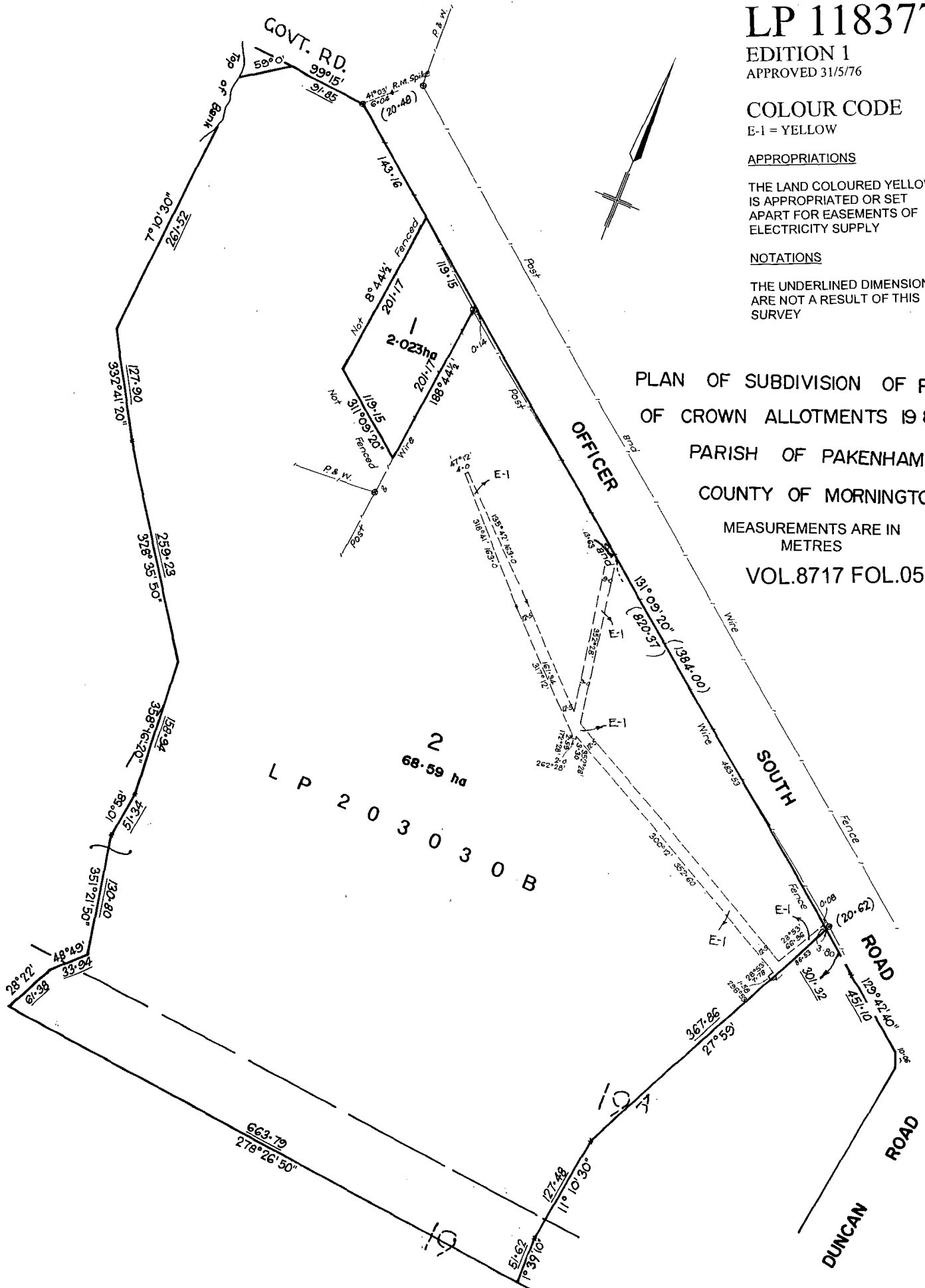
PLAN OF SUBDIVISION OF PART
OF CROWN ALLOTMENTS 19 & 19^A

PARISH OF PAKENHAM

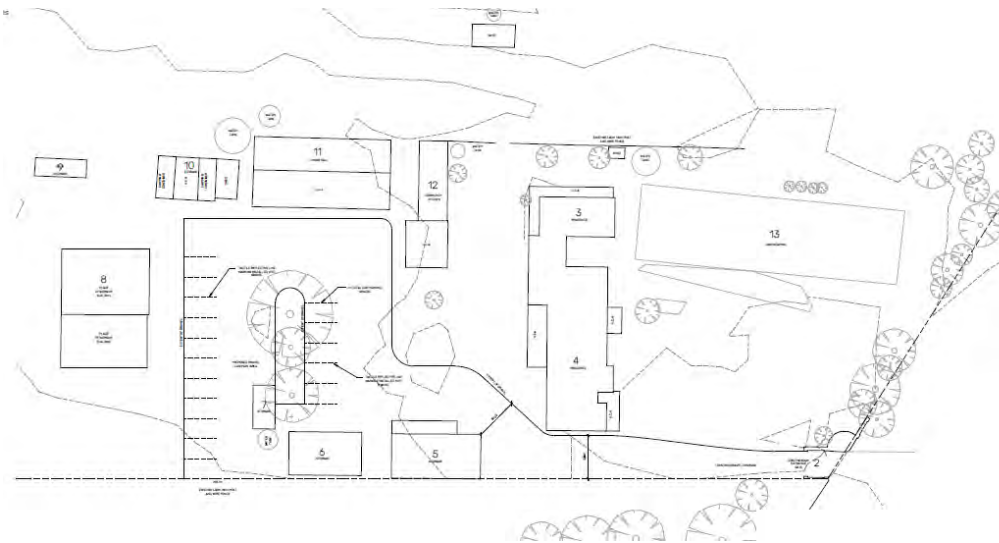
COUNTY OF MORNINGTON

MEASUREMENTS ARE IN
METRES

VOL.8717 FOL.050



Note: The underlined dimensions are not a result of this survey.



August,
2023

*Prepared for
Baba Budha Ji
Charitable
Association*

TOWN PLANNING SUBMISSION

28 Patterson Road, Officer South Vic 3809

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1.0 Introduction and Overview

M & D Town Planning PTY LTD have been engaged by the Baba budha Ji Charitable Association to prepare a Town Planning Assessment Report for use of the land for a place of worship and ancillary community kitchen and buildings and works associated with the small gravel car parking area at 28 Patterson Road, Officer South Vic 3809. **Please note that no structures or buildings and works are proposed other than the gravel car parking area on the site plan.**

The applied planning permit triggers are:

Clause 35.04-1	A permit is required to use the land as a place of worship [Section 2 Use] in the GWZ1.
Clause 35.04-5	A permit is required for buildings and works associated with the gravel parking area as no exemption is satisfied under this clause.

2.0 Subject Site, Background and Surrounds

The subject site is located on the southern side of Patterson Road in Officer South. The site is existing and has a number of existing buildings on the site which are being utilised and repurposed to conduct the operations of the Baba Budha Charitable organization activities which include providing free food for the homeless and needy in the community. This organization is well renowned throughout Cardinia Shire and aims to establish their base of operation at this site which is located on the periphery of the Urban Growth Zone as recommended by Council planning officers.

We have undertaken a pre-application in the past with Dean Haeusler (GE230137) and the outcome and verbal/written advice from this meeting prompted the Baba Budha Ji Charitable Association to purchase the property. Within the meeting it was stated that the applicable Green Wedge zoning and key land use compatibility policy Clause 22.05 – Westernport Green Wedge Polic outlines and encourages non-rural uses (including place of worships) to be sited on Green Wedge land that adjoins the Urban Growth Boundary which is indeed the case for the subject site.

The Planning Permit application relates to use of the premises for the place of worship which involves an ancillary Community Kitchen which is located central to the site and does not



involve the construction of any new buildings to minimize potential impacts. The subject site contains ten (10) different existing structures/buildings and their uses are explained later in this report, with a total of sixteen (16) car spaces located deep within the site and is screened from the street and adjoining property owners.

Baba Budha ji charitable, social welfare mission is a social charitable society registered on 17-02-2005 with Registrar of Societies. The Society is being run by the eminent persons of the society and specialists in their fields who had held government positions in the past and are mostly retired now that want to pursue a social responsibility plan and their sole aim is to help the poor and needy. It is not for the benefit of single person or particular religion but for the benefit of public at large.

The main goals of the organization are as follows:

- To promote the feeling of universal brotherhood among all human beings and respect the sentiments and feeling of society in general.
- To inculcate among the fellow beings the necessity of respecting the old, helpless, weak human beings in the society. To extend full support and help in creating goodwill and better environment for the proper living and upkeep of the helpless sections of the society.
- To create infrastructure for the better and happy living of the people who are old, infirm, weak, orphaned, women, destitute. In order to enjoy the life given by the Almighty by creating atmosphere of happiness and living to the fulfillment of self without hurting the sentiments and feelings of other persons.
- To establish and run old age homes, shelters, hostels and community centers for the purpose.

This not-for-profit charitable organization aim to utilize this site to carry out the important community work that they stand for. Baba Budha ji charitable organization delivered approximately 1500 meals per week in the COVID pandemic and the organization delivered countless amounts of free food during the recent bushfires.

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Figure 1: Subject Site Location

The surrounding area of the incorporates differing zones and low-scale uses. Across the road is Urban Growth zoning, south, west and east of the site is Green wedge zoning – however the houses located on these sites are a very large distance from the structures located on this subject site. The below figure provides an overview and clearly highlights the extent of Urban Growth zoning and surrounding zones to the site. It is evident that the site is suitable for non-rural uses given its strategic location.

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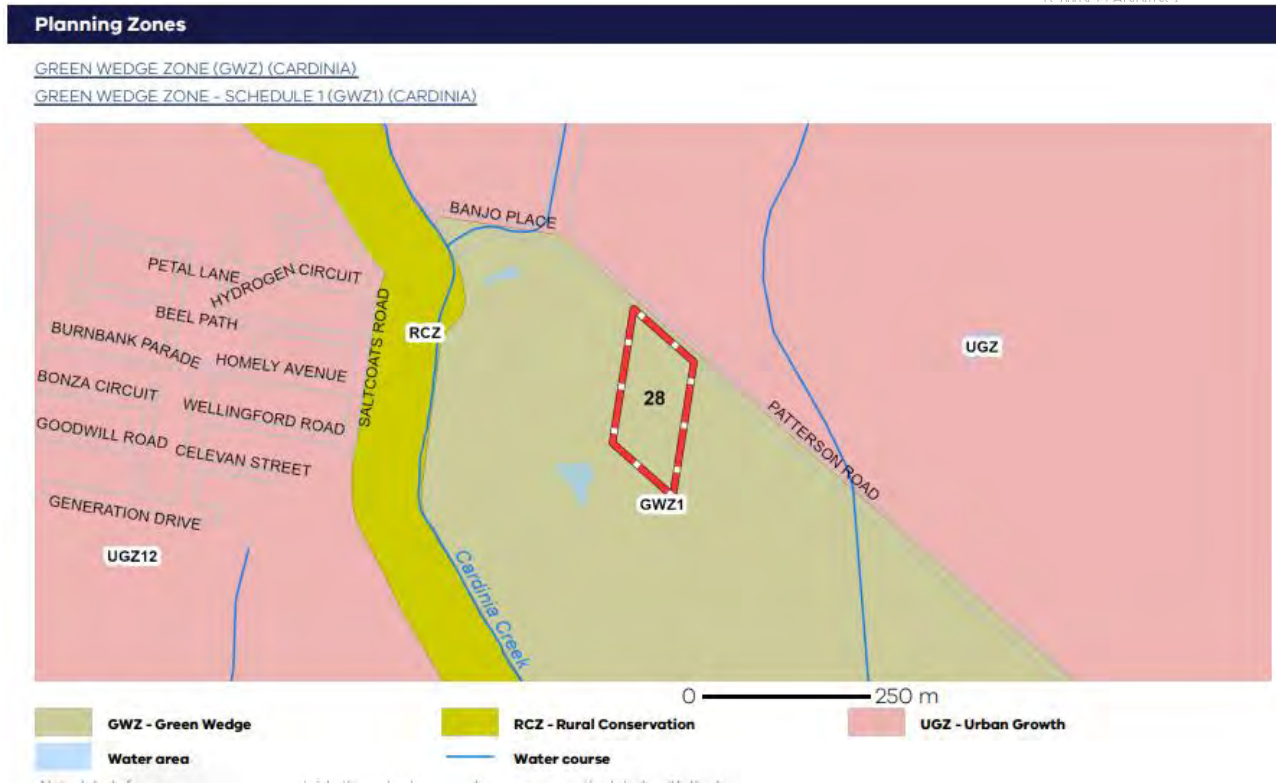


Figure 2: Surrounding Zoning (Source: Planning Maps Online)



Figure 3: Volunteer Organization members standing in front of one of their free food vans



3.0 Title Details

Title Volume 09246, Folio No. 086 relating to Lot 1 on Plan of Subdivision 118377 has no restrictions or encumbrances.

4.0 Overview of the Proposal

The application seeks approval for use of the land for the purposes of a place of worship and ancillary community kitchen. *The Baba budha Ji Charitable Association* is a **not-for profit organization** that have delivered countless free meals to the vulnerable, homeless and needy members of society. They have provided free meals to vulnerable people throughout differing municipalities and we have worked with them to facilitate their mission of being a not-for-profit community icon that aims to assist and provide for vulnerable members of the community throughout Victoria. They aim to prepare free meals on the premises and then deliver the food to the homeless and needy for consumption off of the site in food vans (like in Figure 3), and occasionally on site in the repurposed dining hall (building 11). There is zero profit obtained for the mission that they carry out and they undertake this purely for the good of the community and want to work closely with Cardinia Shire to continue and establish their base of operations within this courteous Council.

This organization has been working within surrounding municipalities and have settled on Cardinia Shire as their main base of operations and also aim to serve their mission and provide to the surrounding municipalities to provide free meals for the homeless and those most in need and ultimately require planning permit approval for this place of worship and ancillary community kitchen to continue to undertake and expand the excellent work they are doing for the community.

Details of the proposed use are as follows:

- The primary use of the site is for a place of worship.
- The place of worship proposes a maximum of 55 patrons at any one time.
- A total of 16 spaces are accommodated within the site as shown on the plans. These are situated on gravel and are line marked using tactile markers as to ensure no impact on existing trees.
- The proposed repurposed community kitchen will prepare meals for transport and consumption off and on site. The business does not sell food nor profit from these activities and only aims to serve vulnerable and needy members of society.
- People in need can access this service by either registering online, or via phone call. The food is then delivered to their house. Customers/members of the public do not have access to the cooking community kitchen premises and only can access the



dining hall.

- Deliveries will take place occasionally during the week. Additional deliveries may occur depending on the demand.
- Deliveries to the site will be accepted during normal business hours of 9am to 4pm.
- No external buildings and works or increase in floor area proposed. We have purposely chosen this site and propose no buildings and works in the form of structures as to minimize potential impacts to adjoining property owners or increase or add additional built form to the site.
- No signage is proposed as part of this application.
- A maximum of five (10) staff/volunteer members will be on site at any one time. This includes groundkeepers, cooks, devotees etc.
- Opening hours will be primarily 6am – 9pm which can vary with season. However, morning 6am-8am & evening 6pm-8pm are the two primary times of operation all days of the week and on the weekend.
- The ancillary community kitchen will only operate 9am-4pm during weekdays. This will not be operational on weekends.
- It is expected that four (4) to seven (7) food vans/vehicles will be on site at any one time associated with the community kitchen and delivery of the free food meals to the needy and vulnerable.
- The food production amount will not exceed 200 tonnes per year.
- Every effort will be made to mitigate the sound impacts, if any, to the surrounding which also includes utilization of noise attenuating measures such as acoustic fencing etc if required by Council. In this instance, due to large setbacks to neighbouring properties acoustic fencing is considered overkill but can be conditioned if required.

How existing Buildings are being used on the site:

There are ten (13) different existing structures on the site and each of their respective uses have been numbered and shown on the plans as per their repurposing. This is elaborated upon below:

1 – Gate not to be used or relative to this proposed application

2 – Utilizing existing gate access to the property for entry and exit to the site.

3 and 4 – Two to Three devotees will stay in the existing house as caretakers for the site and no buildings and works will occur to this structure as it is in good condition. House remains as is and no modifications. The devotees staying here are undertaking Preaching, maintenance, landscaping etc on a daily basis.

5 – What is this garage being used for? Storage of matts, chairs, tables, maintenance tools etc

6 and 7 – what processes and activities happening here? Is it storage? Storage of matts, chairs, tables, maintenance tools etc

8 – Place of worship building. Meditation, religious ceremonies, spiritual music, holy preaching, prayer etc. Only religious activities

9 – Storage of shoes before accessing place of worship in Building 8

10 – Storage of utensils

11 – Food/dining hall – Free food served here cooked from the community kitchen – vulnerable people and needy member of community come here and can eat within this building. Not all food is eaten on site. A lot of food is taken by food vans and delivered to the needy off-site.

12 – Community kitchen - is the community kitchen where volunteers prepare meals for the vulnerable and homeless people for consumption off site and occasionally on site. All cooking of food occurs 9am-4pm weekdays. No cooking occurring on weekends to mitigate potential amenity impacts on neighbouring sites.

13 – Bowling green removed and turned into landscaping area

The proposed layout is shown in the plans below:

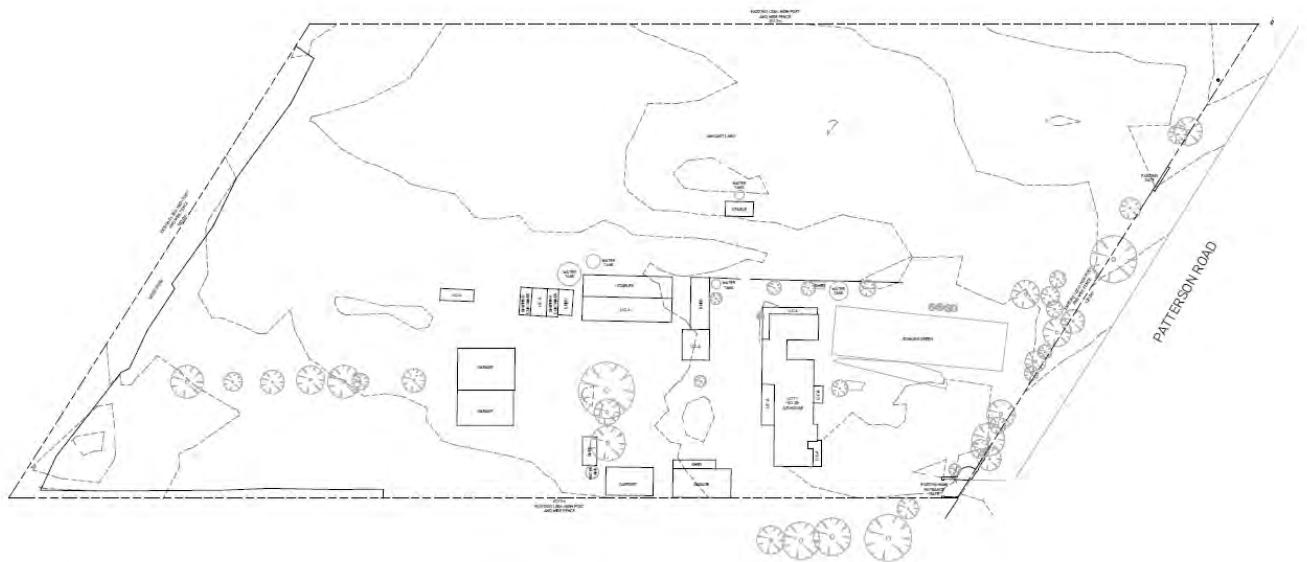


Figure 4: Site Conditions Layout

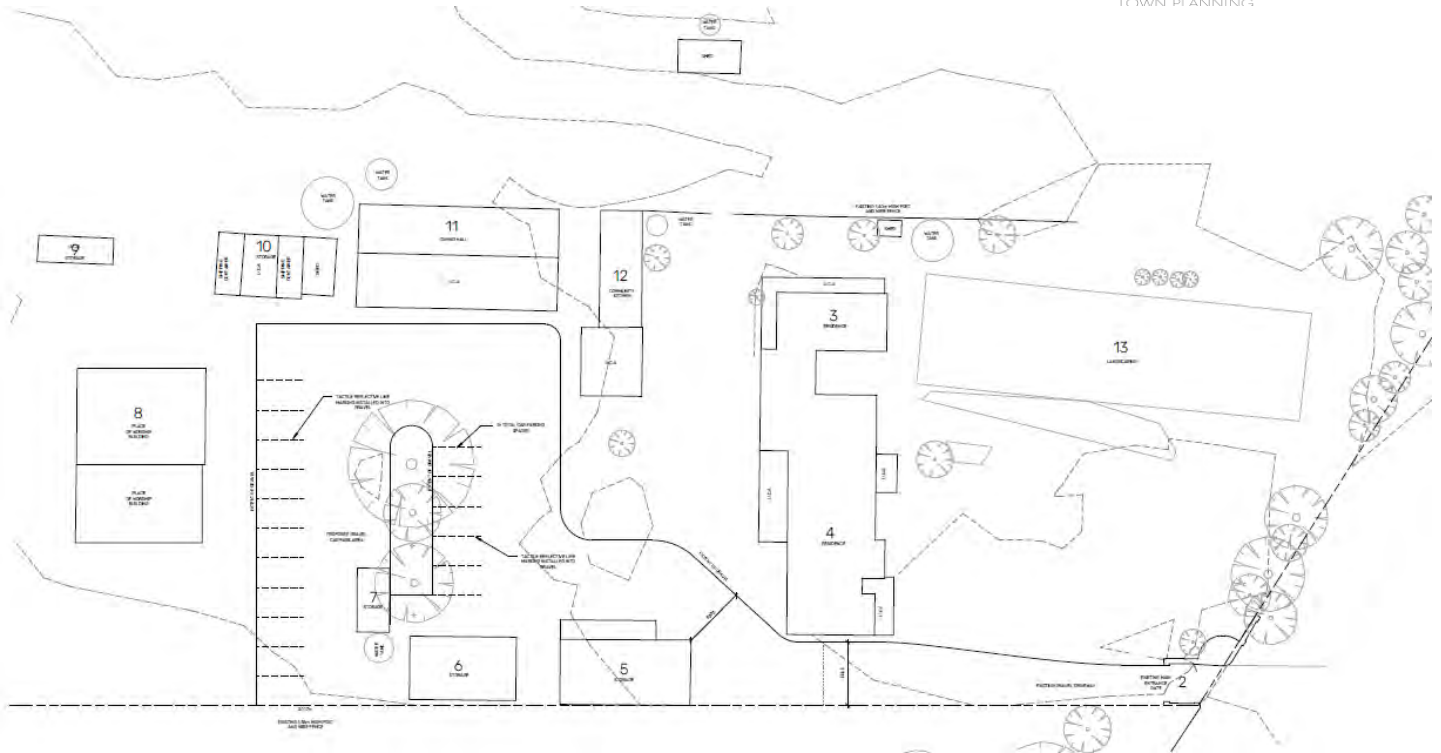


Figure 5: Proposed Conditions Layout

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5.0 Zoning & Overlays

5.1 Zoning

Green Wedge Zone (Schedule 1) – Clause 35.05

The subject site is located within the Green Wedge Zone – Schedule 1 (GWZ1). Pursuant to Clause 35.05-1, a Planning Permit is required to use the land for the purpose of a dwelling. Additionally, pursuant to Clause 35.05-5, a Planning Permit is required to construct or carry out works for the purpose of a dwelling.

Zone Purpose:

- To implement the Municipal Planning Strategy and the Planning Policy Framework.
- To provide for the use of land for agriculture.
- To protect, conserve and enhance the biodiversity, natural resources, scenic landscapes and heritage values of the area.
- To ensure that use and development promotes sustainable land management practices and infrastructure provision.
- To protect, conserve and enhance the cultural heritage significance and the character of rural and scenic non-urban landscapes.
- To recognize and protect the amenity of existing rural living areas.

Relevant Decision Guidelines:

Pursuant to Clause 32.03-6, an application to change the use of the land must be assessed (as appropriate) against the following decision guidelines:

- The Municipal Planning Strategy and the Planning Policy Framework.
- The effect that the use may have on nearby existing or proposed residential areas or other uses which are sensitive.
- The effect that nearby industries may have on the proposed use.
- The drainage of the land.
- The availability of and connection to services.
- The effect of traffic to be generated on roads.
- The interim use of those parts of the land not required for the proposed use.

In response:

The proposed use is considered appropriate for the site and compliant with the Zone provisions. The proposed place of worship can easily be accommodated on the site and involves utilizing the structures which exist upon the site and repurposing them. The subject site is also located in a location that is surrounded by Urban Growth Zoning to the direct north making it appropriate for strategic non-rural uses with minimal impacts to the surrounds. The addition of preparation and manufacturing of food as a provisional community service to provide for those in need is also not going to have impact on surrounding properties as the community kitchen is located central to the site and operates during weekday business hours. This allows for a non-invasive valuable community asset to



operate lawfully provided they do not have an adverse impact on their surrounds. It is considered that the proposed use will complement the surrounding area and be a net gain for the community.

Using the land for the purpose of a place of worship with the ancillary Community Kitchen will provide enormous net societal and community benefit to the surrounding area by providing a facility for this not-for-profit organization to continue to provide free meals for those in need. This is considered a beneficial community use within the locality as well as surrounding municipalities. The proposed use is not expected to have any detrimental effects on the surrounds, with regards to noise, drainage or traffic. The amount of food produced will also not exceed 200 tonnes, meaning the use will not be of adverse amenity potential pursuant to Clause 53.10.

5.2 Overlays

LSIO - Land Subject To Inundation Overlay – Clause 44.04

No buildings and works that involve excavation nor vegetation removal are sought within this proposal. We have no doubt that the small gravel carpark area is going to have negligible impact on the LSIO and we welcome positive feedback from the relevant floodplain authority.

6.0 PPF Assessment

Clause 11.02-1S: Supply of Urban Land

Objective

To ensure a sufficient supply of land is available for residential, commercial, retail, industrial, recreational, institutional and other community uses.

Relevant Strategies

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- Ensure the ongoing provision of land and supporting infrastructure to support sustainable urban development.
- Ensure that sufficient land is available to meet forecast demand.
- Plan to accommodate projected population growth over at least a 15 year period and provide clear direction on locations where growth should occur.
- Residential land supply will be considered on a municipal basis, rather than a town-by-town basis.
- Monitor development trends and land supply and demand for housing and industry.
- Maintain access to productive natural resources and an adequate supply of well-located land for energy generation, infrastructure and industry.

Clause 11.03-1S: Activity Centres

Objective

To encourage the concentration of major retail, residential, commercial, administrative, entertainment and cultural developments into activity centres that are highly accessible to the community.

Relevant Strategies

- Build up activity centres as a focus for high-quality development, activity and living.
- Support the role and function of each centre in the context of its classification, the policies for housing intensification, and development of the public transport network.
- Undertake strategic planning for the use and development of land in and around activity centres.
- Give clear direction on preferred locations for investment.
- Encourage a diversity of housing types at higher densities in and around activity centres.
- Support the continued growth and diversification of activity centres to give communities access to a wide range of goods and services, provide local employment and support local economies.
- Encourage economic activity and business synergies.
- Improve the social, economic and environmental performance and amenity of activity centres.

Clause 13.07-1S: Land Use Compatibility

Objective

To protect community amenity, human health and safety while facilitating appropriate commercial, industrial, infrastructure or other uses with potential adverse off-site impacts.

Relevant Strategies



- Ensure that use or development of land is compatible with adjoining and nearby land uses.
- Avoid locating incompatible uses in areas that may be impacted by adverse off-site impacts from commercial, industrial and other uses.
- Avoid or otherwise minimise adverse off-site impacts from commercial, industrial and other uses through land use separation, siting, building design and operational measures.
- Protect existing commercial, industrial and other uses from encroachment by use or development that would compromise the ability of those uses to function safely and effectively.

Clause 15.01-1S Urban Design

Objective

To create urban environments that are safe, healthy, functional and enjoyable and that contribute to a sense of place and cultural identity.

Relevant Strategies

- Require development to respond to its context in terms of character, cultural identity, natural features, surrounding landscape and climate.
- Ensure development contributes to community and cultural life by improving the quality of living and working environments, facilitating accessibility and providing for inclusiveness.
- Ensure the interface between the private and public realm protects and enhances personal safety.
- Ensure development supports public realm amenity and safe access to walking and cycling environments and public transport.
- Ensure that the design and location of publicly accessible private spaces, including car parking areas, forecourts and walkways, is of a high standard, creates a safe environment for users and enables easy and efficient use.
- Ensure that development provides landscaping that supports the amenity, attractiveness and safety of the public realm.
- Ensure that development, including signs, minimises detrimental impacts on amenity, on the natural and built environment and on the safety and efficiency of roads.
- Promote good urban design along and abutting transport corridors.

Clause 15.01-2S: Building Design

Objective



To achieve building design outcomes that contribute positively to the local context and enhance the public realm

Relevant Strategies

- Ensure a comprehensive site analysis forms the starting point of the design process and provides the basis for the consideration of height, scale and massing of new development.
- Ensure development responds and contributes to the strategic and cultural context of its location.
- Minimise the detrimental impact of development on neighbouring properties, the public realm and the natural environment.
- Ensure the form, scale, and appearance of development enhances the function and amenity of the public realm.
- Ensure buildings and their interface with the public realm support personal safety, perceptions of safety and property security.
- Ensure development is designed to protect and enhance valued landmarks, views and vistas.
- Ensure development provides safe access and egress for pedestrians, cyclists and vehicles.
- Ensure development provides landscaping that responds to its site context, enhances the built form and creates safe and attractive spaces.
- Encourage development to retain existing vegetation.

Clause 17.01-1S Diversified Economy

Objective

To strengthen and diversify the economy.

Relevant Strategies

- Protect and strengthen existing and planned employment areas and plan for new employment areas.
- Facilitate regional, cross-border and inter-regional relationships to harness emerging economic opportunities.
- Facilitate growth in a range of employment sectors, including health, education, retail, tourism, knowledge industries and professional and technical services based on the emerging and existing strengths of each region.
- Improve access to jobs closer to where people live.



Clause 17.02-1S: Business

Objective

To encourage development that meets the community's needs for retail, entertainment, office and other commercial services.

Relevant Strategies

- Plan for an adequate supply of commercial land in appropriate locations.
- Ensure commercial facilities are aggregated and provide net community benefit in relation to their viability, accessibility and efficient use of infrastructure.
- Locate commercial facilities in existing or planned activity centres.
- Provide new convenience shopping facilities to provide for the needs of the local population in new residential areas and within, or immediately adjacent to, existing commercial centres.
- Provide small scale shopping opportunities that meet the needs of local residents and workers in convenient locations.
- Provide outlets of trade-related goods or services directly serving or ancillary to industry that have adequate on-site car parking.

Clause 18.02-4S: Car Parking

Objective

To ensure an adequate supply of car parking that is appropriately designed and located.

Relevant Strategies

- Allocate or require land to be set aside for car parking subject to the existing and potential modes of access including public transport, the demand for off-street car parking, road capacity and the potential for demand management of car parking.
- Encourage the efficient provision of car parking by consolidating car parking facilities.
- Design and locate local car parking to:
 - Protect the role and function of nearby roads.
 - Enable easy and efficient use.
 - Enable the movement and delivery of goods.
 - Achieve a high standard of urban design and protect the amenity of the locality, including the amenity of pedestrians and other road users.
 - Create a safe environment, particularly at night.
 - Facilitate the use of public transport.



- Protect the amenity of residential precincts from the effects of road congestion created by on-street parking.

In Response:

The proposed development responds in a satisfactory sense to the Planning Policy Framework. The proposal provides for local employment opportunities and provides a space for a non-for-profit organisation to cook and manufacture food as to allow the provision of free meals for homeless and those in need, resulting in immense community benefit in accordance with State Planning Policy Framework.

The subject site provides appropriate car parking in accordance with the purpose of Clause 18.02. It is considered that the proposal will integrate well with the existing uses and reflect a desirable outcome with the provision of appropriate car parking spaces to be a community asset for the surrounding area.

The community kitchen is considered an appropriately situated use, nestled in the centre of the site that appropriately responds to the site's planning context, as well its surrounds.

The proposed place of worship and community kitchen will strengthen the functionality and provide net community benefit in relation to the viability, accessibility and efficient use of infrastructure. This will enable the site to contribute to a diversified economy and provide additional local employment opportunities as mentioned above. Further to this, the business has been successfully operating and providing free meals for those in need, so this presents an excellent opportunity for Cardinia Shire to support such a community asset and cause that not only aligns with the provisions and purpose of the PPF but also aligns with Cardinia Shires organizational values, as stated on their website.. Hundreds of local volunteers regularly give their time and energy to assist others in the community and to allow this non-for-profit organisation use to operate would successfully acknowledge and replicate these values and allow meals to be provided voluntarily to those most in need.

7. Local Planning Policies

Western Port Green Wedge Policy – Clause 22.05

In Response:

The proposed development responds in a satisfactory sense to the Western Port Green wedge policy pursuant to Clause 22.05 future land use direction. The subject site is located within Precinct 1 per Table 1 to this Clause which aims to primarily provide for Agriculture,



horticulture and soil-based food production. The future direction/preferred land uses specifically states to encourage place of worship and non-rural uses within this precinct **within the green wedge land that adjoins the UGB**. As previously mentioned, the site directly adjoins the urban growth boundary and has urban growth zoning applicable directly across Patterson Road as can be seen in figure 2. The strategic positioning of the site means that the potential impacts on surrounding properties will be lessened, and the intent of Precinct 1 is not disrespected due to the proximity to the urban growth boundary and the allotment being situated on the periphery of the Urban Growth zone. Furthermore, we do not propose any buildings or structures with this application to further mitigate the potential impacts on the western port green wedge which enables the site to be returned to agricultural or horticultural use in the future if required. In conclusion, the proposed use being place of worship and ancillary community kitchen is an optimal, low-impact addition to the Green Wedge zone and is directly adjoining the urban growth boundary making it fully compliant with the provisions of Clause 22.05. This factor was also echoed by senior planning officer Dean H within the pre-application that occurred prior to this proposal.

8.0 Particular Provisions

Clause 52.06 – Car Parking

Clause 52.06 applies before a new use is to commence. The purpose of this clause is as follows:

- 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.

Number of car spaces required:

Table 1 under Clause 52.06-5 outlines the statutory requirements related to car parking which are applicable to the commencement of a new use. Use of the land for place of worship generates a car parking requirement based off floor area. The following table outlines the car parking requirements pursuant to this Clause:



Use	Rate	Spaces required
Place of worship	0.3 spaces per patron	55 patrons = 16.5 spaces required (rounded down to 16).

In Response:

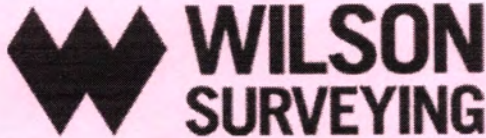
As there are a total of 16 proposed car spaces located on site, the car parking rate generated from the maximum number of patronages of 55 people is 16 spaces. The proposed use therefore fully complies with the Statutory Car Parking rate within Clause 52.06.

9.0 Conclusion

The abovementioned place of worship change of use and minuscule buildings and works (gravel car park) proposal at 28 Patterson Road, Officer South Vic 3809 is compliant with the abovementioned planning zone, as well as local, state policies and particular provisions.

We trust that Council has received all of the required information to assess the application. We therefore kindly request a planning permit to be issued for the proposal. If any questions arise, please do not hesitate to contact the applicant to discuss the proposal.

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**ENGINEERING & RESCODE SURVEYS**

PO BOX 251, Lilydale VIC 3140

P: (03) 9735 9085

Email:- wilsonsurveying@wilsonsurveying.com.au

DATE

28/6/23

Survey No.

1

2

3

Client:

M&D TOWN PLANNING

Ref Number:

199373

Lot No.

1

Street No.

28

Street Name

PATTERSON ROAD

Suburb

OFFICER SOUTH

Municipality

Melway Ref.

449 C12**Services:****Nothing Built****Construction Incomplete**

Power

Yes

No

N/Sighted

O/Head

U/Ground

FL

FR

RL

RR

Sewer

Yes

No

Pit SightedYesNoGas — BOTTLE GASYes

No

Tapping SightedYesNo

Water

Yes

No

Tapping SightedYesNo

Water Main

Same Side

Opp. Side

N/Sighted

Existing Tap

Stormwater Drainage

Yes

No

Discharge PointYesN/Sighted**Site:****Re-Establishment Survey Required**Yes*

No

**All sites require a second feature survey after a Title Re-establishment survey*

Is Sub Complete

Yes

No

Existing Title PegsYesNo

Will Be

Any Trees On Site

Yes

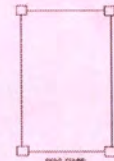
No

Levels May ChangeYesNo

Neighbouring Blocks Have Trees

Yes

No

LeftRightRear**Exist Fences**

1. Left Ht.

1.40m

2. Right Ht.

1.35m

3. Rear Ht.

1.35m

4. Front Ht.

1.35m

Left =

Picket

Paling

Brick

Metal

Cyclone

P & W

Brush

Post & Rail

Right =

Picket

Paling

Brick

Metal

Cyclone

P & W

Brush

Rear =

Picket

Paling

Brick

Metal

Cyclone

P & W

Brush

Front =

Picket

Paling

Brick

Metal

Cyclone

P & W

Brush

Lattice Ext. =

1. Left Ht.

2. Right Ht.

3. Rear Ht.

4. Front Ht.

Neighbouring Front Fence

1. Left Ht

1.4m

2. Right Ht

1.35m

Left =

Picket

Paling

Brick

Metal

Cyclone

P & W

Brush

POST & RAIL

Right =

Picket

Paling

Brick

Metal

Cyclone

P & W

Brush

Private Open Space:

Front Left

Rear Left

Front Right

Rear Right

Rear Property

Road Details:**Nothing Built****Construction Incomplete**

Construction Type:

Bitumen

Concrete

Brick

Unmade

Footpath

YesNo**Damaged**Yes

No

Bays

Vehicle Crossing

CRUSHED ROCKYesNo**Damaged**Yes

No

Bays

Kerb & Channel

YesNo**Damaged**Yes

No

Bays

Rollover Kerb

YesNo**Kerb Opening**Yes

No

Adjacent Site Details:

Left Side

Vacant

Developed

Right Side

Vacant

Developed

Rear

Vacant

Developed

N/A

1 Storey

2 Storey

Brick

W/Board

Other

Windows

YesNo

Eave Width

YesNo

Eave Ht.

YesNo

X-OVER

Adj

Opp

N/S

1 Storey

2 Storey

Brick

W/Board

Other

Windows

YesNo

Eave Width

YesNo

Eave Ht.

YesNo

X-OVER

Adj

Opp

N/S

1 Storey

2 Storey

Brick

W/Board

Other

Windows

YesNo

Eave Width

YesNo

Eave Ht.

YesNo**Land Status:**

No XO

No FP

No K&C

No Bit

No TS

Mounds

NAA

Estimated Weeks Until Sub-Division Complete:

2

4

6

8

10

12

16

20

26+

Surveyed by:

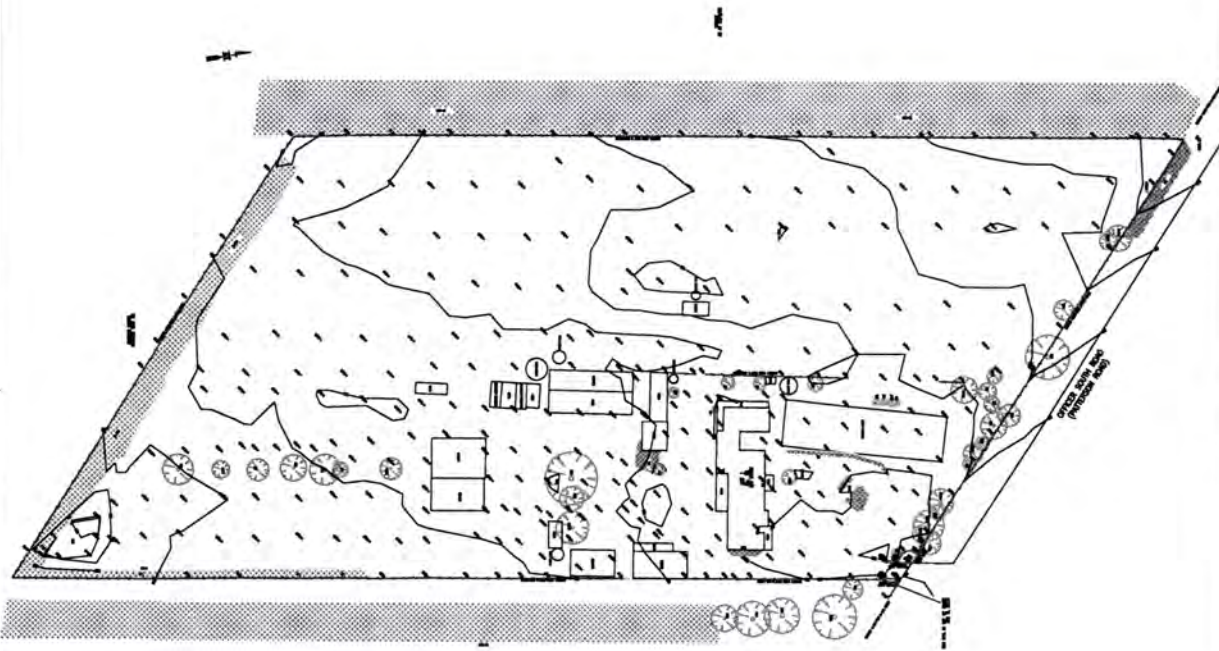
AF ATD CS DL ET JB JI LB NS TM

Comments:

IL

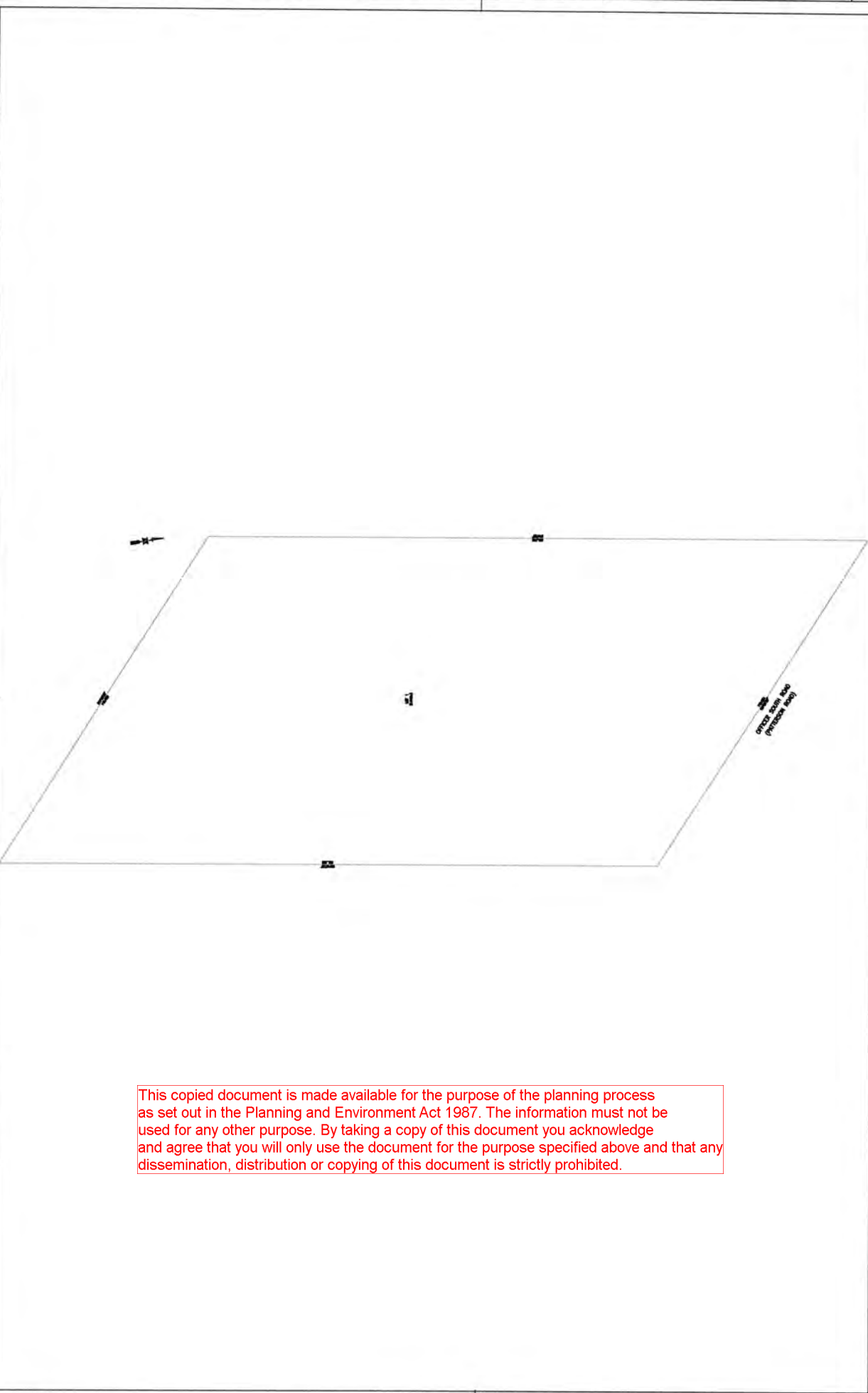
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LEVEL AND FEATURE SURVEY		EMAIL:- WILSONSURVEYING@WILSONSURVEYING.COM.AU	DRAWN AF	DATE 7/7/23	ORIG SCALE 1:200
This plan is not a Title Re-Establishment Survey. Boundary lines are indicative only. Boundary position may need to be confirmed with a Licensed Surveyor		WILSON SURVEYING PTY LTD		199373	
Only those services that are visible have been shown, relevant authorities need to be contacted for all services		PO BOX 251 LILYDALE 3140		TEL 9735 9085	
Only significant vegetation shown on plan. Tree canopy sizes and tree heights are approximate only.		Contour interval is 0.2m			
Tree classification should be clarified with an Arborist		Level datum is AHD			
Second story windows may be shown offset for clarity					

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COPY OF TITLE AS PER LP 118377 EDITION 1 This plan is not a Title Re-Establishment Survey. <small>This copy of title or plan of subdivision may not be the current version and should be verified with Titles Office</small>	EMAIL:- WILSONSURVEYING@WILSONSURVEYING.COM.AU	DRAWN AF	DATE 7/7/23	ORIG SCALE 1:200
		WILSON PO BOX 251 LILYDALE 3140 TEL 9735 9085	SURVEYING	199373T

Written Responses for 28 Patterson Officer South

2. Estimated volume of food to be generated on a weekly basis.

Approximately 48kg of food produced on a weekly basis which equates to 2.5 tonnes per year.

3. Details of the dining hall activity including:

a. maximum capacity; *The maximum capacity of the dining hall is 25 people at any one time but will usually be less than this.*

b. whether the kitchen will be attended by persons not affiliated with the place of worship:

The kitchen is only attended to be people affiliated with the place of worship

c. whether these hours differ from the community kitchen. *The hours of this dining hall operates for lunch & dinner all days of the week. Only cooking of food which is dedicated to only occur within the community kitchen occurs between 9am-4pm on weekdays but this does not occur for the entire day only in preparation for lunch and dinner time meals.*

4. Whether amplified music will be used on-site and if so, during what times and where.

Music is not loud and is only to occur within the place of worship hall ONLY and occurs 7am-8am (sunrise) and 5pm-6pm (sunset) on a daily basis. This is utilised intermittently and does not go consistently for the entirety of this time. We are happy to incorporate acoustic measures to further insulate the place of worship building to mitigate noise and potential amenity impacts to neighbouring properties. We are happy to also include decibel limitations as permit conditions to ensure that noise generated is of an acceptable nature.

5. Whether outdoor areas will be used for worship or related activities and if so, specify the nature of these activities and where these will be held.

No outdoor activities or areas will be used for worship or related activities.

6. Details of the general scheduling, frequency, duration and nature of the Place of Worship activities listed (religious ceremonies, meditation, holy preaching, etc).

Sunrise between 7am-8am and sunset 5pm-6pm on a daily basis – this is the only time that activities listed will occur (religious ceremonies, meditation, holy preaching, etc).

7. Details of how off-site amenity impacts, including but not limited to noise and lighting will be managed during the operation of the activity.

Adopt acoustic measures to actively show Council and neighbouring properties that we are proactively mitigating noise, lighting and off-site amenity impacts.

8. Details of any unique calendar events specific to the Place of Worship including when these occurs, any changes to patron numbers and activities.

There are no specific, unique or key dates associated with this particular place of worship. Patronage will not exceed more than 55 people at any one time as nominated in the town planning submission.

8. Clause 52.34 Response

Clause 52.34 requires the provision of 2 plus 1 to each visitor per 1500sqm of net floor area. This means the requirement of 3 bicycle spaces for the site. It is highly unlikely that any attendees will access the subject site via bicycle, but we are happy to incorporate the bike racks if the Responsible Authority decide to condition this as part of a planning permit issued.

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Land Use Responses:

7. Details of how off-site amenity impacts, including but not limited to noise and lighting will be managed during the operation of the activity

In response: To manage off-site amenity impacts we will adhere to the EPA noise regulations and implement a regular noise monitoring program to measure noise levels within the premises of the place of worship, utilizing additional sound limiters on music emitting equipment as to ensure impact on surrounding areas are nullified. In our proposal per the last response, we have established specific operating hours for activities within the place of worship to minimize disturbances during sensitive times, such as late evenings or early mornings. We have further ensured that no outdoor place of worship related activities producing sound will occur and we are happy for this to be conditioned on the planning permit to further ensure strict compliance with this element. We are also planning to install timers and motion sensors for outdoor lighting to ensure lights are only activated when necessary and are automatically turned off when not in use to avoid light pollution or potential adverse impacts on other properties.

Site Plan

10. Updated site plans to show:

a. The setbacks of the 'Place of Worship Building' and 'Dining Hall' from title boundaries.

Amended

b. Car parking and access areas fully dimensioned including aisle widths and parking bays.

Amended

c. Confirmation of whether building 7 is to be retained, relocated or removed to facilitate the creation of the carpark.

Amended

d. Food van loading and parking area/s

Amended

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Neighbourhood context and land use plan

11. A neighborhood context plan identifying the purpose or primary use of each neighboring property (adjoining land and land adjacent to Patterson Road) and distance of neighboring dwelling from the subject site.

Amended

Arborist assessment

14. Construction impact assessment of all trees (including neighboring trees as applicable) where a Tree Protection Zone (TPZ) will be encroached by the proposed buildings and/or works.

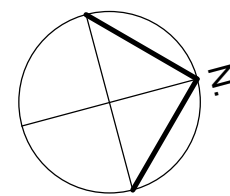
Amended

Acoustic Report

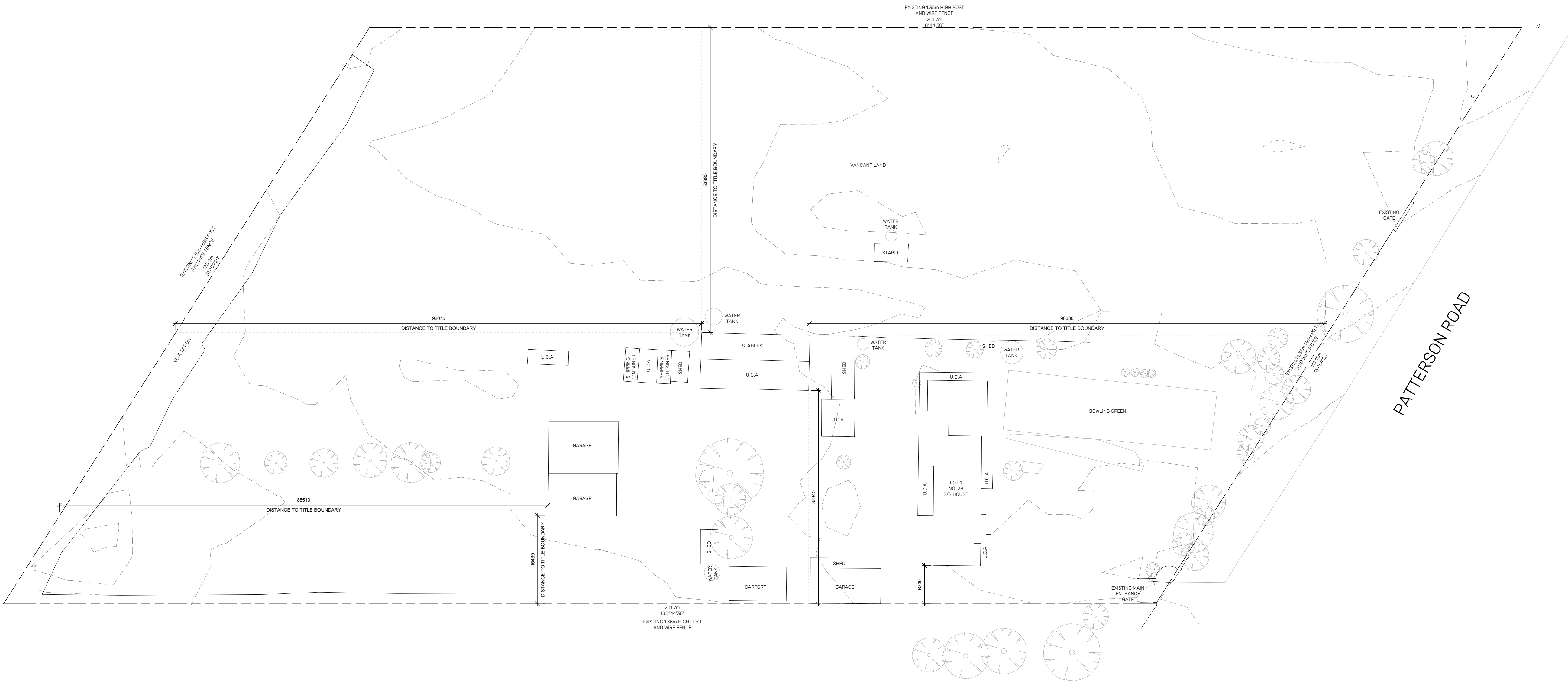
16. An acoustic impact assessment that determines the likelihood and extent of off-site impacts to all sensitive noise receptors within vicinity of the subject site, taking into account normal operations of the activity and any special or calendar events.

An amended acoustic report has been submitted accounting for this detail.

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EXISTING SITE CONDITIONS:
1:400

U.J.A

URBAN JUNGLE ARCHITECTURE
GUELBO VIC 3215
M 461 401 012 336
david@urbanjunglearchitecture.com.au

PROJECT ADDRESS:

28 PATTERSON ROAD,
OFFICER SOUTH

DRAWING TITLE:

EXISTING CONDITIONS PLAN

STATUS:

PRELIMINARY

SCALE:	DRAWN:	COORDINATED:	CHECKED:	DATE:
1:400	D.C.	D.C.	D.C.	23.01.24
REFERENCE:	DRAWING NO:	ISSUE:		
Baba Budha Ji Charitable Association				P6

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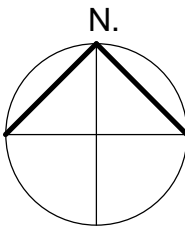
13 - Landscaping area.



○ TREE PROTECTION ZONE

16 x NEW PROPOSED ON SITE GRAVEL
CAR SPACES TO THE SOUTH AS SHOWN,
WITH REFLECTIVE TACTILE GROUND
MARKERS.

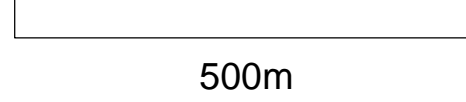
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LEGEND:

- GWZ Green Wedge Zone
- RCZ Rural Conservation Zone
- SUZ Special Use Zone
- UGZ Urban Growth Zone

NEIGHBORHOOD
CHARACTER PLAN:
1:500



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	28 PATTERSON ROAD, OFFICER SOUTH		NEIGHBOURHOOD PLAN			
	STATUS		PRELIMINARY			
	SCALE	DRAWN	COORDINATED	CHECKED	DATE	
	AS SHOWN	D.C	D.C	D.C	23.01.24	
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		Baba Budha Ji Charitable Association				P6



NEIGHBORHOOD CHARACTER PLAN
NOT TO SCALE
DISTANCE TO 30 PATTERSON ROAD
DWELLING AND FARM



NEIGHBORHOOD CHARACTER PLAN
NOT TO SCALE
DISTANCE TO 30 PATTERSON ROAD
DWELLING AND FARM

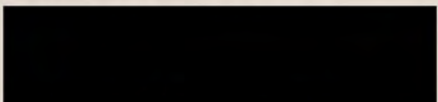
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NEIGHBORHOOD CHARACTER PLAN
NOT TO SCALE
DISTANCE TO 425 PATTERSON ROAD
DWELLING AND FARM



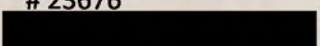
WAVEFORM
ACOUSTICS


info@waveformacoustics.com.au
www.waveformacoustics.com.au

Project – 28 Patterson Rd, Officer South

Date – 25.1.24

23676


E info@mndtownplanning.com.au

P (03) 9016 0416

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ACOUSTIC REPORT INFORMATION SHEET

Project

28 Patterson Rd

Prepared for**Prepared by**

s from Waveform Acoustics

REVISIONS REGISTER	ISSUE DATE
Draft Acoustic Report	31.10.23
Final Acoustic Report	1.12.23
Final Acoustic Report REV A	25.1.24

DOCUMENT REGISTER	ISSUE DATE
Letter of engagement	17.10.23

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1.0 – EXECUTIVE SUMMARY

Waveform Acoustics has been engaged by Darcy Canter to provide an Acoustic Report in relation to the use of the proposed place of worship at 28 Patterson Rd, Officer South. In particular, demonstrating that the proposed use and level of noise generated can be appropriately contained in the site without unreasonable impact on the residences and accommodation in close proximity. This report considers the acoustic items within the Application No T230414.

This report will determine the limits for plant and machinery noise, as well as the allowable noise levels for music and entertainment in accordance with the EPA's 1826.4 noise protocols, and determined based on measured data during a site inspection if the noise present at the facility is within these limits at the nearby Noise Sensitive Receivers (NSR).

The client has specified the following:

- Operational hours of 06:00 – 21:00
 - Typical daily operations of 06:00 – 08:00, 18:00 – 20:00
- Kitchen area to operate from 09:00 – 16:00, weekdays only
- Deliveries to the site between 09:00 – 16:00
- 4 to 7 food trucks for off-site food deliveries within the site at any one time
- There will be a maximum of 55 persons on site
- 2-3 caretakers will live on-site as caretakers
 - *It is our opinion that these caretakers on site should not be considered NSRs as they would typically be expected to be involved in the day-to-day operations of the site.*


The client has advised that worship areas (designated as building 8 in Appendix – Site Plan) will be used for only religious activities, such as: meditation, religious ceremonies, spiritual music, preaching and prayer. As music is a component of this space, site verification of the noise levels on site within 3-months of operation will be required to assess the impacts on nearby NSRs. Additionally, as the facility will be operating from 06:00, there will be risks associated with sleep disturbance. Testing of the site within 3-months of operation will be required to assess the impacts on the nearby NSR.

The site is under the Cardinia planning scheme, situated in a Green Wedge Zone Schedule 1, with Urban Growth Zone to the north. The nearest NSR appears to be to the south of the proposed site, approx. 87m from the proposed place of worship to the southern shared boundary. It is our opinion that compliance at these locations will be indicative of compliance at all NSR locations.

Testing was conducted as unattended measurements from 20/10/23 to 24/10/23.

It is our opinion that the facility can remain compliant with their EPA 1826.4 Noise Protocol obligations during the Day, Evening and Night Period with strict application of the recommendations contained in this report.

Best Regards,


Ronan Barnes MIAAS
Principal Consultant

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2.0 – LEGISLATION AND GUIDELINES

In the preparation of the report the following legislation and guidelines were used:

EPA publication 1826.4: ‘Noise limit and assessment protocol for the control of noise from commercial, industrial and trade premises and entertainment venues’ (Noise Protocol).

This publication provides a protocol for the purpose of determining noise limits for new and existing commercial, industrial and trade premises and entertainment venues as defined by the Regulations. It sets the methodology for assessing the effective noise level to determine unreasonable noise under Regulations 118, 125 and 130. The measurement procedures of this Noise Protocol are also used to determine aggravated noise under Regulations 121, 127 and 131.

Environment Protection Regulations 2021

The objectives of these Regulations are to further the purposes of, and give effect to, the Environment Protection Act 2017 by imposing obligations in relation to environmental protection in Victoria.

State Environmental Protection General Environmental Duty 2021

New environment protection laws will mean that anyone engaging in an activity posing a risk of harm to human health and the environment, from pollution or waste, must manage that risk to prevent harm as far as reasonably practicable. This general environmental duty applies to all Victorians. It means you will need to proactively assess and manage the risks of harm from your activities. Eliminating or reducing risk is important because industry activities could impact - Noise – affecting people’s sleep; communication, cognition and learning; domestic or recreational activities; tranquillity and enjoyment inside and outside

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3.0 – ACOUSTIC ASSESSMENT

DETAILS OF TESTING

An ARL Ngara noise logger recorded the environmental noise data calibrated prior to and after measurement.

EQUIPMENT REGISTER	S/N	CALIBRATION DATE
ARL Ngara noise logger	878153	due 2.11.24
SV 33A Calibrator	73304	due 22.11.23

DATA & TIME	LOCATION
20/10/23, 13:45 – 24/10/23, 10:45	Within the proposed site, approx. 2m from front boundary, facing Patterson Rd.

ATMOSPHERIC¹

Date	Temperature (C°) min/max	Rain (mm)	Windspeeds (km/h) 9am/3pm
20/10/23	13.3/28.4	0.0	4/6
21/10/23	17.0/20.5	0.0	13/6
22/10/23	11.5/14.1	0.8	20/22
23/10/23	10.4/17.8	1.2	13/11
24/10/23	11.2/no data	0.2	13/17

Weather conditions have been considered when processing data.

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¹ <https://web.archive.org/web/20231024230029/http://www.bom.gov.au/climate/dwo/202310/html/IDCJDW3112.202310.shtml>

3.1 – ACOUSTIC ASSESSMENT, cont.

1826.4 NOISE PROTOCOL, PLANT & MACHINERY

EPA 1826.4 DETERMINED LIMITS FOR MECHANICAL SERVICES

PERIOD*	1826.4 ZONING LEVEL	EXISTING LEVEL, dB L _{A90}	DETERMINED LIMIT, dB L _{Aeq}
DAY	50	39	50 (Neutral)
EVENING	44	37	44 (Neutral)
NIGHT	39	35	39 (Neutral)

*Please refer to Appendix – Operating Hours for details of operating periods.

This table describes the external noise limits set in the EPA 1826.4 Noise Protocol in relation to mechanical services type noise, not music.

DETERMINED LIMITS:

Day: 50dB L_{Aeq}

Evening: 44dB L_{Aeq}

Night: 39dB L_{Aeq}

Any items of plant and machinery such as but not limited to air conditioning systems, exhaust and extraction systems must be within the limits as set out above.

Any new plant or machinery should have positioning, make and model verified by an acoustic consultant to ensure compliance is maintained.

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3.2 – ACOUSTIC ASSESSMENT, cont.

1826.4 NOISE PROTOCOLS, ENTERTAINMENT & MUSIC ACTIVITIES

EPA 1826.4 DETERMINED NOISE LIMITS FOR MUSIC AND ENTERTAINMENT ACTIVITIES

PERIOD*	CALCULATED LIMIT	EXISTING LEVEL, dB L _{A90}				DETERMINED LIMIT, dB L _{Aeq}			
DAY	Measured dB L _{A90} + 5dB(A)	39				44			
EVENING	Measured dB L _{A90} + 5dB(A)	37				42			
NIGHT	Measured dB L _{OCT90} + 8dB(A)	OCTAVE BAND CENTRE FREQUENCY (Hz)							
		Hz	63	125	250	500	1K	2K	4K
		MEASURED	42	33	26	27	24	24	10
		LIMIT	50	41	34	35	32	32	18

*Please refer to Appendix – Operating Hours for details of operating periods.

This table describes the external noise limits set in the EPA 1826.4 Noise Protocol in relation to noise associated with entertainment, specifically music and the activities which may be involved.

DETERMINED LIMITS FOR AN INDOOR VENUE:

Day: 44dB L_{Aeq}

Evening: 42dB L_{Aeq}

Night:

	OCTAVE BAND CENTRE FREQUENCY (Hz)						
FREQUENCY (Hz)	63	125	250	500	1K	2K	4K
MEASURED (L _{OCT90})	42	33	26	27	24	24	10
LIMIT (L _{OCT10})	50	41	34	35	32	32	18

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4.0 – SITE DESCRIPTION

The site was an existing rural property on a 5-acre lot with an existing dwelling and various other structures on the site, such as garages, sheds and studios separate from the main dwelling. It is our understand that there will be limited new development on the site, and these existing structures will be used for the purposes of the place of worship.

The client has advised that there will be a maximum of 5 staff on site at any one time, including to 2-3 caretakers/devotees staying on-site in the dedicated housing.

Existing garages to be used to store chairs, mats tables and other maintenance tools.

The shed structures at the rear of the site are intended to be used as a place of worship for meditation, religious ceremonies, preaching and prayer, with music played in this area. Any music played will need to comply with the EPA 1826.4 limits for Music & Entertainment.

There will also be a dining hall in place of where there previously stables. This area is to operate 09:00 – 16:00 on weekdays and will be used to supply food to people on-site, but also to prepare food to be taken by food vans and delivered elsewhere.

The nearest NSR to the site appear to be immediately to the south, and to the southeast, however as there is Urban Growth Zoning to the north of the site, we expect that there could also be new NSR to the north of the site, across Patterson Rd.

Additionally, approx. 600m to the west, there is a new development that is largely residential. While we do not anticipate this to affect the allowable noise levels on site at 28 Patterson Rd, it is indicative of the growing area, and that the background noise levels may increase over the coming years, and reassessment of the allowable limits may be required if background noise levels increase notably.

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5.0 – REQUIREMENTS FOR COMPLIANCE

MUSIC NOISE LIMITER

Although we would not typically expect noise levels from music at the same intensity at a typical music venue, as the site will operate in the Night Period, nearby NSR to the site, and the background levels are currently measured relatively low, there will need to be a way to ensure compliance in met.

In order to ensure that EPA 1826.4 music noise limits are not breached, we recommend noise limiters be installed.

A noise limiter such as a Cesva LF200, which is to be site calibrated by a suitable acoustic professional to ensure that music limits are not exceeded at the nearest NSR.

This type of limiter is connected in line with the audio system and reduces the audio signal to compliant levels if the calibrated limit is ever exceeded.

Any sound system or amplified music must be running through this limiter and must not be bypassed under any circumstance. The Cesva LF200 can keep logs on noise levels present on site, and these logs should be made available to council upon request.

Calibration of this limiter needs to take into account doors/windows and other penetrations where music will escape the room and propagate towards the NSR, and limiter calibrated to ensure compliance if windows or doors are to be left open when using this areas.

Additionally, in efforts to reduce the impacts on the residential amenity of the area, playing music in the Day and Evening Periods only should be considered.

EXTERNAL MUSIC/PA SYSTEMS/ACOUSTIC INSTRUMENTS

Due to the nearby residential area, amplified music/PA systems must not be used outdoors.

ACOUSTIC INSTRUMENT ASSESSMENT

If acoustic, non-amplified instruments are being played within the facility, noise levels will need to be site confirmed to ensure that noise levels are not exceeded at the NSR.

In the case that the level of music noise is exceeding the EPA limits at the NSR, additional treatments/upgrades to the wall and ceiling systems of the rooms containing acoustic instruments, to enhance the noise attenuating properties, will be required.

As the noise from acoustic instruments is not necessarily amplified, noise limiters cannot reduce the noise produced from acoustic instruments.

Without appropriate measures to attenuate the noise from certain instruments, there will have to be management procedures in place to identify particularly loud instruments and restrict their use.

An assessment of music noise must be done within 3-months of the site being in operation, in order to determine the impacts of acoustic instruments on the nearest NSR. This assessment will determine the appropriateness of the existing wall/ceiling systems and whether or not upgrades will be required to maintain compliant noise levels.

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5.1 – REQUIREMENTS FOR COMPLIANCE, cont.

PLANT & EQUIPMENT ASSESSMENT

Based on the distance from the existing structures on site to the nearest NSR, we would anticipate that any plant and equipment on site should be within the determined EPA limits, however this must be site confirmed by way of acoustic assessment during the operation of the site, including the kitchen area.

If the noise levels exceed the EPA 1826.4 limits, or there are measurements of over 65dB LAmax (level indicative of sleep disturbance) at the nearest NSR, additional works will be required in the form of a barrier around any plant and equipment, or acoustic fencing in areas of concern.

SIGNAGE IN CAR PARK AREA

Due to the site operating within the Night Period, signage should be displayed in the car park area to remind patrons to be considerate of the surrounding residential area.

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6.0 – EPA GENERAL ENVIRONMENTAL DUTY (GED)

EPA General Environmental Duty 2021 sets out the following guidelines to follows:

- Understand your duties under the EP Act
- Identify Hazards
- Assess Risks
- Manage the Risks
- Implement Controls

UNDERSTAND YOUR DUTIES UNDER THE EP ACT

Anyone engaging in an activity that poses risk of harm to human health and the environment, from pollution or waste, or noise must eliminate or reduce that risk. You also need to eliminate or reduce risk as far as reasonably practicable. You can do this by putting appropriate controls in place that are proportionate to the risk.

Your approach to managing risk will depend on the complexity and scale of your activities or project, as well as the nature of the risks you need to manage.

MANAGE THE RISKS

- Identify Hazards
- Assess Risk
- Check Controls
- Implement Controls



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6.1 – EPA GENERAL ENVIRONMENTAL DUTY (GED), cont.



IDENTIFY POTENTIAL NOISE HAZARDS

The first step in the risk management process is to identify your hazards (i.e. the activities that could cause harm).

This involves looking at your activities, gathering information about the site and its surrounding areas, and considering if the environment could be impacted.

For this venue, we have noted the following potential noise sources that could cause harm:

- Music noise
- Noise from parking area
- Noise from kitchen area

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6.2 – EPA GENERAL ENVIRONMENTAL DUTY (GED), cont.



ASSESSMENT OF RISK

How the risks associated with each hazard you identified in step one could lead to harm, how severe that harm could be and the likelihood of it occurring.

The first step is to assess the likelihood of a hazard causing harm. Likelihood is based on what is known, or should be known, about the hazard and the way circumstances and activities affect the hazard.

Likelihood can be rated as:

- **certain:** expected to happen regularly under normal circumstances
- **very likely:** expected to happen at some time
- **likely:** may happen at some time
- **unlikely:** not likely to happen in normal circumstances
- **rare:** could happen but probably never will.

MUSIC NOISE:

Based on the distances to the nearest NSR, and assuming music will be at background levels, based on the size of the place of worship, with anticipate the risk of harm to be **unlikely**. Notwithstanding, an assessment of the impacts, particularly in the early morning Night Period, during the use of the site, will be required to ensure that noise levels that would be indicative of sleep disturbance are not present.

PARKING AREA NOISE:

Based on the description of its use from the client, size of the lot, and distance to the nearest NSR, we would anticipate that the risk of harm in **unlikely**, however, reasonably practicable methods to ensure that the neighbourhood amenity is not being disturbed should be put in place.

KITCHEN AREA NOISE:

Based on the distance to the nearest NSR, we would anticipate that the risk of harm in **unlikely**, however the plant and equipment on site must be assessed when the site is in operation to confirm the levels present and to ensure limits are not being exceeded.

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6.3 – EPA GENERAL ENVIRONMENTAL DUTY (GED), cont.



IMPLEMENT CONTROLS

- This step involves identifying the most appropriate controls to manage the risks you assessed at step two.
- You may need to implement multiple controls to minimise the risk of harm that a single hazard presents.
- You can use a hierarchy of controls to help select appropriate controls. Aim to eliminate the hazard as the most preferred approach.



Currently, we are recommending the implementation of our recommendations in section 5 of this report, where relevant.

Additional site assessments for plant & equipment, music and other noises from the site during operation must be assessed within 3-months, and additional controls may be required, based on the findings during the assessment.

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6.4 – EPA GENERAL ENVIRONMENTAL DUTY (GED), cont.



CHECK CONTROLS

Monitoring controls once implemented will allow you to evaluate their effectiveness and identify any changes you may need to make to them and/or your risk assessment process.

Once the site is operating, an assessment of the noise levels present will be required within 3 months of the operation of the site to confirm compliance or otherwise, and to identify any other concerns in regard to noise.

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7.0 – SUMMARY

Based on the available environmental noise data and plans received, implementation of the measures outlined in this acoustic assessment report would be expected to minimise the noise impact on the neighbouring residences from the site and any plant and machinery.

This report gives consideration to acoustic matters associated with the operation of the site, with recommended acoustic treatments and relevant practices to maintain compliance to the EPA 1826.4 Noise Protocol.

Where clarification is required or the recommended acoustic treatments may be found to impact on other services or statutory requirements, independent advice, as appropriate, is to be sought in respect to any such impact that these acoustic works may have on the building design and construction.

Rohan Barnes

Waveform Acoustics

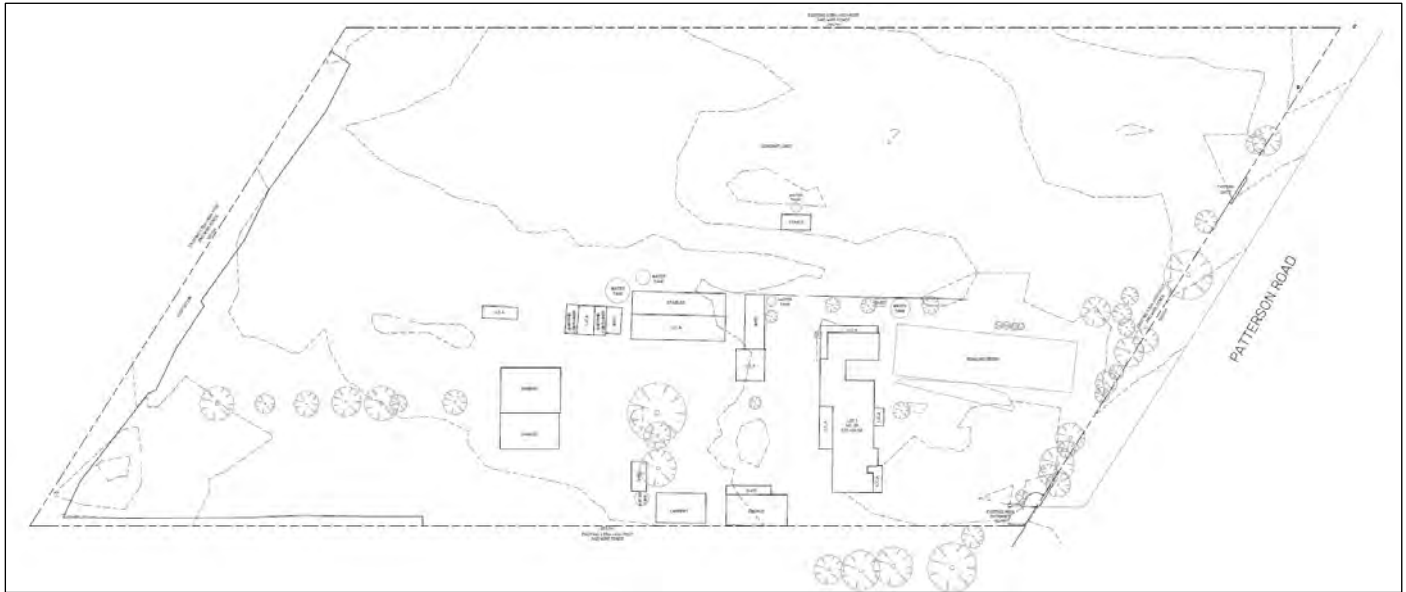
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APPENDIX – SITE MAP



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APPENDIX – SITE PLAN



Highlighted in red are areas of concern regarding noise:

- 8, worship area
- 11, dining hall
- 12, kitchen
- Parking area

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APPENDIX – SITE PHOTOS



Logger location at the front of the lot.

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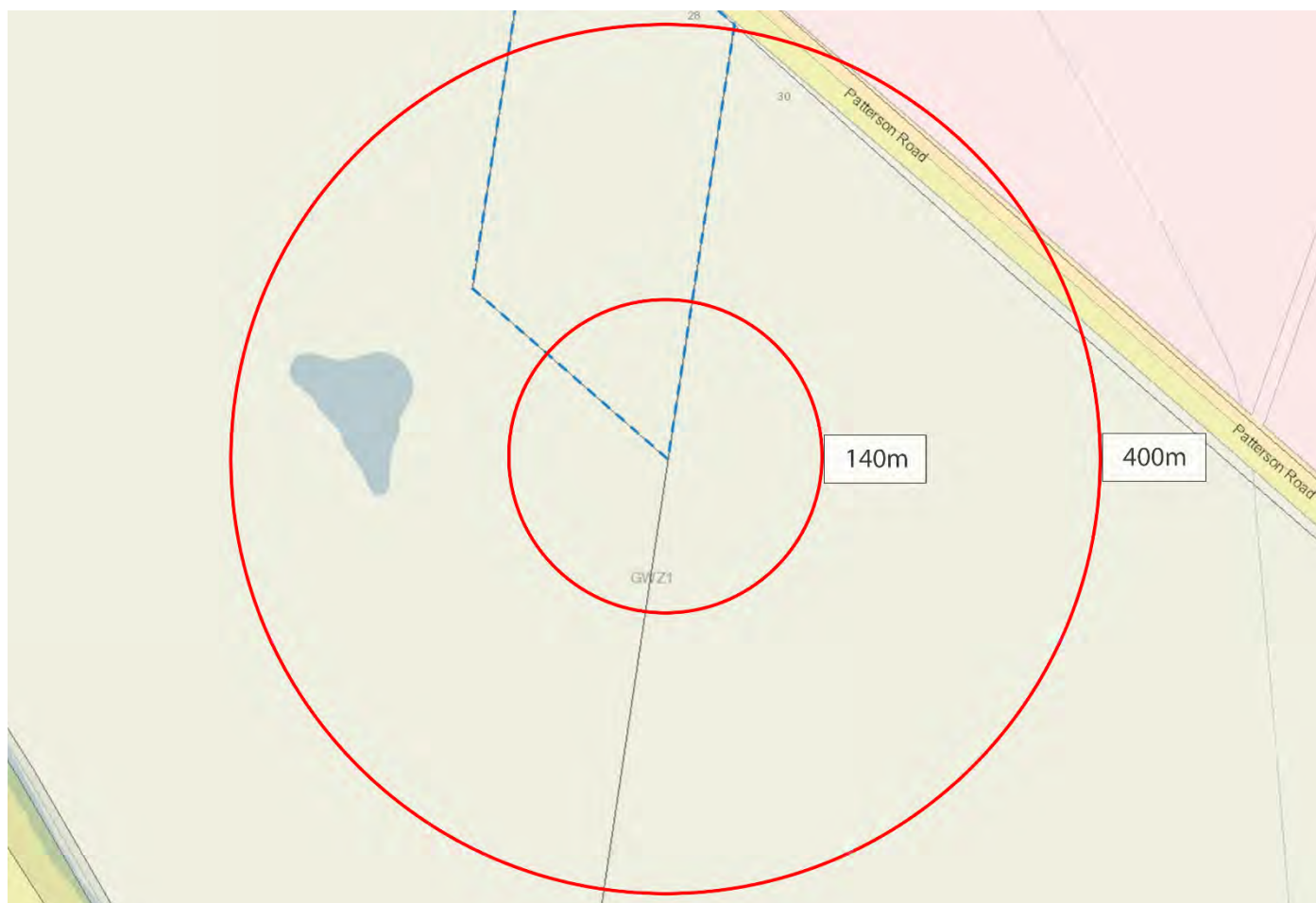
Front yard area of the existing property.



Patterson Rd is currently gravel road only, however 600m to the west is new developments, indicating that this area may be built up in the near future, and roads sealed.

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APPENDIX – ZONING MAP



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APPENDIX – ASSESSING NOISE FROM COMMERCIAL, INDUSTRIAL AND TRADE PREMISES

1. Assessment location, alternative assessment location and alternative assessment criteria.

1.1 Assessment location

(56) Noise from commercial, industrial and trade premises must be assessed at a location in a noise sensitive area where the maximum effective noise level occurs or, for proposed premises, is predicted to occur.

1.2 Alternative assessment location

(57) Notwithstanding clause 56, an alternative assessment location may be specified where:

- a. two or more premises contribute to the effective noise level and a measurement point is required that is not influenced by any noise source from any other commercial, industrial or trade premises;
- b. atmospheric conditions affect the effective noise level at the noise sensitive area and a measurement point is required closer to the commercial, industrial or trade premises under investigation that is not affected by atmospheric conditions;
- c. a measurement point in a noise sensitive area is not readily accessible and a more suitable measurement point is required; or
- d. extraneous noise affects the effective noise level at the noise sensitive area and a measurement point is required at a location that is not affected by extraneous noise.

(58) The alternative assessment location must be chosen so that the noise at the alternative assessment location is representative of the noise exposure within noise sensitive areas.

(59) An alternative assessment location may be specified either within or outside a commercial, industrial or trade premises.

1.3 Alternative assessment criterion

(60) Where an alternative assessment location is used, an alternative assessment criterion must be determined for that location, for each relevant operating time period.

(61) The alternative assessment criterion must be set so that compliance with this noise level will result in the noise limit at the noise sensitive area not being exceeded, for the relevant operating time period.

(62) The alternative assessment criterion must be calculated having regard to:

- a. the sound paths to the noise sensitive area and other factors which may affect the propagation of sound.
- b. the character of the noise from commercial, industrial and trade premises that will be experienced in noise sensitive areas, and the value of the relevant duration or noise character adjustments as described in clauses 79 to 81 and clauses 82 to 88.
- c. the cumulative contribution from other industrial, commercial or trade premises affecting noise sensitive areas, as required in Regulation 119.
- d. the uncertainty of the calculation method used.

Note: The value of a specific alternative assessment criterion is determined from the relevant noise limit, the difference between the sound paths from the industry being assessed to the noise sensitive area, and the sound paths to the alternative assessment location. It may also be influenced by the character of the noise. However, to ensure that meeting an alternative assessment criterion is consistent with complying to the relevant noise limit that applies within the considered noise sensitive area, an alternative assessment criterion is not subject to the base noise limits set out in Regulation 118(2) or to the maximum value of 55 dB(A) for the night period set out in Regulation 118(3).

2. Effective noise levels

(63) The effective noise level is determined, for noise from commercial, industrial and trade premises, as a 30-minute equivalent sound pressure level $L_{Aeq,30min}$ adjusted, where relevant for:

- a. duration (A_{dur})
- b. noise character i. tonality (A_{tone})
ii. impulse (A_{imp})
iii. intermittency (A_{int})
- c. measurement position
i. reflection (A_{refl})
ii. indoor (A_{ind})

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(64) The effective noise level is calculated using Equation 1:

$$ENL = L_{Aeq} + A_{dur} + A_{tone} + A_{imp} + A_{int} + A_{refl} + A_{ind} \text{ (Equation 1)}$$

(65) For the purpose of determining the effective noise level the noise is measured using the Fast time weighting and the A-frequency weighting network.

(66) The L_{Aeq} and relevant adjustments must be applied to one decimal place.

(67) The effective noise level is rounded to the nearest decibel.

Existing premises

(68) For existing premises, the effective noise level is determined based on measurements within the noise sensitive area or at an alternative assessment location, in accordance with clauses 71 to 90.

(69) Notwithstanding clause 68 the effective noise level for existing premises can be calculated in accordance with clause 70 to facilitate the assessment of noise.

Proposed premises or proposed extensions of existing premises

(70) For proposed premises or proposed extensions of existing premises, the effective noise level must be calculated having regard to:

- a. all existing noise sensitive areas or future noise sensitive areas relevant to approved developments;
- b. the sound paths to the noise sensitive area and other factors which may affect the propagation of sound;
- c. the character of the noise that will be experienced in noise sensitive areas, and the value of the relevant duration and noise character adjustments to apply (clauses 79 to 81 and clauses 82 to 88);
- d. the cumulative contribution from existing and approved premises affecting noise sensitive areas;
- e. the uncertainty of the calculation method used.

3. Measurement of noise from commercial, industrial and trade premises

3.1 Measurement point

Outdoor measurement

(71) The measurement point must be located within a noise sensitive area or at an alternative assessment location.

(72) If the measurement point is in a noise sensitive area, it must be located outdoors unless the conditions for an indoor measurement apply in accordance with clause 74.

(73) The measurement point within a noise sensitive area must be located at a point where the maximum effective noise level occurs.

Indoor measurement

(74) The measurement point must be located indoors, in a sensitive room within a noise sensitive area, when:

- a. the noise (including vibration induced noise) is transmitted into the affected room through a solid wall, floor or ceiling from another part of the same building or an adjoining building; or
- b. an outdoor measurement that represents noise exposure within the noise sensitive area cannot be made (neither within the noise sensitive area, nor at an alternative assessment location), even when a microphone is placed through a window opening on a boom. (75) If an indoor measurement is made in a sensitive room, all its windows and doors must be closed.

3.2 Atmospheric conditions

(76) Where the effective noise level at the noise sensitive area is likely to be affected by atmospheric conditions, an alternative assessment location located near to the commercial, industrial or trade premises must be used unless there is no appropriate alternative assessment location (refer clause 77).

(77) If an alternative assessment location is not appropriate, the effective noise level is calculated as the arithmetic average of three measurements taken on different days within a 30-day period at the noise sensitive area.

(78) The measurements in clause 77 must represent the worst-case scenario of exposure, giving regard to the operation conditions of the noise source and atmospheric conditions favourable to the propagation of sound.

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3.3 Duration adjustment

(79) If noise emissions from the commercial, industrial or trade premises investigated do not occur over the whole continuous 30-minute period, the duration adjustment applies.

(80) The duration adjustment is determined from the ratio of the total time for which the source is operating over the measurement period (per cent on time) using Equation 2:

$$A_{dur} = 10 \log_{10} (\text{total time source operating} / \text{measurement period}) \text{ dB (Equation 2)}$$

(81) When determining the duration adjustment for noise that is impulsive in nature, any impulse noise emission is deemed to be audible for 10 seconds after the occurrence of the emission.

3.4 Adjustments for noise character

Tonality adjustment

(82) When the noise is tonal in character then an adjustment is made based on observations of the noise.

(83) The following adjustments apply –

- when the tonal character of the noise is just detectable then $A_{tone} = +2$ dB;
 - when the tonal character of the noise is prominent then $A_{tone} = +5$ dB.
- (84) When a tone is present, but observations do not provide certainty with regards to the value to apply for the tonal adjustment, the adjustment may be determined using the objective tonal method in accordance with Annex C.

Impulse adjustment

(85) When the noise is impulsive in character the following adjustments apply:

- when the impulsive character of the noise is just detectable then $A_{imp} = +2$ dB.
 - when the impulsive character of the noise is prominent then $A_{imp} = +5$ dB.
- (86) When determining the duration adjustment for noise that is impulsive in character, any impulse noise emission is deemed to be audible for 10 seconds after the occurrence of the emission.

Intermittency adjustment

(87) An intermittency adjustment applies when the noise:

- increases in level rapidly, and by at least 5 dB, on at least two occasions during a 30-minute period; and
 - maintains the higher level for at least a one-minute duration.
- (88) The intermittency adjustment is determined using Table 5.

Table 5: Intermittency adjustment for noise from commercial, industrial and trade premises

Time Period	Increase in level	Adjustment
Day period	> 10 dB	+ 3 dB
Evening period or Night period	5-10 dB	+ 3 dB
	> 10 dB	+ 5 dB

3.5 Adjustments for measurement position

Reflection adjustment

(89) If the microphone position is located between 1, and 2 metres from an acoustically reflective surface, the reflection adjustment is applied by subtracting 2.5 dB from the measured noise level, so that $A_{refl} = -2.5$ dB.

Indoor adjustment

(90) If the measurement is conducted indoors, an indoor adjustment applies and is determined using Table 6.

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Note: The intent of the indoor adjustment is to allow for the assessment of noise emissions from commercial, industry and trade premises, against the noise limits that are defined as outdoor noise levels, when an outdoor measurement would not allow for this assessment. The indoor adjustment is not meant to be used to determine or assess the effectiveness of the design response and construction of buildings affected by noise from commercial, industry and trade premises.

Table 6: Indoor adjustment for noise from commercial, industrial and trade premises

Circumstances		Adjustment
<ul style="list-style-type: none"> The noise reduction performance of the building envelope is known, in octave or one third octave bands, from design specifications, calculations or measurements, and; The frequency spectrum of the indoor noise has been measured. 		Site specific adjustment based on the noise reduction performance of the building envelope (taking into account the volume and acoustic properties of the room).
<ul style="list-style-type: none"> Where the noise reduction performance is unknown, the adjustment is based on the following assessment of the building envelope: 	- Meets or exceeds energy efficiency requirements set out in the Building Code of Australia 2006 (BCA 2006) including sealing requirements.	+20 dB
	- Does not meet energy efficiency requirements or sealing requirements set out in the BCA 2006.	+15 dB

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APPENDIX – HOW TO TEST FOR NOISE LEVEL COMPLIANCE

As described in EPA Noise Protocol 1826.4 – Commercial Noise Control Music and Equipment

Indoor entertainment venues during operation

(125) For the purpose of determining the effective noise level, the measurement must be made at a time when the greatest intrusion of music noise into a noise sensitive area is likely to occur, and include at least 15 cumulative minutes of music audible at the measurement point. The music noise is measured –

- for the day and evening period using the Fast time weighting and the A-frequency weighting network;
- for the night period using the Fast time weighting, and the linear weighting network.

(126) Where the measurement point is outdoors and is between 1 and 2 metres from an acoustically reflecting surface an adjustment of -2.5 dB must be made to the effective noise level.

(127) Where an indoor measurement is required, in accordance with clause 106 –

- a. for the purposes of clause 106(a)(i) the measurement must be made within the sensitive room, with all windows that are not major sound transmission paths closed.
- b. for the purposes of clause 106(a)(ii), the measurement must be made within the sensitive room with
 - i. any openable external window which is a major sound transmission path fully open during the measurement, and
 - ii. all windows that are not major sound transmission paths closed.
- c. for the purposes of clause 106(a)(iii), the measurement must be made within the sensitive room with windows and doors closed.

Proposed indoor entertainment venues:

(128) For proposed indoor entertainment venues or proposed extensions of existing indoor entertainment venues, the effective noise level of music noise must be calculated having regard to –

- a. all existing noise sensitive areas or future noise sensitive areas relevant to approved developments;
- b. the frequency spectrum of the music noise;
- c. the frequency-dependent sound insulation performance of the building within which the venue is located, as relevant;
- d. the sound paths to the noise sensitive area and other factors which may affect the propagation of sound; and
- e. the cumulative contribution from existing and approved entertainment venues or events affecting noise sensitive areas.

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Using an outdoor noise measurement to assess indoor noise levels

(129) An outdoor measurement conducted directly outside a sensitive room can be used to assess the effective noise level indoors when –

- a. assessing music noise from a live music entertainment venue and, in application of clause 53.06 of the VPPs, the agent of change is a noise sensitive residential use; or
- b. assessing music noise from an outdoor entertainment venue in a noise sensitive area within the Docklands Noise Attenuation Area. (130) For the purpose of clause 129 the indoor effective noise level is determined by subtracting the noise reduction performance of the building envelope from the measured outdoor noise level, having regard to the frequency spectrum of the music noise and the specific acoustic conditions of the sensitive room within which the assessment is conducted.

Measurement Point

(106) Where the measurement is to be made in a noise sensitive area, the measurement point must be located outdoors near a sensitive room unless –

- a. For indoor entertainment venues:
 - i. the main transmission path of the music noise entering the sensitive room consists of a floor, ceiling or wall with no openings;
 - ii. an outdoor measurement does not represent the noise exposure within the sensitive room; or
 - iii. the noise sensitive residential use is the agent of change, in application of clause 53.06 of the VPPs.

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APPENDIX – OPERATING TIME PERIODS

From the Environmental Protection Regulations 2021:

116 Definitions—operating time periods

In this division (3), in relation to noise emitted from *commercial, industrial and trade premises*—

day period means –

- Monday to Saturday (except public holidays), from 7am to 6pm

evening period means –

- Monday to Saturday, from 6pm to 10pm; and
- Sunday and public holidays, from 7am to 10pm

night period means –

- 10pm to 7am the following day.

123 Definitions—operating time periods

In this division (4), in relation to music noise emitted from *indoor entertainment venues*—

day and evening period means—

- Monday to Saturday (other than a public holiday), from 7 a.m. to 11 p.m.;
- Sunday or a public holiday (other than if either is preceding a public holiday), from 9 a.m. to 10 p.m.;
- Sunday or a public holiday (if either is preceding a public holiday), from 9 a.m. to 11 p.m.;

night period means—

- Monday to Friday (other than a public holiday or a day preceding a public holiday), from 11 p.m. to 7 a.m. the following day;
- Saturday or any day preceding a public holiday, from 11 p.m. to 9 a.m. the following day;
- Sunday or a public holiday (if neither is preceding a public holiday), from 10 p.m. to 7 a.m. the following day.

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GLOSSARY OF ACOUSTIC TERMS

- Decibel (dB): A logarithmic unit used to express the ratio between two sound pressures or powers. It is a relative measurement with reference to a specific threshold (usually 0 dB for sound pressure).
- dB(A): A-weighted decibels, which apply a frequency weighting to sound measurements to better represent the human ear's sensitivity to different frequencies.
- dB(C): C-weighted decibels, the C-weighting curve is relatively flat and does not emphasize any specific frequency range. It covers the entire audible frequency range with equal weighting. C-weighting is less commonly used in general sound level measurements, but it may be used in specific applications, such as measuring peak sound levels or when the sound being measured contains substantial low-frequency content.
- Octave Band: A frequency band in which the upper frequency is twice the lower frequency (e.g., 63 Hz - 125 Hz).
- Third-Octave Band: A frequency band with higher resolution, splitting each octave into 3 centre frequency measurement points.
- LAeq: Equivalent Continuous Sound Level, an average sound level over a specific time period, often used to represent overall noise exposure.
- LMax: Maximum A-weighted sound level, the highest instantaneous sound level during a particular time period.
- LAmin: Minimum A-weighted sound level, the lowest instantaneous sound level during a particular time period.
- LA90: The A-weighted sound pressure level which is exceeded for 90% of the time interval considered.
- LOCT10: The 'C' weighted or linear sound pressure level for a specified octave band that is exceeded for 10% of the time.
- Sound Pressure (SPL): The amplitude of sound waves in a specific medium, typically measured in decibels (dB).
- Sound Power: The total amount of acoustic energy radiated by a sound source, measured in watts (W) or decibels (dB).
- Frequency (f): The number of complete cycles of a sound wave occurring per second, measured in Hertz (Hz).
- Sound Level Meter (SLM): An instrument used to measure sound pressure levels in decibels.
- Reverberation Time: The time it takes for a sound to decay by 60 dB after the sound source has stopped, indicating the acoustic characteristics of a room.

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SMOLDERS[®] GEOTECHNICAL

Land Capability Assessment Report

SITE ADDRESS: 28 Patterson Road, OFFICER SOUTH, VIC 3809

CLIENT:

[REDACTED]
C/- M & D Town Planning
info@mndtownplanning.com.au
03 9016 0416

DATE: 26 October 2023

REFERENCE NUMBER: 23J6991

UPDATED:

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1. Introduction

THE CONSULTANTS

Smolders Geotechnical Pty Ltd has been engaged to undertake a Land Capability Assessment (LCA) for construction of a place of worship with ancillary kitchen and staff living quarters at a site at 28 Patterson Road, OFFICER SOUTH, VIC 3809.

The field investigation and report have been undertaken and prepared by suitably experienced staff.

██████████ B.Sc (soils) PhD. undertook the site investigation and prepared this report.

Smolders Geotechnical Pty Ltd has appropriate professional indemnity insurance for this type of work.

REPORT SUMMARY

I understand that this report will accompany an application for a Septic Tank Permit to Install submitted to Cardinia Shire Council for an onsite wastewater management system for the proposed development at the above site. The site is to cater for a maximum of 55 patrons at any one time plus 5 permanent staff that will be resident on site. This leads to a daily hydraulic load of 2550 litres (maximum) and a daily BOD of 2500 litres. Information provided by client.

This document provides information about the site and soil conditions. It also provides a detailed Land Capability Assessment for the site and includes a conceptual design for a suitable onsite wastewater management system, including recommendations for monitoring and management requirements. A number of options are provided for both the treatment system and Land Application Area (LAA).

However, the wastewater should be treated either to secondary level by a suitable EPA-approved treatment system and the effluent applied to land via sub-surface drip irrigation.

Council and/or Referral Authorities may require secondary treatment prior to disposal as policy regardless of the results of the Land Capability Assessment.

SITE OVERVIEW

The site is a partially developed, flat paddock and is consistent with a green wedge zone.

The proposed LAA is situated on flat land. The area has a very good exposure and aspect. The area is within a Land Subject to Inundation Overlay.

There is a pond/dam in the southeast corner of the site and a dam approximately 45m southwest of the southwest corner of the site. Cardinia Creek is approximately 275m west of the site and there is a drainage line/creek approximately 125m east of the site.

There is sufficient land available for sustainable onsite effluent management that maintains the required buffers to protect any nearby surface waters and floodways.

I did not observe any sensitive environmental receptors within a 30m setback from the recommended Land Application Area envelope.

2. Description of the Development

Site Address: 28 Patterson Road, OFFICER SOUTH, VIC 3809. A Land Channel Property Report provides a locality plan and indicates the location of the site of the proposed development (Appendix 9.8).

Client/Agent: [REDACTED] C/- M & D Town Planning

Postal Address: 11 Hayward Road, FERNTREE GULLY VIC 3156

Contact: 03 9016 0416

Council Area: Cardinia Shire Council.

Zoning: Green Wedge Zone (GWZ), Land Subject to Inundation Overlay (LSIO).

Allotment Size: 2.02 Hectares.

Domestic Water Supply: Assume not available at site.

Anticipated Wastewater Load: Assume a residence with full water-reduction fixtures at maximum occupancy with a separate place of worship and a kitchen facility capable of supplying food for 55 patrons. Wastewater generation = 150 L/person/day (residence) and = 30 L/person/day (kitchen)(source Table 4 of the EPA Code of Practice 891.4). However, even though the site may not be fully utilised at all times of the year, the effluent treatment and disposal system must be able to cope with "full" occupancy, hence; the wastewater system is to be designed to cope with surge flows equivalent to full occupancy.

Availability of Sewer: The area is unsewered and highly unlikely to be sewerred within the next 10-20 years, due to low development density in the area and the considerable distance from existing wastewater services.

3. Site and Soil Assessment

I undertook a site investigation on the 9th October 2023.

3.1 SITE KEY FEATURES

Table 1 summarises the key features of the site in relation to effluent management proposed for the site.

NOTE:

- There is evidence of a seasonal/perched water table at the upper to lower soil horizon boundary and mottling within the lower soil horizon at depth;
- There is sufficient land available for effluent disposal;
- Very good exposure and aspect;
- The site is flat;
- The risk of effluent transport offsite is low.

Both aerial and site photographs are appended to provide current site context (Appendix 9.1).

3.2 Table 1: Risk Assessment of Site Characteristics

Feature	Description	Level of Constraint	Mitigation Measures
Buffer Distances	All relevant buffer distances in Table 5 of the EPA Code of Practice (2016) are achievable from the proposed effluent management area.	Minor	Locate Land Application Area appropriately.
Climate	Average annual rainfall 851.75mm SILO data Average annual evaporation 1269.54mm SILO data (Appendix 9.5). Rainfall exceeds evaporation on average for 5 months of the year.	Major	Plant LAA with high evapotranspiration vegetation
Drainage	Some signs or likelihood of dampness.	Moderate	Secondary treatment and sub-surface drip irrigation.
Erosion & Landslip	No evidence of sheet or rill erosion; the erosion hazard is low. No evidence of landslip and landslip potential is low.	Nil	NN
Exposure & Aspect	Proposed Land Application Area clear with good all round aspect, and good sun and wind exposure.	Nil	NN
Soil Drainage	Sandy Clayey Silt (Sandy Clay Loam) overlying Sandy Clay, is imperfectly drained. Water removed very slowly in relation to supply, seasonal ponding, all horizons wet for periods of several months, some mottling. Permeability measured as 0.063 m/d using constant head permeameter, consistent with sandy clay/loam.	Major	plant LAA with high evapotranspiration vegetation. Access openings to tanks or other parts of system should be sealed to prevent ingress of water during flood events. Submerged equipment may need regular maintenance, anchoring of tanks to prevent lifting by flood waters.

NN: Not needed

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3.2 Table 1: Risk Assessment of Site Characteristics Continued:

Feature	Description	Level of Constraint	Mitigation Measures
Flooding	The proposed LAA envelope is located within a Land subject to Inundation Overlay.	Major	Access openings to tanks or other parts of system should be sealed to prevent ingress of water during flood events. Submerged equipment may need regular maintenance, anchoring of tanks to prevent lifting by flood waters. Raise ground level using good quality sandy loam topsoil.
Groundwater	No signs of shallow groundwater tables to 1.8m depth. Indication of seasonal/perched water. Slight mottling within sub-soil	Major	Use of sub-surface drip irrigation or mound system.
Imported Fill	Minor fill observed in places on site.	Moderate	Remove fill where necessary
Land Available for LAA	Considering all the constraints and buffers, the site has ample suitable land for land application of treated effluent.	Nil	NN
Landform	Flat land in proposed LAA	Minor	NN
Rock Outcrops	No rock outcrops observed on site	Nil	NN
Run-on & Runoff	Very low likelihood of run-on or run-off.	Nil	NN
Slope	Flat land.	Nil	NN
Surface Waters	Nearest surface water is > 30 metres horizontal distance to the southwest of proposed LAA.	Minor	NN
Ground Water Bore	No bore recorded within 70m of proposed Land Application Area.	Nil	NN
Vegetation	Mixture of grasses on proposed Land Application Area.	Nil	NN

NN: Not needed

3.3 SITE ASSESSMENT RESULTS

Based on the most constraining site features (climate, drainage and inundation) the overall land capability of the site to sustainably manage all effluent onsite is satisfactory. The proposed effluent management area is located within a Land Subject to Inundation Overlay, however; by using a grease trap, secondary treatment and subsurface drip irrigation, a suitably sized holding/balance tank for use during periods of inundation and/or surge loading, anchoring of all septic and holding tanks and sealed access openings to all relevant parts of the system, there will be ample protection of surface waters and groundwater.

3.4 SOIL KEY FEATURES

The site's soils have been assessed for their suitability for onsite wastewater management by a combination of soil survey and desktop review of published soil survey information as outlined below.

The soils on site have been derived from Allvium (MapCode Qa1) which is the regional geological setting. Appended is a Geovic Map indicating the site location (Appendix 9.7).

3.5 SOIL SURVEY AND ANALYSIS

A soil survey was carried out at the site to determine suitability for application of treated effluent. Soil investigations were conducted at 7 locations in the vicinity of the proposed LAA, as shown in the Test Site Location Plan (Figure 1/Appendix 9.3), using a 90mm hand auger (6 x boreholes) to a maximum depth of 1.8m depth and a hand dug pit to a maximum depth of 800mm. This was sufficient to adequately characterise the soils as only minor variation would be expected throughout the area of interest.

Two soil types were encountered in these investigations. Full profile descriptions are provided in the appended borelogs (Appendix 9.4). Samples of all discrete soil layers for each soil type were collected for subsequent laboratory analysis of pH, electrical conductivity and Emerson Aggregate Class. Table 2 describes the soil constraints in detail for each of the soils encountered.

Soils in the vicinity of the building envelope are characterised as weakly to moderately structured sandy clay loam topsoils overlying a weakly structured to massive sandy clay lower horizon.

Considering the physical and chemical characteristics of the subsoil in this area of the site, in my opinion secondary treated effluent application via sub-surface drip is a suitable and viable disposal system for this site.

Full Laboratory data results are appended (Appendix 9.6).

Table 2 below provides an assessment of the physical and chemical characteristics of the soil type present.

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3.6 TABLE 2: RISK ASSESSMENT OF SOIL CHARACTERISTICS

Feature	Assessment	Level of Constraint	Mitigation Measures
Cation Exchange Capacity (CEC)	5.0 (subsoil) to 4.7 (topsoil) MEQ%. No evidence of restricted plant growth. Calcium and Magnesium dominant ions on exchange sites	Minor	NN
Electrical Conductivity (ECe)	0.013 to 0.018dS/m. No evidence of restricted plant growth on site.	Minor	NN
Emerson Aggregate Class	Topsoil: Slaking/ Some dispersion Class 2	Major	Soil amelioration recommended. Apply gypsum to base of any excavation. (Min 1Kg/m ²)
	Subsoil: Slaking/ Complete dispersion Class 1	Major	Soil amelioration recommended. Apply gypsum to base of any excavation. (Min 1Kg/m ²)
pH	5.3 to 5.5 No evidence of restricted plant growth on site.	Minor	NN
Rock Fragments	No rock fragments	Minor	NN
Sodicity (ESP)	2.2- to 4.6%. Non-Sodic. No evidence of restricted plant growth on site.	Minor	NN
Sodium Absorption Ratio (SAR)	0.05 – 0.1. No evidence of restricted plant growth on site. Sodium concentrations low on exchange sites.	Minor	NN
Soil Depth	Topsoil: Majority of proposed LAA has approximately 400mm depth.	Minor	NN
	Subsoil: Soil depths 400 - 1800mm (minimum thickness). No hardpans occur. No refusal in any boreholes.	Minor	NN
Soil Permeability & Design Loading Rates	Topsoil: Sandy Clay Loam; 3.5mm/day Drip Irrigation Rate (DIR) for sub-surface drip irrigation (Code, 2016).	Minor	NN
	Subsoil: sandy clay; 3mm/day DIR for sub-surface drip irrigation (Code, 2016).	Minor	NN
Soil Texture & Structure	Topsoils: Sandy Clay Loam (Category 4b)	Moderate	Secondary treatment/sub-surface drip irrigation
	Subsoil (>400mm): sandy clay (Category 5c) in accordance with AS/NZS/NZS 1547:2012	Major	Secondary treatment/sub-surface drip irrigation
Water table Depth	Groundwater not encountered. Deepest borehole terminated at 1.8m. Slight mottling of sub-soil suggests seasonal perched water table	Major	Secondary treatment/sub-surface drip irrigation

NN: Not needed

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3.7 OVERALL LAND CAPABILITY RATING

For the soil in the proposed additional land application area (weakly to moderately structured Sandy Clay Loam topsoils overlying a weakly structured Sandy Clay), no features present a moderate or major constraint that cannot be mitigated.

Based on the results of the site and soil assessment tabled above and provided in the Appendices, the overall land capability of the proposed effluent management area is not constrained **as long as either disposal of secondary treated effluent by sub-surface drip irrigation is used.**

4 Waste Water Management System

The following sections provide an overview of a suitable onsite wastewater management system, with sizing and design considerations and justification for its selection. Detailed design for the system should be undertaken at the time of the building application and submitted to Council.

4.1 TREATMENT SYSTEM

The secondary effluent quality required is:

- BOD < 20 mg/L;
- SS < 30 mg/L;

Refer to the EPA website for the list of approved options that are available. Any of the secondary treatment system options are capable of achieving the desired level of performance. The property owner has the responsibility for the final selection of the secondary treatment system and must include the details of it in the Septic Tank Permit to Install application form for Council approval.

4.2 EFFLUENT MANAGEMENT SYSTEM

A range of possible land application systems have been considered, such as absorption trenches, evapotranspiration/absorption (ETA) beds wick trenches, subsurface/surface irrigation and mounds.

The nominated and preferred system is secondary treatment with pressure compensating subsurface irrigation. The system should include a holding/balance tank capable of holding any surge loads and capable of holding any effluent produced during periods of inundation, the system should also have a grease trap fitted between the kitchen and secondary treatment system. The effluent produced at the residence, place of worship and dining hall should also be connected to the system. Subsurface irrigation will provide even and widespread dispersal of the treated effluent within the root-zone of plants. This system will provide beneficial reuse of effluent, which is desirable given that the site is possibly not serviced by town water. It will also ensure that the risk of effluent being transported off-site will be negligible.

The client should note that council may require secondary treatment of effluent as standard.

4.3 DESCRIPTION OF THE IRRIGATION SYSTEM

A detailed irrigation system design is beyond the scope of this report; however, a general description of both recommended systems is provided here for the information of the client and Council.

SUB-SURFACE DRIP IRRIGATION

Subsurface irrigation comprises a network of drip-irrigation lines that are specially designed for use with wastewater. The pipe contains pressure compensating emitters (drippers) that employ a biocide to prevent build-up of slimes and inhibit root penetration. The lateral pipes are usually 1.0m apart for loams, installed parallel along the contour. Installation depth is 150mm to 200mm in accordance with AS/NZS 1547:2012. It is critical that the irrigation pump be sized properly to ensure adequate pressure and delivery rate to the irrigation network. A sequencing valve should be installed to separate the drip lines into two or more batches, this will ensure an even disposal of the effluent across the system.

A filter is installed in the main line to remove fine particulates that could block the emitters. This must be cleaned regularly (typically monthly) following manufacturer's instructions. Vacuum breakers should be installed at the high point/s in the system to prevent air and soil being sucked back into the drippers when the pump shuts off. Flushing valves are an important component and allow periodic flushing of the lines, which should be done at six monthly intervals. Flush water can be either returned to the treatment system, or should be released to a small dedicated gravel-based trench.

All trenching used to install the pipes must be backfilled properly to prevent preferential subsurface flows along trench lines. Irrigation areas must not be subject to high foot traffic movement, and vehicles and livestock must not have access to the area otherwise compaction around emitters can lead to premature system failure.

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4.4 SIZING THE IRRIGATION SYSTEM

Residence for five occupants plus place of worship, dining hall and community kitchen for maximum of 55 patrons.

SUB-SURFACE DRIP IRRIGATION

To determine the necessary size of the irrigation area, detailed water balance modelling has been considered using the Excel water balance tool in the Victorian Land Capability Assessment Framework (2014) and the EPA Code (2016). The final sizing of the irrigation system has been undertaken adopting a DIR from Table 9 of the EPA code (2016). We have used a DLR/DIR of 3.5 mm/d (Table 9. EPA 2016) to take into account the Sandy Clay Loam topsoil within the proposed LAA. The minimum area required using the detailed water balance method is **1889 square metres (say 2000 square metres)**. The spreadsheet calculations are shown below on p.15.

Precipitation and evaporation data from SILO has been used in the modelling. (See Appendix 9.5 for complete data).

As well as water balance modelling a preliminary nutrient balance has been considered to check that the Land Application Area is of sufficient size to ensure nutrients are assimilated by the soils and vegetation. It is acknowledged that a proportion of nitrogen will be retained in the soil through processes such as mineralisation and volatilisation.

Reference: Victoria Land Capability Assessment Framework Jan 2014 (app 2).

NOTE: Soil has a high PRI (phosphorus retention index) in clayey soils. Phosphorus is readily removed under these circumstances from wastewater fixation in clayey soil by the action of adsorption. Phosphate in dispersed effluent is lost within a few centimetres of the soil.

This leaves nitrogen (N) as the limiting factor in this proposed development.

EPA performance criteria for Aerated Wastewater Treatment Systems (AWTS) is TKN 25mg/L. Adopt TKN 25mg/L as design criteria. Calculation shown on page 16.

Minimum area required for N uptake = 846 sq m (say 850 sq m).

I am of the opinion that the area required for nitrogen assimilation and phosphorus can be met by the above sized Land Application Area.

The client should note that Council may consider a study or other utility room as a potential bedroom.

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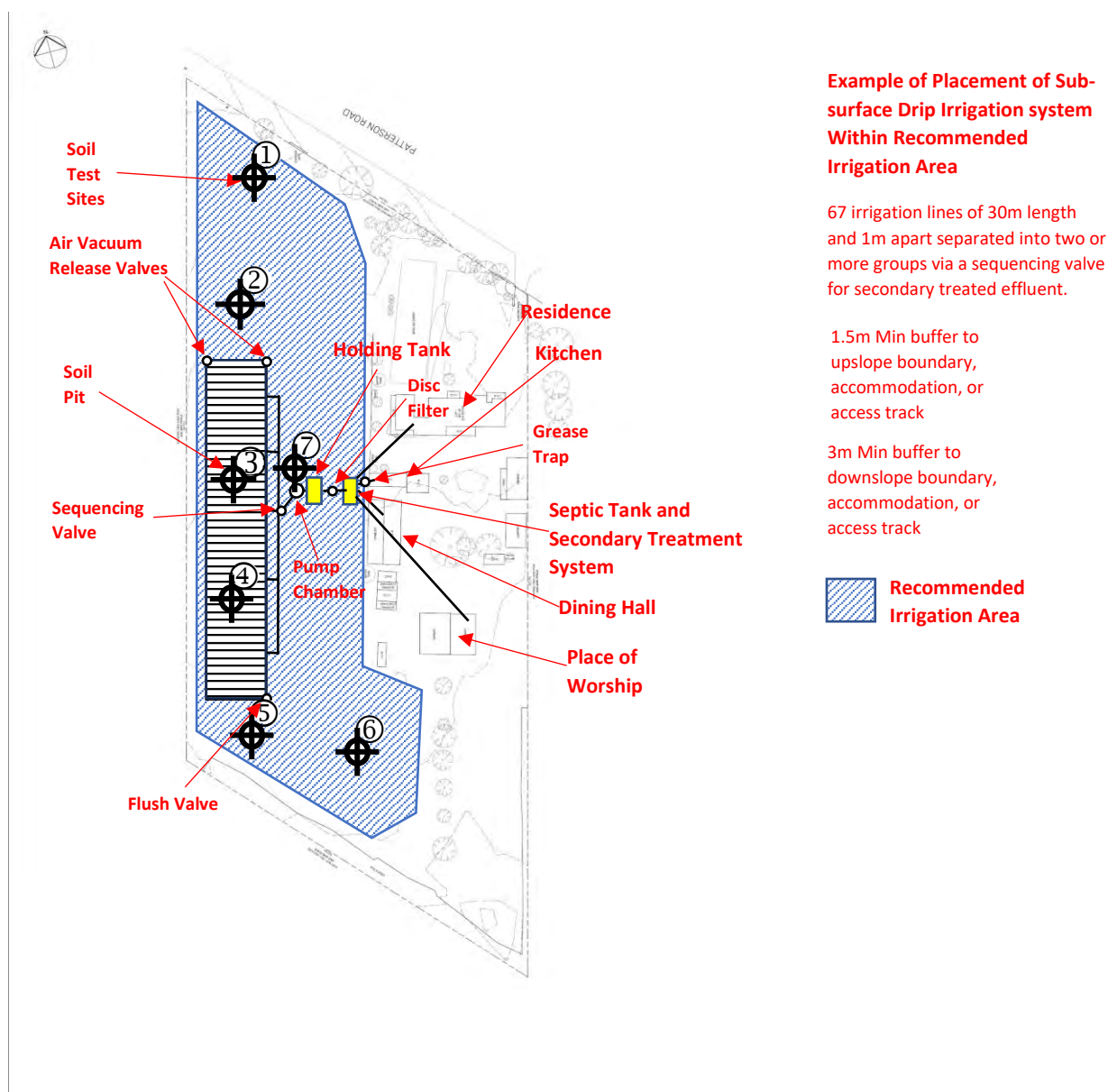


Figure 1. Test Site Location Plan, showing an example of the location of a sub-surface, pressure compensating, drip irrigation system with secondary treated effluent.

Table summarizing LAA requirements for the recommended system.

SYSTEM TYPE	AREA REQUIRED M ² (INCLUDING AREA BETWEEN LINES)	MAXIMUM LENGTH OF INDIVIDUAL IRRIGATION LINES (METRES)	SPACING BETWEEN INDIVIDUAL TRENCH/BEDS (METRES)
SUB-SURFACE DRIP IRRIGATION	2000	60*	1

*Length of individual lateral lines may vary depending on the make and diameter of the line (read manufacturers guidelines), lines should be of equal length to ensure even distribution of effluent

Summary and Discussion

It is worth noting that modeling includes several significant factors of conservatism:

- Hydraulic load. This assumes a maximum occupancy of five persons within the residence at a rate of 150 Litres/person/day and 55 patrons at a rate of 30 Litres/person/day.

It is likely that the actual occupancy and water usage will be less than this;

- From the nutrient balances, in the absence of site-specific data very conservative estimates of crop nutrient uptake rates and total nitrogen lost to soil processes are considered.

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Victorian Land Capability Assessment Framework

Please read the attached notes before using this spreadsheet

Irrigation area sizing using Nominated Area Water Balance for Zero Storage

Site Address: 28 Patterson Road, OFFICER SOUTH, VIC

Date: Assessor:

INPUT DATA

DRIP IRRIGATION

Design Wastewater Flow	Q	2,550	L/day	Based on maximum potential occupancy and derived from Table 4 in the EPA Code of Practice (2013)
Design Irrigation Rate	DIR	3.5	mm/day	Based on soil texture class/permeability and derived from Table 9 in the EPA Code of Practice (2013)
Nominated Land Application Area	L	1889	m ²	¹
Crop Factor	C	0.6-0.8	unitless	Estimates evapotranspiration as a fraction of pan evaporation; varies with season and crop type ²
Rainfall Runoff Factor	RF	1.0	unitless	Proportion of rainfall that remains onsite and infiltrates, allowing for any runoff
Mean Monthly Rainfall Data	SILO Data			BoM Station and number
Mean Monthly Pan Evaporation Data	SILO Data			BoM Station and number

Parameter	Symbol	Formula	Units	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Days in month	D		days	31	28	31	30	31	30	31	31	30	31	30	31	365
Rainfall	R		mm/month	51.15	35	54.87	89.7	78.12	87	61.07	84.32	75.3	86.8	85.8	62.62	851.75
Evaporation	E		mm/month	191.27	153.72	129.58	78.9	53.94	37.5	45.26	60.76	83.4	116.87	140.4	177.94	1269.54
Crop Factor	C		unitless	0.80	0.80	0.70	0.70	0.60	0.60	0.60	0.60	0.70	0.80	0.80	0.80	

OUTPUTS

Evapotranspiration	ET	ExC	mm/month	153	123	91	55	32	23	27	36	58	93	112	142	946.952
Percolation	B	DIRxD	mm/month	108.5	98	108.5	105.0	108.5	105.0	108.5	108.5	105.0	108.5	105.0	108.5	1277.5
Outputs		ET+B	mm/month	261.5	220.976	199.2	160.2	140.9	127.5	135.7	145.0	163.4	202.0	217.3	250.9	2224.5

INPUTS

Retained Rainfall	RR	RxRF	mm/month	51.15	35	54.87	89.7	78.12	87	61.07	84.32	75.3	86.8	85.8	62.62	851.75
Applied Effluent	W	(QxD)/L	mm/month	41.8	37.8	41.8	40.5	41.8	40.5	41.8	41.8	40.5	41.8	40.5	41.8	492.7
Inputs		RR+W	mm/month	93.0	72.8	96.7	130.2	120.0	127.5	102.9	126.2	115.8	128.6	126.3	104.5	1344.5

STORAGE CALCULATION

Storage remaining from previous month			mm/month	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Storage for the month	S	(RR+W)-(ET+B)	mm/month	-168.5	-148.2	-102.5	-30.0	-20.9	0.0	-32.7	-18.8	-47.6	-73.3	-91.0	-146.4	
Cumulative Storage	M		mm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Maximum Storage for Nominated Area	N		mm	0.00												
	V	NxL	L	0												

LAND AREA REQUIRED FOR ZERO STORAGE

		m ²	376	384	548	1085	1260	1889	1060	1304	869	686	582	420		
--	--	----------------	-----	-----	-----	------	------	------	------	------	-----	-----	-----	-----	--	--

MINIMUM AREA REQUIRED FOR ZERO STORAGE: 1889.0 m²

CELLS

	Please enter data in blue cells
XX	Red cells are automatically populated by the spreadsheet
XX	Data in yellow cells is calculated by the spreadsheet, DO NOT ALTER THESE CELLS

NOTES

¹ This value should be the largest of the following: land application area required based on the most limiting nutrient balance or minimum area required for zero storage

² Values selected are suitable for pasture grass in Victoria

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Victorian Land Capability Assessment Framework

Please read the attached notes before using this spreadsheet

Nitrogen Balance

Site Address: 28 Patterson Road, OFFICER SOUTH, VIC

SUMMARY - LAND APPLICATION AREA REQUIRED BASED NITROGEN BALANCE

846

m²

INPUT DATA¹

Wastewater Loading			Nutrient Crop Uptake			
Hydraulic Load	2550	L/day	Crop N Uptake	220	kg/ha/yr	which equals
Effluent N Concentration	25	mg/L				60.27
% N Lost to Soil Processes (Geary & Gardner 1996)	0.2	Decimal				mg/m ² /day
Total N Loss to Soil	12750	mg/day				
Remaining N Load after soil loss	51000	mg/day				

NITROGEN BALANCE BASED ON ANNUAL CROP UPTAKE RATES

Minimum Area required with zero buffer			Determination of Buffer Zone Size for a Nominated Land Application Area (LAA)		
Nitrogen	846	m ²	Nominated LAA Size	1889	m ²
			Predicted N Export from LAA	-22.94	kg/year
			Minimum Buffer Required for excess nutrient	0	m ²

CELLS

	Please enter data in blue cells
XX	Red cells are automatically populated by the spreadsheet
XX	Data in yellow cells is calculated by the spreadsheet, DO NOT ALTER THESE CELLS

NOTES

¹ Model sensitivity to input parameters will affect the accuracy of the result obtained. Where possible site specific data should be used. Otherwise data should be obtained from a reliable source such as:

- EPA Guidelines for Effluent Irrigation
- Appropriate Peer Reviewed Papers
- Environment and Health Protection Guidelines: Onsite Sewage Management for Single Households
- USEPA Onsite Systems Manual

4.5 SITING AND CONFIGURATION OF THE LAND APPLICATION AREA

Considering the allotment's size there is sufficient space for the location of a subsurface drip irrigation or a mound system on the allotment.

If the pressure compensating drip irrigation system is to be used, it may need to be installed in a raised pad (at Councils discretion), constructed of good quality sandy loam topsoil, to ensure that it does not become inundated during flood events.

The Catchment Management Authority, Local Council or EPA may insist on changes to this recommendation due to the existence of the Land Subject to inundation Overlay.

Whilst there is ample area for application of effluent, it is important that buffer distances be adhered to. It is important to note that buffers are measured as the overland flow path for run-off water from the effluent disposal area.

As a result of our visit, I can confirm that the sub-surface drip irrigation system can be placed in the nominated LAA envelope delineated on the provided site plan (Appendix 9.3/figure 1).

4.6 DISPOSAL SYSTEM DESCRIPTION

Disposal design should be adopted from Irrigation System designs within AS/NZS 1547:2012.

The Test Site Location Plan (figure 1 and Appendix 9.3) shows an area of land that has been investigated and is considered suitable for effluent management and maintains the relevant buffers.

Final placement and configuration of the irrigation system will be determined by the client and/or system installer, provided it remains within the allotment boundaries and satisfies the minimum area required according to the water and nutrient balances.

Whilst there is ample area for application of the effluent, it is important that appropriate buffer distances to neighbouring properties be maintained. It is important to note that buffers are measured as the overland flow path for run-off water from the effluent irrigation area.

It is recommended that the owner consult an irrigation expert familiar with effluent irrigation equipment to design the system, and an appropriately registered plumbing/drainage practitioner to install the system. The irrigation plan must ensure even application of effluent throughout the entire irrigation area.

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4.7 BUFFER DISTANCES

Setback buffer distances from effluent land application areas and treatment systems are required to help prevent human contact, maintain public amenity and protect sensitive environments.

The relevant buffer distances for this site, taken from Table 5 of the Code (2016) are:

- 20 metres from groundwater bores.
- 30 metres (secondary treatment) from non-potable watercourses.
- 100m from potable watercourses.
- 3 metres if area up-gradient and 1.5 metres if area down-gradient of property boundaries, swimming pools and buildings.

These are conservative values for secondary effluent.

All buffer distances are achievable.

4.8 INSTALLATION OF THE IRRIGATION SYSTEM

Installation of the irrigation system must be carried out by a suitably qualified, licensed plumber or drainer experienced with effluent irrigation systems.

To ensure even distribution of effluent, it is essential that the pump capacity is adequate for the size and configuration of the irrigation system, taking into account head and friction losses due to changes in elevation, pipes, valves, fittings etc. An additional, and recommended, optional measure to achieve even coverage is to divide the irrigation area into two or more separate sub-zones of equal size; dosed alternately using an automatic indexing or sequencing valve.

The irrigation area and surrounding area must be vegetated or revegetated immediately following installation of the system, preferably with turf. The area should be fenced or otherwise isolated (such as by landscaping), to prevent vehicle and stock access; and signs should be erected to inform householders and visitors of the extent of the effluent irrigation area and to limit their access and impact on the area. The irrigation lines should be installed approximately horizontal.

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5 Monitoring, Operation and Maintenance

Maintenance is to be carried out in accordance with the EPA Certificate of Approval of the selected secondary treatment system and Council's permit conditions. The treatment system will only function adequately if appropriately and regularly maintained.

To ensure the treatment system functions adequately, residents must:

- Have a suitably qualified maintenance contractor service the system at the frequency required by Council under the permit to use;
- Use low phosphorous household cleaning products that are suitable for septic tanks;
- Sink strainer to be used to catch food particles;
- Install a grease trap;
- scrape all dishes to remove grease and fats before washing;
- do not install a garbage grinder waste disposal system;
- do not allow sanitary napkins or hygiene products to enter the system;
- do not dispose of aggressive toxic cleaning agents in the system;
- do not dispose of any solvents or paints in the system;
- do not allow bleach, whiteners, nappy soakers, spot removers or disinfectants to enter the system;
- Keep as much fat and oil out of the system as possible; and
- Conserve water (AAA rated fixtures and appliances are recommended).

To ensure the land application system functions adequately, residents must:

- Regularly harvest (mow) vegetation within the LAA and remove this to maximise uptake of water and nutrients;
- Monitor and maintain the chosen system following the manufacturer's recommendations;
- Dose the LAA more than once a day
- Install a holding/balance tank capable of holding any possible surge flows and any flows during periods of inundation;
- Regularly clean in-line filters (following manufacturers instructions);
- Not erect any structures and paths over the LAA;
- Avoid vehicle and livestock access to the LAA, to prevent compaction and damage; and
- Ensure that the LAA is kept level by filling any depressions with good quality topsoil (not clay).

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6 Stormwater Management

As mentioned above, stormwater is a concern in this case. Therefore, access openings to tanks or other parts of the system should be sealed to prevent ingress of water during flood events. Roof stormwater must not be disposed of in the Land Application Area. Council may decide that the irrigation system must be installed in/on a raised pad constructed of good quality sandy loam topsoil to ensure that inundation of the system does not occur.

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7 Conclusions

As a result of my investigations I conclude that sustainable onsite wastewater management is feasible with appropriate mitigation measures as outlined for a future residential development on this allotment.

Specifically, I recommend the following:

- Treatment of wastewater by an EPA-accredited treatment system;
- Location of Land Application Area within the envelope nominated.
- Access openings to tanks of other parts of the system should be sealed to prevent ingress of water during flood events
- Installation in/on a raised pad constructed of good quality sandy loam topsoil to ensure that inundation of the system does not occur (at Councils discretion)
- Land application of treated effluent to a suitably sized subsurface drip irrigation area (which may be subdivided into two or more evenly sized zones using an indexing or sequencing valve);
- Application of Gypsum to the base of all drip irrigation trenches prior to installation of the system;
- Installation of water saving fixtures and appliances in the new residence to reduce the effluent load;
- Use of low phosphorus and low sodium (liquid) detergents to improve effluent quality and maintain soil properties for growing plants; and
- Operation and management of the treatment and disposal system in accordance with manufacturer's recommendations, the EPA Certificate of Approval, the EPA Code of Practice (2016) and the recommendations made in this report.

For and on behalf of SMOLDERS GEOTECHNICAL PTY. LTD.



B.Sc. (Soils) PhD.

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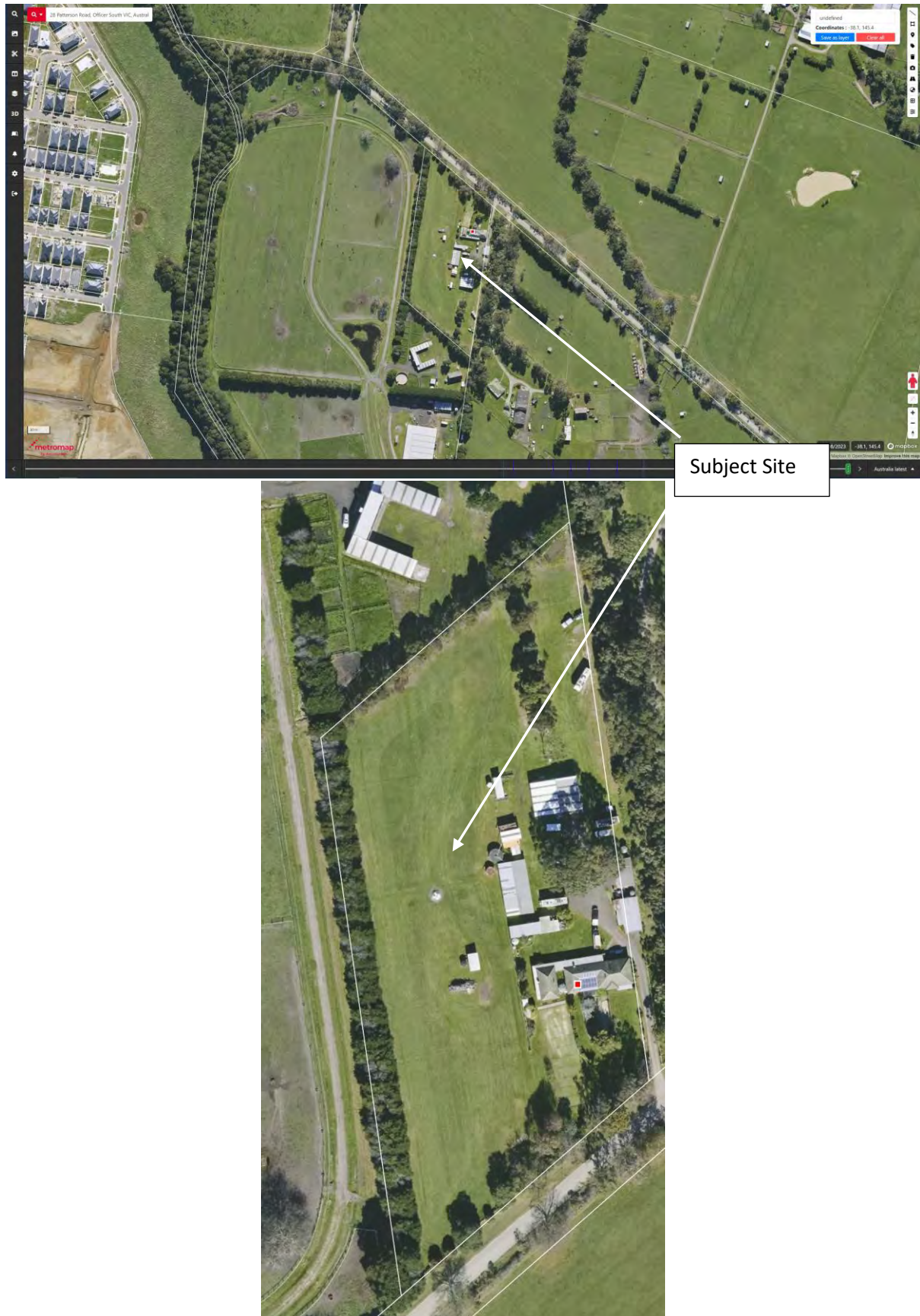
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9 Appendices

- 9.1 Aerial and Site Photographs
- 9.2 Floor Plan
- 9.3 Test Site Location Plan
- 9.4 Borelog Descriptions
- 9.5 Bureau of Meteorology Climate Report
- 9.6 Analytical Laboratory Results
- 9.7 Geological Map
- 9.8 Land Channel Property Report

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9.1 Aerial and Site Photographs





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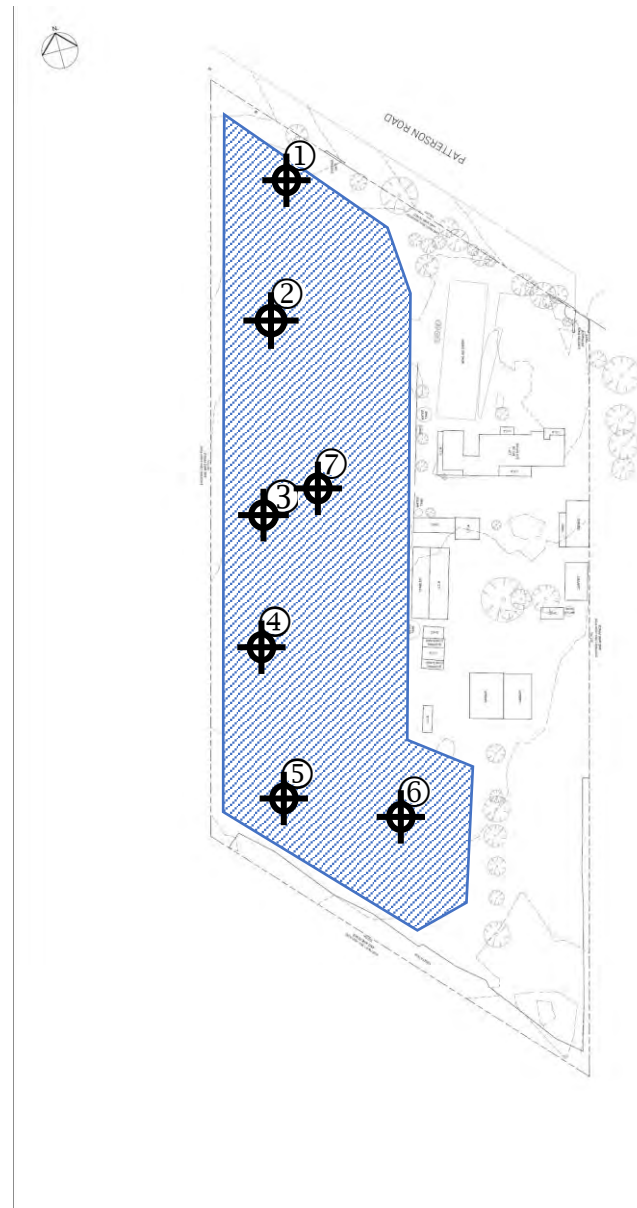


9.2 Floor Plan

Not Provided

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9.3 Test Site and LAA Location Plan



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SOIL TEST SITES



RECOMMENDED IRRIGATION AREA

9.4 Borelog Description

PROJECT ADDRESS: 28 Patterson Road, OFFICER SOUTH, VIC
REFERENCE NUMBER: 23J6991

FIELD WORK DATE: 09/10/2023
SUPERVISING GEOLOGIST: [REDACTED]

BORELOG 1				BORELOG 2				BORELOG 3			
Depth mm	SOIL PROFILE Hand Auger	Fill	Cat	Depth mm	SOIL PROFILE Hand Auger	Fill	Cat	Depth mm	SOIL PROFILE Hand Dug Pit	Fill	Cat.
100	Sandy Clay Loam: Br/Gr, moist to wet, firm		4b	100	Sandy Clay Loam: Br/Gr, moist to wet, firm		4b	100	Sandy Clay Loam: Br/Gr, moist to wet, firm		4b
200	Moderately structured			200	Moderately structured			200	Moderately structured		
300	Ribbon Length 40 to 50mm			300	Ribbon Length 40 to 50mm			300	Ribbon Length 40 to 50mm		
400	Sandy Clay: Gr, becoming mottled orange/		5c	400	Sandy Clay: Gr, becoming mottled orange/			400	Sandy Clay: Gr, becoming mottled orange/		
500	Brown at depth, moist to wet			500	Brown at depth, moist to wet		5c	500	Brown at depth, moist to wet		5c
600	stiff			600	stiff			600	stiff		
700	Weakly structured, 70mm ribbon			700	Weakly structured, 70mm ribbon			700	Weakly structured, 70mm ribbon		
800				800				800			
900				900				900	End of Borehole: No Refusal		
1000				1000				1000			
1100				1100				1100			
1200				1200				1200			
1300				1300				1300			
1400				1400				1400			
1500				1500				1500			
1600				1600				1600			
1700				1700				1700			
1800				1800				1800			
1900	End of Borehole: No Refusal			1900	End of Borehole: No Refusal			1900			
2000				2000				2000			
2100				2100				2100			
2200				2200				2200			
2300				2300				2300			
2400				2400				2400			
2500				2500				2500			
2600				2600				2600			
2700				2700				2700			
2800				2800				2800			
2900				2900				2900			
3000				3000				3000			
3100				3100				3100			
3200				3200				3200			
3300				3300				3300			
				3400				3400			
				3500				3500			

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PROJECT ADDRESS: 28 Patterson Road, OFFICER SOUTH, VIC
REFERENCE NUMBER: 23J6991

FIELD WORK DATE: 09/10/2023
SUPERVISING GEOLOGIST: [REDACTED]

BORELOG 4				BORELOG 5				BORELOG 6			
Depth mm	SOIL PROFILE Hand Auger	Fill	Cat	Depth mm	SOIL PROFILE Hand Auger	Fill	Cat	Depth mm	SOIL PROFILE Hand Auger	Fill	Cat.
100	Sandy Clay Loam: Br/Gr, moist to wet, firm		4b	100	Sandy Clay Loam: Br/Gr, moist to wet, firm		4b	100	Sandy Clay Loam: Br/Gr, moist to wet, firm		4b
200	Moderately structured			200	Moderately structured			200	Moderately structured		
300	Ribbon Length 40 to 50mm			300	Ribbon Length 40 to 50mm			300	Ribbon Length 40 to 50mm		
400	Sandy Clay: Gr, becoming mottled orange/			400	Sandy Clay: Gr, becoming mottled orange/			400	Sandy Clay: Gr, becoming mottled orange/		
500	Brown at depth, moist to wet		5c	500	Brown at depth, moist to wet		5c	500	Brown at depth, moist to wet		5c
600	stiff			600	stiff			600	stiff		
700	Weakly structured, 70mm ribbon			700	Weakly structured, 70mm ribbon			700	Weakly structured, 70mm ribbon		
800				800				800			
900				900				900			
1000				1000				1000			
1100				1100				1100			
1200				1200				1200			
1300				1300				1300			
1400				1400				1400			
1500				1500				1500			
1600				1600				1600			
1700				1700				1700			
1800				1800				1800			
1900	End of Borehole: No Refusal			1900	End of Borehole: No Refusal			1900	End of Borehole: No Refusal		
2000				2000				2000			
2100				2100				2100			
2200				2200				2200			
2300				2300				2300			
2400				2400				2400			
2500				2500				2500			
2600				2600				2600			
2700				2700				2700			
2800				2800				2800			
2900				2900				2900			
3000				3000				3000			
3100				3300				3300			
3200				3400				3400			
3300				3500				3500			

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PROJECT ADDRESS: 28 Patterson Road, OFFICER SOUTH, VIC
REFERENCE NUMBER: 23J6991

FIELD WORK DATE: 09/10/2023
SUPERVISING GEOLOGIST: [REDACTED]

BORELOG 7				BORELOG 8				BORELOG 9			
Depth mm	SOIL PROFILE Hand Auger	Fill	Cat	Depth mm	SOIL PROFILE	Fill	Cat	Depth mm	SOIL PROFILE	Fill	Cat.
100	Fill, Sandy Clayey SILT: with gravel, Br/Gr, Moist, poorly compacted			100				100			
200				200				200			
300				300				300			
400				400				400			
500				500				500			
600	Sandy Clay Loam: Br/Gr, moist to wet, firm Moderately structured Ribbon Length 40 to 50mm		4b	600				600			
700				700				700			
800				800				800			
900				900				900			
1000	Brown at depth, moist to wet stiff Weakly structured, 70mm ribbon		5c	1000				1000			
1100				1100				1100			
1200				1200				1200			
1300				1300				1300			
1400				1400				1400			
1500				1500				1500			
1600				1600				1600			
1700				1700				1700			
1800				1800				1800			
1900	End of Borehole: No Refusal			1900				1900			
2000				2000				2000			
2100				2100				2100			
2200				2200				2200			
2300				2300				2300			
2400				2400				2400			
2500				2500				2500			
2600				2600				2600			
2700				2700				2700			
2800				2800				2800			
2900				2900				2900			
3000				3000				3000			
3100				3100				3100			
3200				3200				3200			
3300				3300				3300			

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9.5 Bureau of Meteorology Climate Report

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	31	28	31	30	31	30	31	31	31	30	31	30	31
SILO MEDIAN DAILY PPT	1.65	1.25	1.77	2.99	2.52	2.9	1.97	2.72	2.51	2.8	2.86	2.02	27.96
SILO MEDIAN MONTHLY PPT	51.15	35	54.87	89.7	78.12	87	61.07	84.32	75.3	86.8	85.8	62.62	851.75
SILO DAILY EVAPORATION	6.17	5.49	4.18	2.63	1.74	1.25	1.46	1.96	2.78	3.77	4.68	5.74	41.85
SILO MONTHLY EVAPORATION	191.27	153.72	129.58	78.9	53.94	37.5	45.26	60.76	83.4	116.87	140.4	177.94	1269.54

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9.6 Laboratory Results

Groundswell Batch # : GS23745

Groundswell laboratories*" A New Force in Analytical Testing "***CERTIFICATE OF ANALYSIS**

Client Name :	Smolders Geotechnical Pty Ltd	Groundswell Batch # :	GS23745
Client Address :	PO Box 7299, Upper Ferntree Gully, VIC 3156	Project Name :	28 Patterson Road, Officer South VIC
Client Mobile # :	[REDACTED]	Project # :	23J6991
Project Manager :	[REDACTED]	Date Samples Received :	10/10/2023
E-mail :	[REDACTED]	Sample Matrix :	Soil
Project Sample Manager :	[REDACTED]	Sample # Submitted :	2
E-mail :	[REDACTED]	Groundswell Quote # :	Not Applicable
		Date CofA Issued :	17/10/2023

[REDACTED]
Managing Director

Reference AF56.Rev4 Date Issued : 10/5/2014

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Groundswell Batch # : GS23745

Soil Analysis Results

Client Sample ID			Sample 1	Sample 2			
Laboratory Sample Number			GS23745-1	GS23745-1			
Date Sampled			9/10/2023	9/10/2023			
Analytes	Units	LOR					
pH	pH Units	0.1	5.5	5.3			
Electrical Conductivity @ 25°C	dS/m	0.005	0.018	0.013			
Exchangeable Calcium	mg/Kg	1	561	267			
Exchangeable Magnesium	mg/Kg	1	235	369			
Exchangeable Potassium	mg/Kg	1	72	32			
Exchangeable Sodium	mg/Kg	1	25	49			
CEC	MEQ%	0.1	5.0	4.7			
ESP	%	0.1	2.2	4.6			
Sodicity Rating	---	---	Non-Sodic	Non-Sodic			
SAR		0.01	0.05	0.10			

Reference AF56.Rev4 Date Issued : 19/5/2014

Comments :

- 1- pH & electrical conductivity determined & reported on a 1:5 soil:water extraction
- 2- CEC determined by soil chemical method 15B1 'Exchangeable bases and cation exchange capacity - 1M ammonium chloride at pH 7.0, no pre-treatment for soluble salts'
- 3- ESP, sodicity rating & SAR determined by calculation using the exchangeable cation results

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Groundswell Batch # : GS23745

Soil Analysis Results						
Client Sample ID			Sample 1	Sample 1	Sample 2	Sample 2
Laboratory Sample Number			GS23745-1	GS23745-1	GS23745-1	GS23745-1
Date Sampled			9/10/2023	9/10/2023	9/10/2023	9/10/2023
Analytes	Units	LOR				
Sample Type	---	---	Air Dried Aggregates	Re-moulded Ped	Air Dried Aggregates	Re-moulded Ped
Emerson Aggregate Class - 2 Hours	---	---	Slaking / Some Dispersion	Slaking / Some Dispersion	Slaking / Complete Dispersion	Slaking / Complete Dispersion
Emerson Class Number	---	---	Class 2	Class 2	Class 1	Class 1
Emerson Aggregate Class - 20 Hours	---	---	Slaking / Some Dispersion	Slaking / Some Dispersion	Slaking / Complete Dispersion	Slaking / Complete Dispersion
Emerson Class Number	---	---	Class 2	Class 2	Class 1	Class 1
Addition of 1M HCl	---	---	---	---	---	---
1:5 Soil:Water 10 minute extraction	---	---	---	---	---	---
Emerson Class Number	---	---	---	---	---	---

Reference AF56.Rev4 Date Issued : 19/5/2014

Comments :

1- Classification conducted in accordance with Emmerson 'A clasification of soil aggregates based on their coherence in water', 1967 & AS1289.C8.1-1980

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Groundswell Batch # : GS23745

Inorganics Quality Control Report

Client Sample ID							
Laboratory Sample Number							
QC Parameter			Method Blank		Laboratory Control Standard (LCS)		
			Method Blank	Within GSL Acceptance Criteria (<LOR) (Pass/Fail)	LCS (%R)	LCS (%R) Acceptance Criteria	Within GSL Acceptance Criteria (Pass/Fail)
Analyte	Units	LOR					
pH	pH units	0.1	NA	NA	7.03	7.00 ± 0.1 pH Unit	Pass
Conductivity	dS/m	0.005	<0.005	Pass	96%	80-120%	Pass
Exchangeable Calcium	mg/Kg	1	<1	Pass	101%	70-130%	Pass
Exchangeable Magnesium	mg/Kg	1	<1	Pass	103%	70-130%	Pass
Exchangeable Potassium	mg/Kg	1	<1	Pass	104%	70-130%	Pass
Exchangeable Sodium	mg/Kg	1	<1	Pass	78%	70-130%	Pass
CEC	MEQ%	0.1	NA	NA	NA	NA	NA
ESP	%	0.1	NA	NA	NA	NA	NA
SAR	---	0.01	NA	NA	NA	NA	NA

Reference AF56.Rev4 Date Issued : 3/11/2010

Comments :

- 1- Exchangeable cations LCS values based on independent water standards
- 2- NA = Not Applicable

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Smolders Geotechnical Pty. Ltd.
p: 0488 773 060
e: enquiries@smoldersgeotechnical.com.au
p: PO Box 7299, Upper Ferntree Gully, VIC 3156



DATE: 10 October 2023

To: Groundswell Laboratories
116 Moray Street
South Melbourne, VIC 3205

SITE: 28 Patterson Road
Officer South, VIC

REF No.: 23J6991

Please perform the following soil tests:

- i Emerson Aggregate Class
- ii Cation Exchange Capacity
- iii Electrical Conductivity (EC)
- iv pH
- v Sodicity – Exchangeable Sodium Percentage (ESP)
- iv Sodium Absorption Ratio (SAR)

For the following Two (2) sample from One (1) location:

DATE	SAMPLE	TEST SITE	DEPTH (mm)	MATERIAL	LAB ID
09/10/2023	1	PIT1	200-300 mm	SOIL	
09/10/2023	2	PIT1	500-600 mm	SOIL	

We request that the sample be put through on the accelerated turnaround stream.

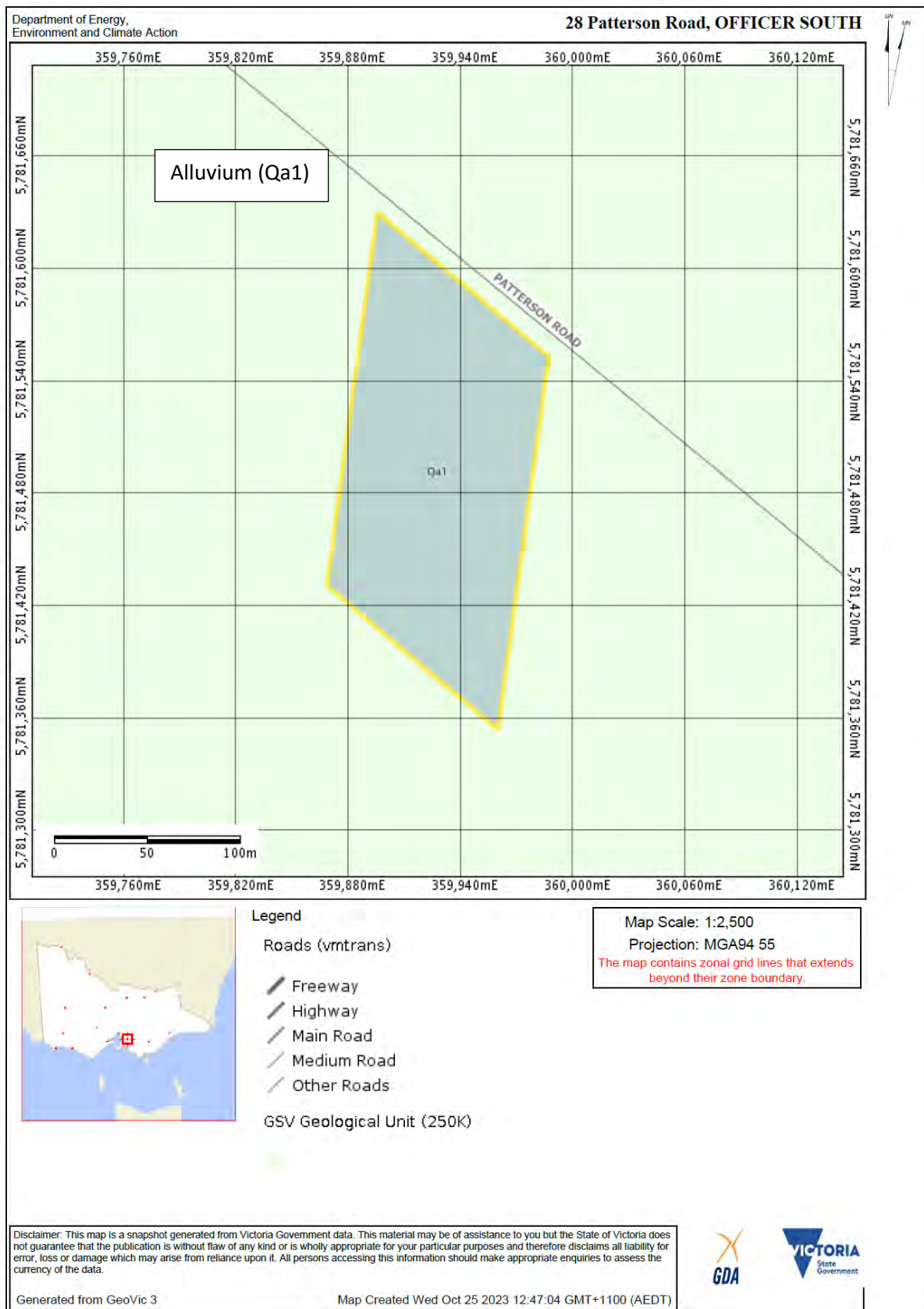
Yours sincerely

For and on behalf of SMOLDERS GEOTECHNICAL PTY. LTD.



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9.7 Geovic Map



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9.8 Land Channel Property Report

PROPERTY REPORT



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From www.planning.vic.gov.au at 25 October 2023 12:10 PM

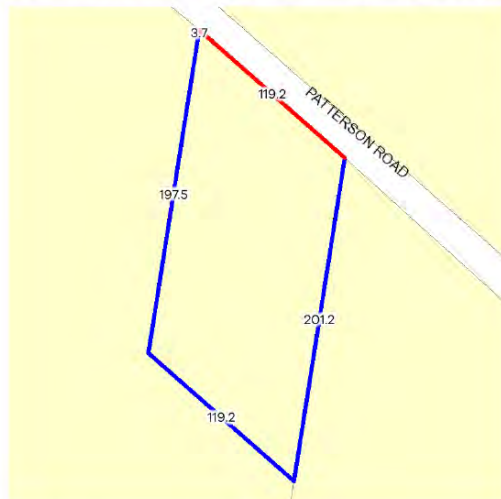
PROPERTY DETAILS

Address: **28 PATTERSON ROAD OFFICER SOUTH 3809**
 Lot and Plan Number: **Lot 1 LP118377**
 Standard Parcel Identifier (SPI): **1\LP118377**
 Local Government Area (Council): **CARDINIA**
 Council Property Number: **4674150200**
 Directory Reference: **Melway 321 G3**

www.cardinia.vic.gov.au

SITE DIMENSIONS

All dimensions and areas are approximate. They may not agree with those shown on a title or plan.



Area: 20237 sq. m (2.02 ha)

Perimeter: 641 m

For this property:

— Site boundaries

— Road frontages

Dimensions for individual parcels require a separate search, but dimensions for individual units are generally not available.

Calculating the area from the dimensions shown may give a different value to the area shown above

For more accurate dimensions get copy of plan at [Title and Property Certificates](#)

UTILITIES

Rural Water Corporation: **Southern Rural Water**
 Melbourne Water Retailer: **South East Water**
 Melbourne Water: **Inside drainage boundary**
 Power Distributor: **AUSNET**

STATE ELECTORATES

Legislative Council: **EASTERN VICTORIA**
 Legislative Assembly: **PAKENHAM**

PLANNING INFORMATION

Property Planning details have been removed from the Property Reports to address duplication with the Planning Property Reports which are DELWP's authoritative source for all Property Planning information.

The Planning Property Report for this property can found here - [Planning Property Report](#).

Planning Property Reports can be found via these two links

Vicplan <https://mapshare.vic.gov.au/vicplan/>

Property and parcel search <https://www.land.vic.gov.au/property-and-parcel-search>

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PROPERTY REPORT: 28 PATTERSON ROAD OFFICER SOUTH 3809

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PROPERTY REPORT



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Area Map



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PROPERTY REPORT: 28 PATTERSON ROAD OFFICER SOUTH 3809

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PLANNING PROPERTY REPORT



Environment,
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From www.planning.vic.gov.au at 25 October 2023 12:11 PM

PROPERTY DETAILS

Address: **28 PATTERSON ROAD OFFICER SOUTH 3809**
 Lot and Plan Number: **Lot 1 LP118377**
 Standard Parcel Identifier (SPI): **1\LP118377**
 Local Government Area (Council): **CARDINIA**
 Council Property Number: **4674150200**
 Planning Scheme: **Cardinia**
 Directory Reference: **Melway 321 G3**

www.cardinia.vic.gov.au

[Planning Scheme - Cardinia](#)

UTILITIES

Rural Water Corporation: **Southern Rural Water**
 Melbourne Water Retailer: **South East Water**
 Melbourne Water: **Inside drainage boundary**
 Power Distributor: **AUSNET**

STATE ELECTORATES

Legislative Council: **EASTERN VICTORIA**
 Legislative Assembly: **PAKENHAM**

OTHER

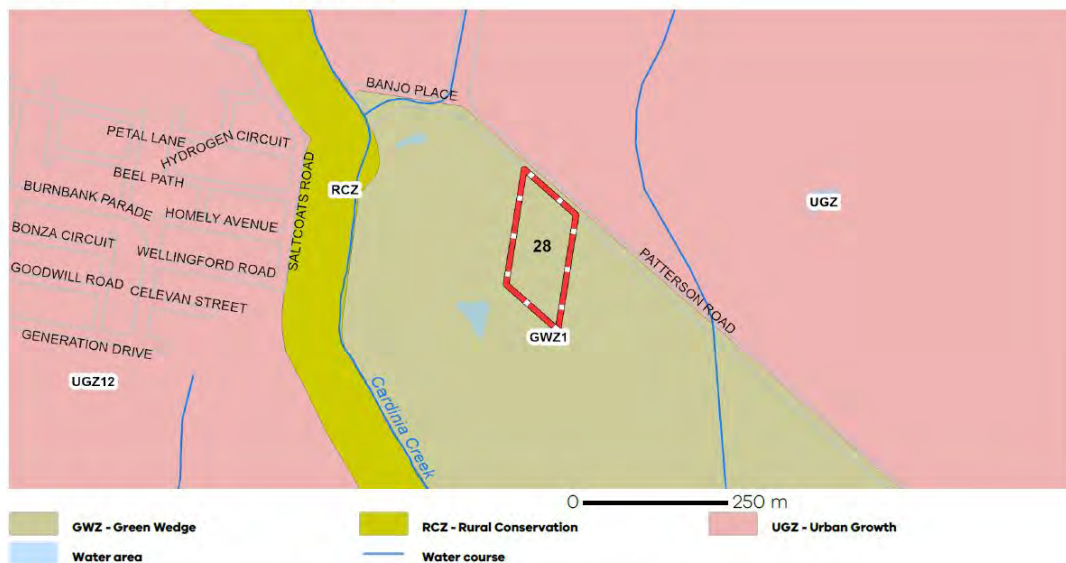
Registered Aboriginal Party: **Bunurong Land Council Aboriginal Corporation**

[View location in VicPlan](#)

Planning Zones

[GREEN WEDGE ZONE \(GWZ\) \(CARDINIA\)](#)

[GREEN WEDGE ZONE - SCHEDULE 1 \(GWZ1\) \(CARDINIA\)](#)



Note: labels for zones may appear outside the actual zone - please compare the labels with the legend.

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PLANNING PROPERTY REPORT: 28 PATTERSON ROAD OFFICER SOUTH 3809

Page 1 of 5

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PLANNING PROPERTY REPORT

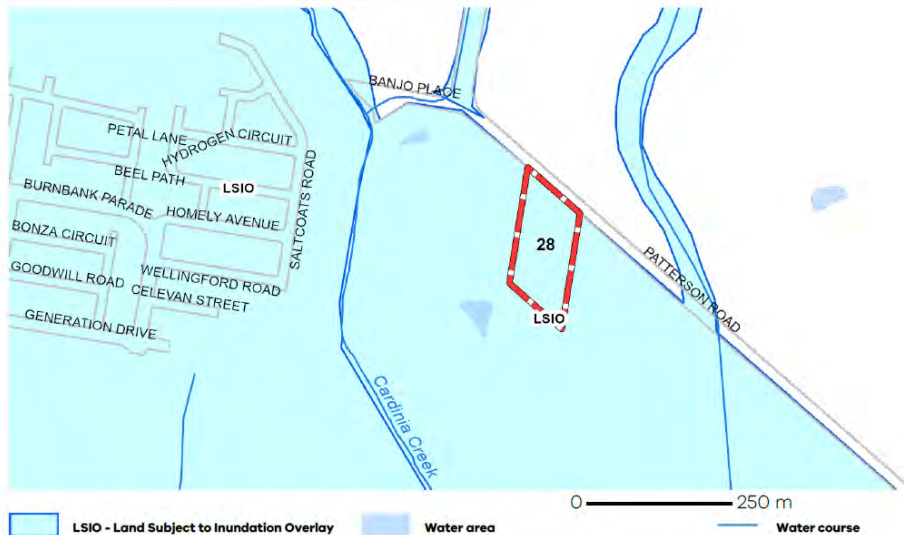


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Planning Overlays

LAND SUBJECT TO INUNDATION OVERLAY (LSIO) (CARDINIA)

LAND SUBJECT TO INUNDATION OVERLAY SCHEDULE (LSIO) (CARDINIA)



Note: due to overlaps, some overlays may not be visible, and some colours may not match those in the legend

OTHER OVERLAYS

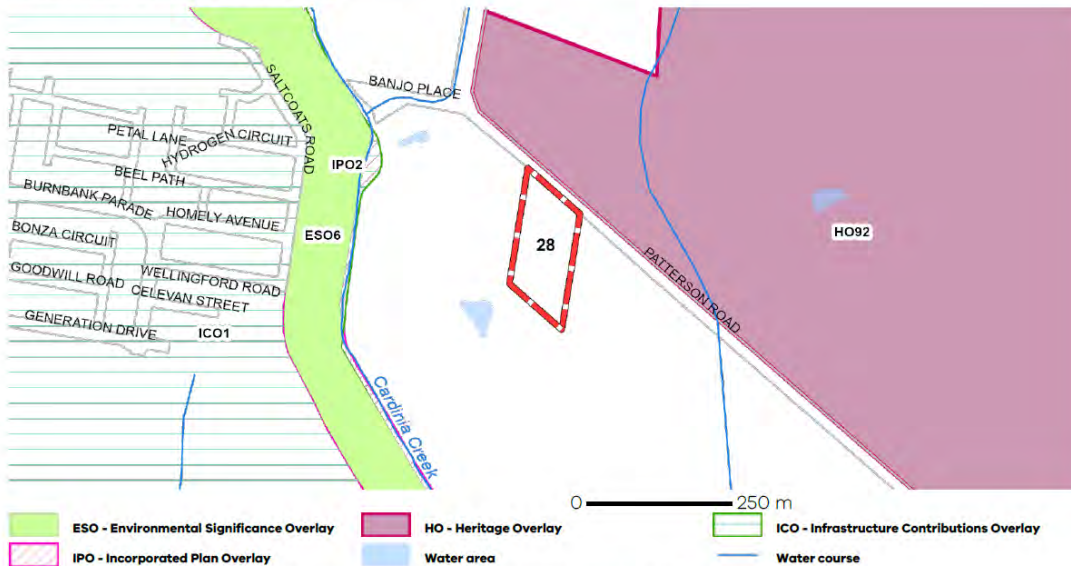
Other overlays in the vicinity not directly affecting this land

ENVIRONMENTAL SIGNIFICANCE OVERLAY (ESO) (CASEY)

HERITAGE OVERLAY (HO) (CARDINIA)

INFRASTRUCTURE CONTRIBUTIONS OVERLAY (ICO) (CASEY)

INCORPORATED PLAN OVERLAY (IPO) (CASEY)



Note: due to overlaps, some overlays may not be visible, and some colours may not match those in the legend

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PLANNING PROPERTY REPORT



Areas of Aboriginal Cultural Heritage Sensitivity

All or part of this property is an 'area of cultural heritage sensitivity'.

'Areas of cultural heritage sensitivity' are defined under the Aboriginal Heritage Regulations 2018, and include registered Aboriginal cultural heritage places and land form types that are generally regarded as more likely to contain Aboriginal cultural heritage.

Under the Aboriginal Heritage Regulations 2018, 'areas of cultural heritage sensitivity' are one part of a two part trigger which require a 'cultural heritage management plan' be prepared where a listed 'high impact activity' is proposed.

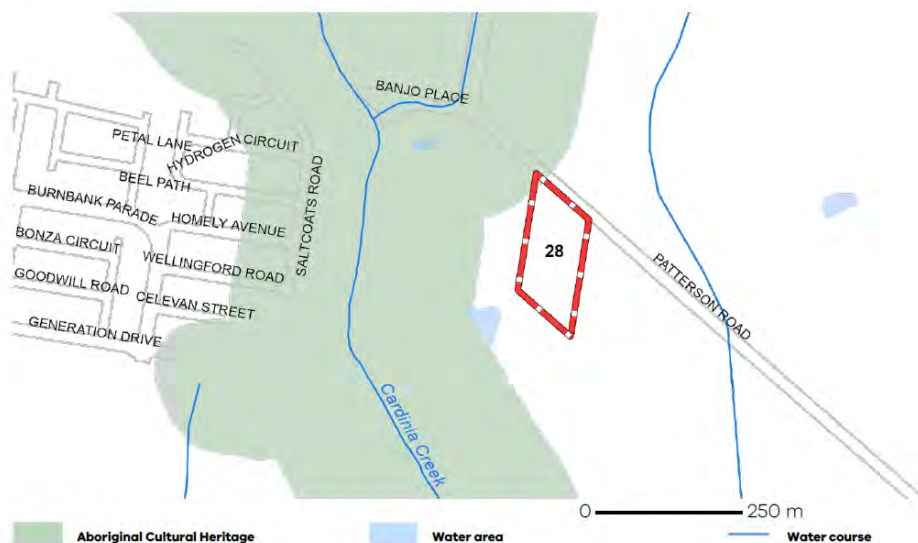
If a significant land use change is proposed (for example, a subdivision into 3 or more lots), a cultural heritage management plan may be triggered. One or two dwellings, works ancillary to a dwelling, services to a dwelling, alteration of buildings and minor works are examples of works exempt from this requirement.

Under the Aboriginal Heritage Act 2006, where a cultural heritage management plan is required, planning permits, licences and work authorities cannot be issued unless the cultural heritage management plan has been approved for the activity.

For further information about whether a Cultural Heritage Management Plan is required go to

<http://www.gov.vic.gov.au/gov/Question1.aspx>

More information, including links to both the Aboriginal Heritage Act 2006 and the Aboriginal Heritage Regulations 2018, can also be found here - <https://www.aboriginal.vic.gov.au/aboriginal-heritage-legislation>



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PLANNING PROPERTY REPORT: 28 PATTERSON ROAD OFFICER SOUTH 3809

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PLANNING PROPERTY REPORT**Further Planning Information**

Planning scheme data last updated on 19 October 2023.

A **planning scheme** sets out policies and requirements for the use, development and protection of land. This report provides information about the zone and overlay provisions that apply to the selected land. Information about the State and local policy, particular, general and operational provisions of the local planning scheme that may affect the use of this land can be obtained by contacting the local council or by visiting <https://www.planning.vic.gov.au>

This report is NOT a **Planning Certificate** issued pursuant to Section 199 of the **Planning and Environment Act 1987**. It does not include information about exhibited planning scheme amendments, or zonings that may affect the land. To obtain a Planning Certificate go to Titles and Property Certificates at Landata - <https://www.landata.vic.gov.au>

For details of surrounding properties, use this service to get the Reports for properties of interest.

To view planning zones, overlay and heritage information in an interactive format visit <https://mapshare.maps.vic.gov.au/vicplan>

For other information about planning in Victoria visit <https://www.planning.vic.gov.au>

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PLANNING PROPERTY REPORT: 28 PATTERSON ROAD OFFICER SOUTH 3809

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PLANNING PROPERTY REPORT



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Designated Bushfire Prone Areas

This property is in a designated bushfire prone area. Special bushfire construction requirements apply to the part of the property mapped as a designated bushfire prone area (BPA). Planning provisions may apply.

Where part of the property is mapped as BPA, if no part of the building envelope or footprint falls within the BPA area, the BPA construction requirements do not apply.

Note: the relevant building surveyor determines the need for compliance with the bushfire construction requirements.



Designated BPA are determined by the Minister for Planning following a detailed review process. The Building Regulations 2018, through adoption of the Building Code of Australia, apply bushfire protection standards for building works in designated BPA.

Designated BPA maps can be viewed on VicPlan at <https://mapshare.vic.gov.au/vicplan/> or at the relevant local council.

Create a BPA definition plan in [VicPlan](#) to measure the BPA.

Information for lot owners building in the BPA is available at <https://www.planning.vic.gov.au>.

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 this property and the application of Clause 52.17 please visit the Native Vegetation Information Management system <https://nvim.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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PLANNING PROPERTY REPORT: 28 PATTERSON ROAD OFFICER SOUTH 3809

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ARBORICULTURAL IMPACT ASSESSMENT

REPORT COMMISSIONED BY:
Property owner

DATE OF ASSESSMENT:
Monday, October 16, 2023

SUBJECT SITE:
28 Patterson Road,
Officer South Vic 3809

DATE OF REPORT:
Friday, October 20, 2023

REPORT PREPARED BY:

VERSION 1

Consulting Arborist
Certificate 5 Arboriculture

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ARBORICULTURAL CONSULTING SERVICES

ABN

PHONE

EMAIL

WEBSITE

13 601 685 223

0401 442 604

nick@tmcreports.com.au

www.tmcreports.com.au

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1 Assignment

1.1 Author / Consulting Arborist

Name

[REDACTED]

Consulting Arborist
Certificate 5 Arboriculture

Company

TMC Reports

Phone

[REDACTED]

1.2 Client

Name

Property owner

Site Address

28 Patterson Road,
Officer South Vic 3809

Intended Audience

- The property/tree owner(s)
- The development project manager and associated construction staff
- Council Planning Department

1.3 Brief

The purpose of this report is to provide an independent arboricultural assessment of 3 prominent trees that are located within the subject site.

Detail has been requested in relation to the following instructions:

- To provide an objective assessment of the overall condition of the subject trees.
- To provide an objective assessment of the retention value of the subject trees.
- To determine the Tree Protection Zones (TPZ) and Structural Root Zones (SRZ) of the subject trees.
- To determine whether the subject trees are expected to remain viable following the proposed development.
- To propose recommendations that are expected to ensure that the subject trees would remain viable post construction.

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1.4 Summary

- Two trees (Trees 2 & 3) are of moderate retention value.
- One tree (Tree 1) is of high retention value.
- All 3 trees are protected under Clause 52.17 – Native vegetation.
- Less invasive construction measures for driveway (8.3.1) and drains and services (8.4.7).

2 Data collection

2.1 Site visit

- Oliver Garratt of TMC Reports, visited the site for an arboricultural assessment on Monday the 16th of October 2023 at 11:00am.

2.2 Method of data collection

- The subject trees were assessed from observations made as viewed from ground level.
- Access to neighbouring properties was not permitted. Assessment was therefore limited only to parts of the trees that were visible from within the subject site.
- A digital camera was used at ground level to obtain photographs within this report.
- The canopy spreads of the trees were estimated.
- The heights of the trees were measured by using a Nikon Forestry Pro 2 Laser Range Finder.
- A circumference tape measure was used to determine the trunk dimension.
- Encroachment percentages have been calculated via ArborCAD.

2.2.1 Documents viewed

- Proposed plans (07/08/2023)
- Cardinia Council Planning Scheme
- Australian Standard AS4970 – 2009 ‘Protection of Trees on Development Sites’
- Australian Standard AS4373 – 2007 ‘Pruning of Amenity Trees’

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3 Site description

- The subject site is located in a Green Wedge Zone - Schedule 1 (GWZ1)
- The subject site is located within a Bushfire Prone Area (BPA) within the Cardinia Council.
- An existing residential dwelling is located within the subject site.
- The terrain of the site appeared to be predominantly flat.
- The subject trees are all located within the subject site.
- No additional prominent vegetation was observed within five metres of the site boundary lines.

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4 Tree data

Tree No.	Botanical Name & Common Name	Age	Origin	Height	Canopy Spread N-S E-W	DBH CA1 DAB	Health	Structure	ULE	Amenity Value	Retention Value	TPZ Radius	SRZ Radius	Permit Required	Comments
1	<i>Corymbia maculata</i>	Mature	Native NSW VIC	19.0 m	N-S 9.0 m	0.74 m	Good	Good	20+ years	Moderate	High	8.9 m	3.2 m	Yes	Heathy good quality specimen.
	Spotted gum				E-W 8.0 m	2.32 m									
						0.89 m									
2	<i>Eucalyptus viminalis subsp. viminalis</i>	Mature	Native NSW SA TAS VIC	18.6 m	N-S 4.0 m	0.63 m	Fair/ good	Fair/ good	20+ years	Moderate	Moderate	7.6 m	2.9 m	Yes	Growing on a slight lean. Smaller canopy spread than trees 1 & 2.
					E-W 6.0 m	1.98 m									
	Manna gum					0.75 m									
3	<i>Eucalyptus botryoides</i>	Mature	Native NSW VIC	18.9 m	N-S 8.0 m	0.99 m	Good	Fair	20+ years	Moderate	Moderate	11.9 m	3.5 m	Yes	Large multi stemmed tree.
					E-W 10.0 m	3.11 m									
	Southern mahogany					1.14 m									

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4.1 Photographic evidence



Tree 1



Tree 2



Tree 3



Trees 1, 2 & 3 as viewed from the south



Trees 2 & 3 site conditions at the base of the tree



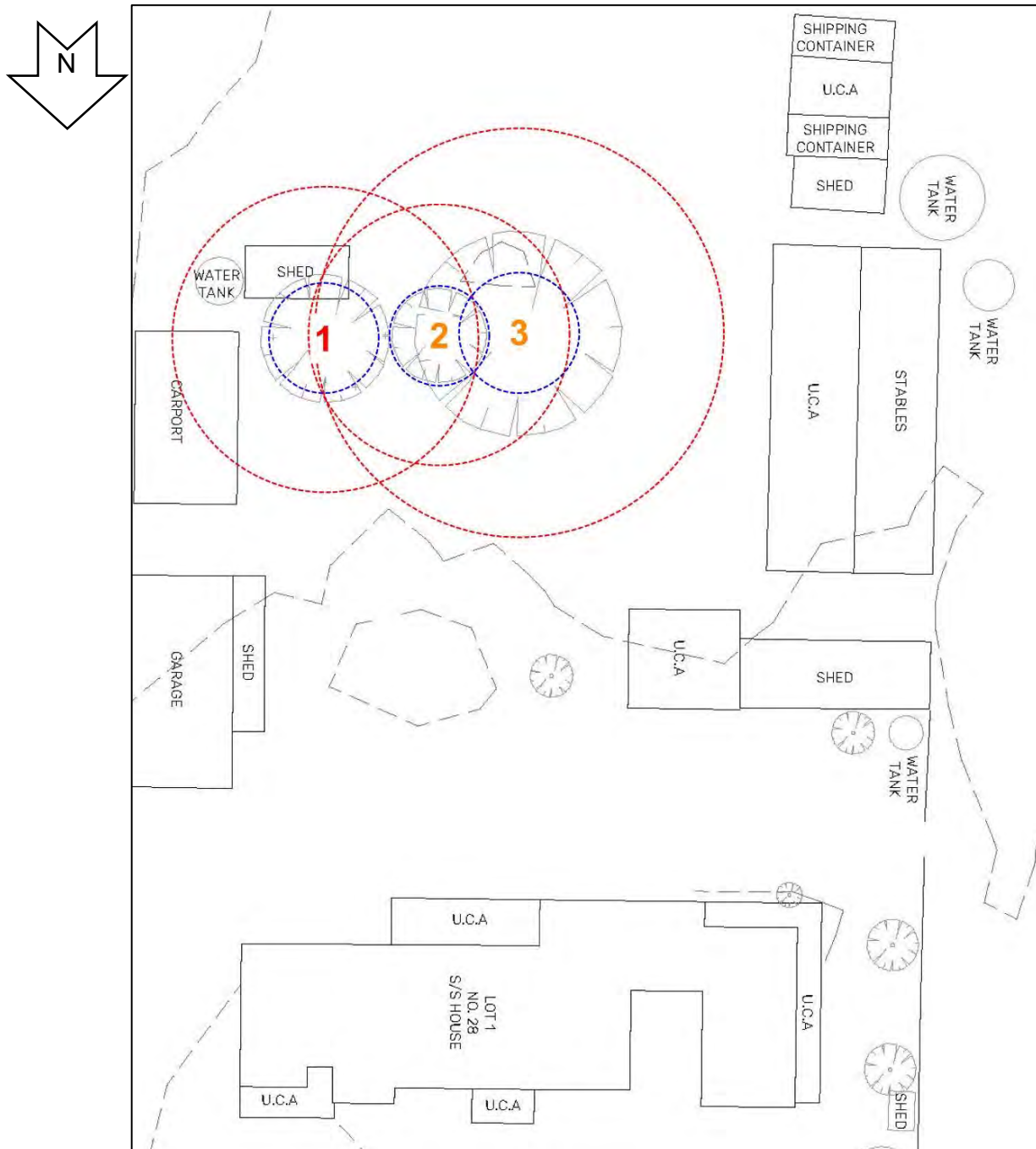
Tree 1 site conditions at the base of the tree

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5 Site maps

5.1 Existing conditions

The following map indicates the tree locations in relation to the existing conditions:



LEGEND

■ LOW RETENTION VALUE	■ COUNCIL OWNED TREE	○ TREE PROTECTION ZONE
■ MODERATE RETENTION VALUE	○ NEIGHBOURING TREE	○ STRUCTURAL ROOT ZONE
■ HIGH RETENTION VALUE	■ MAJOR ENCROACHMENT	■ MINOR ENCROACHMENT

6 Discussion

6.1 Tree protection zone

The tree protection zone (TPZ) is determined by multiplying the trunk diameter of the tree at breast height, 1.4m from ground level, by 12. A 10% encroachment on one side of this zone is acceptable without investigation into root distribution or offset of the lost area.

Section 3.2 of the Australian Standard AS4970 – 2009 Protection of Trees on Development Sites states that the TPZ of Palms, other monocots, cycads and tree ferns should not be less than 1 m outside the crown projection.

6.2 Structural root zone

The structural root zone (SRZ) is the setback required to avoid damage to stabilising structural roots. The loss of roots within the SRZ must be avoided. The SRZ is determined by applying the following formula: $(D \times 50) 0.42 \times 0.64$ where D = trunk diameter in metres.

6.3 Designing around trees

It may be possible to encroach into or make variations to the TPZ of the trees that must be retained. Encroachment includes excavation, compacted fill and machine trenching.

The following is referenced from section 3.3 of the Australian Standards AS4970 – 2009 Protection of Trees on Development Sites:

6.3.1 Minor encroachment

If the proposed encroachment is less than 10% of the area of the TPZ and is outside the SRZ, detailed root investigations should not be required. The area lost to this encroachment should be compensated for elsewhere and contiguous with the TPZ.

6.3.2 Major encroachment

If the proposed encroachment is greater than 10% of the TPZ or inside the SRZ the project arborist must demonstrate that the trees would remain viable. The area lost to this encroachment should be compensated for elsewhere and contiguous with the TPZ. This may require root investigation by non-destructive methods.

7 Conclusion

7.1 Tree retention value

7.1.1 Moderate retention value

The following trees are considered to be of moderate retention value as they are moderate sized specimens that are growing in a prominent location:

- Tree 2
- Tree 3

7.1.2 High retention value

The following tree is considered to be of high retention value as it is a large sized specimen that is growing in a prominent location with excellent individual character:

- Tree 1

7.2 Permit requirements

7.3 Clause 52.17 Native vegetation

This clause outlines the requirement for a permit to remove, destroy or lop native vegetation, including dead native vegetation.

A permit is not required to remove native vegetation if:

- the table of exemptions to this clause specifically states that a permit is not required
- it is native vegetation or an area specified in the schedule to the clause
- a NVPP corresponding to the land is incorporated into the relevant planning scheme.

7.3.1 Trees subject to permit requirements

All 3 trees are protected under this clause.

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7.4 Impact assessment

The following table represents the encroachments of the proposed development:

Tree No.	Encroachment	TPZ encroachment	SRZ encroachment	Encroachment category	Proposed retention
1	Proposed gravel driveway	60.0 %	42.0 %	Major	Retain
2	Proposed gravel driveway	64.4 %	17.7 %	Major	Retain
3	Proposed gravel driveway	85.6 %	31.3 %	Major	Retain

Note: encroachment calculations are approximate and do not consider over excavation

7.4.1 Major encroachment

The proposed development is considered to be a major encroachment according to section 3.3.3 of the Australian Standard AS4970 – 2009 ‘Protection of Trees on Development Sites’ of the following trees:

- Tree 1
- Tree 2
- Tree 3

Tree 1

- The footprint of the proposed gravel driveway is considered to be a major encroachment (6.3.2) of 60.0% of the TPZ and 42.0% of the SRZ.
- This tree is of high retention value.
- This tree is proposed to be retained.
- This tree is protected under Clause 52.17 – Native vegetation.
- The construction of the proposed development has the potential to compromise the tree’s long-term viability.
- Recommendations within section 8.3 and 8.4 of this report are required to ensure that this tree would remain viable post construction.

Tree 2

- The footprint of the proposed gravel driveway is considered to be a major encroachment (6.3.2) of 64.0% of the TPZ and 17.7% of the SRZ.
- This tree is of high retention value.
- This tree is proposed to be retained.
- This tree is protected under Clause 52.17 – Native vegetation.
- The construction of the proposed development has the potential to compromise the tree’s long-term viability.
- Recommendations within section 8.3 and 8.4 of this report are required to ensure that this tree would remain viable post construction.

Tree 3

- The footprint of the proposed gravel driveway is considered to be a major encroachment (6.3.2) of 85.6% of the TPZ and 31.3% of the SRZ.
- This tree is of high retention value.
- This tree is proposed to be retained.
- This tree is protected under Clause 52.17 – Native vegetation.
- The construction of the proposed development has the potential to compromise the tree's long-term viability.
- Recommendations within section 8.3 and 8.4 of this report are required to ensure that this tree would remain viable post construction.

8 Recommendations

8.1 Tree retention

The following trees of moderate retention value are proposed to be retained:

- Tree 2
- Tree 3

The following tree of high retention value is proposed to be retained:

- Tree 1

The following is recommended in order to ensure that trees that are proposed to be retained would remain viable post construction:

- Comply with less invasive construction measures (8.3)
- Comply with tree protection measures (8.4)

8.2 Tree removal

- No trees are proposed to be removed from subject site.

8.3 Less invasive construction measures

8.3.1 Gravel driveway

- Limit any excavation to surface scraping for levelling purposes only (e.g. no greater than 100mm in depth) within the TPZ of Tree 1, 2 & 3.
- Engage a suitably qualified arborist (AQF Level 5) to supervise any surface scraping for the driveway within the TPZ of Tree 1, 2 & 3.

8.4 Tree protection measures

8.4.1 Pruning

- Pruning of trees that are proposed to be retained (8.1) is not required for clearance purposes and should therefore not be undertaken.

8.4.2 Tree protection fencing

- Tree protection fencing (TPF) should be installed for Trees 1, 2 & 3.
- TPF should be installed as close to the TPZ boundary as practically possible provided that it does not encroach onto the road, footpath, crossover or proposed works.
- TPF should be installed prior to machinery being brought onsite for the demolition of the existing dwelling.
- TPF should be a minimum 1.8m high and comprised of wire mesh (or similar) supported by concrete feet (or similar).
- TPF should remain intact for the duration of the project.
- TPF should only be removed or shifted with the approval of the Project Arborist and the Responsible Authority.

8.4.3 Tree protection signage

- The signage on the TPF should be placed on TPZ fencing at regular intervals so that it is visible from any angle outside the TPZ.
- Signage should state 'Tree Protection Zone, No Access' or similar.
- Signage should be greater than 600mm X 400mm in size.
- The contact details of the project arborist and site manager should be written clearly on the sign.



8.4.4 Scaffolding

- When scaffolding must be erected within Tree Protection Zones, cover the ground with a 10cm layer of mulch, and then cover this with boards and plywood to prevent soil compaction.

8.4.5 Site storage

- A designated storage area where building materials, chemicals etc. can be stored should be located outside the TPZ of retained trees.

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8.4.6 Prohibitions within the TPZ

The following activities are prohibited within the TPZ:

- Machine excavation including trenching (unless approved by the Responsible Authority)
- Cultivation
- Storage
- Preparation of chemicals, including cement products
- Parking of vehicles
- Refuelling
- Dumping of waste
- Wash down and cleaning of equipment
- Placement of fill
- Lighting of fires
- Physical damage to the tree
- Pruning or damaging of roots greater than 30mm in diameter

8.4.7 Drains and services recommendations

In the event that any drains or services are included in a greater than 10% encroachment into the TPZ or encroach into the SRZ of trees that are proposed to be retained, the following should be undertaken:

- Drains or services should be installed by non-root destructive means such as horizontal boring at greater than 1100mm in depth **or** by low pressure hydro-excavation to ensure that the bark of the roots remain intact, unless a root investigation determines that the tree(s) would remain viable.

Note: encroachment calculations must consider additional encroachments e.g. site cuts, retaining walls, building footprint.

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9 Limitation of liability

TMC Reports and their employees are tree specialists who use their qualifications, education, knowledge, training, diagnostic tools and experience to examine trees, recommend measures to enhance the beauty and health of trees, and attempt to reduce the risk of living near trees. Clients may choose to accept or disregard the recommendations of this assessment and report.

Trees are living organisms that fail in ways the arboriculture industry does not fully understand. Conditions are often hidden within trees and below ground. Unless otherwise stated, observations have been made from ground level and limited to accessible components without dissection, excavation or probing. There is no guarantee that a tree will be healthy or safe under all circumstances, or for a specified period of time. Likewise, remedial treatments cannot be guaranteed.

Treatment, pruning and removal of trees may involve considerations beyond the scope of this report, such as property boundaries and ownership, disputes between neighbours, sight lines, landlord-tenant matters, and related incidents. Such issues cannot be taken into account unless complete and accurate information is given prior to or at the time of site inspection.

Information contained in this report covers those items that were examined and reflect the condition of those items at the time of inspection. There is no warranty or guarantee expressed or implied that the problems or deficiencies of the trees or property in question may not arise in the future. Trees can be managed, but they cannot be controlled. To live or work near a tree involves a degree of risk. The only way to eliminate all risks involved with a tree is to eliminate the tree.

All written reports must be read in their entirety, at no time shall part of the written assessment be referred to unless taken in full context of the whole written report.

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10 Definition of terms

The following descriptors are used as indicators only. Other factors may be used in assessing an individual tree's health, structure, ULE, retention value and amenity value.

10.1 Tree health

Category	Description
Good:	The tree is demonstrating good or exceptional growth for the species. The tree is exhibiting a full canopy of foliage and may have only minor pest or disease problems. Foliage colour, size and density is typical of a healthy specimen of that species.
Fair:	The tree is in reasonable condition and growing well for the species. The tree may exhibit an adequate canopy of foliage. There may be some dead wood in the crown, some grazing by insect or animals may be evident, and/or foliage colour, size or density may be atypical for a healthy specimen of that species.
Poor:	The tree is not growing to its full capacity. Extension growth of the laterals may be minimal. The canopy may be thinning or sparse. Large amounts of dead wood may be evident throughout the crown, as well as significant pest and disease problems. Other symptoms of stress indicating tree decline may be present.
Very poor:	The tree appears to be in a state of decline, and the canopy may be very thin and sparse. A significant volume of dead wood may be present in the canopy, or pest and disease problems may be causing a severe decline in tree health.
Dead:	The tree is no longer alive.

10.2 Structure

Category	Description
Good:	The tree has a well-defined and balanced crown. Branch unions appear to be strong, with no defects evident in the trunks or the branches. Major limbs are well defined. The tree would be considered a good example for the species. Probability of significant failure is highly unlikely.
Fair:	The tree has some minor problems in the structure of the crown. The crown may be slightly out of balance at some branch unions or branches may be exhibiting minor structural faults. If the tree has a single trunk, this may be on a slight lean, or be exhibiting minor defects. Probability of significant failure is low.
Poor:	The tree may have a poorly structured crown, the crown may be unbalanced, or exhibit large gaps. Major limbs may not be well defined; branches may be rubbing or crossing over. Branch unions may be poor or faulty at the point of attachment. The tree may have suffered major root damage. Probability of significant failure is moderate.
Very poor:	The tree has a poorly structured crown. The crown is unbalanced or exhibits large gaps. Major limbs are not well defined. Branch unions may be poor or faulty at the point of attachment. A section of the tree has failed or is in imminent danger of failure. Active failure may be present, or failure is probably in the immediate future.
Failed:	A significant section of the tree or the whole tree has failed.

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10.3 Useful life expectancy (ULE)

Category	Description
Unsafe:	The tree is considered dangerous in the location and should be addressed as a priority..
0 years:	The tree no longer provides any amenity value.
Less than 5 years:	The tree under normal circumstances and without extra stress should be safe and have value of maximum of 5 years. The tree will need to be replaced in the short term. Replacement plants should be established as soon as possible if there is efficient space, or consideration should be given to the removal of the tree to facilitate replanting.
5 to 10 years:	The tree under normal circumstances and without extra stress should be safe and have value of maximum of 10 years. Trees in this category may require regular inspections and maintenance particularly if they are large specimens. Replacement plants should be established in the short term if there is sufficient space, or consideration should be given to the removal of the tree to facilitate replanting.
10 to 20 years:	The tree under normal circumstances and without extra stress should be safe and of value of up to 20 years. During this period, regular inspections and maintenance will be required.
20 + years:	The tree under normal circumstances and without extra stress should be safe and of value of more than 20 years. During this period, regular inspections and maintenance will be required.

10.4 Tree retention value

Category	Description
High:	The tree may be significant in the landscape, offer shade and other amenities such as screening. The tree may assist with erosion control, offer a windbreak or perform a vital function in the location (e.g. habitat, shade, flowers or fruit). The tree is free from structural defects and is vigorous. Consider the retention of the tree and designing the development to accommodate the tree.
Moderate:	The tree may offer some screening in the landscape or serve a particular function in the location and have minor structural defects. The tree may be entering the mature stage of its life cycle. The tree may be retained if it does not hamper the design intent.
Low:	The tree offers very little in the way of screening or amenity and may have significant structural defects. The tree may also be mature and entering the senescent stage of its life cycle. The tree may be removed if necessary.
Neighbouring tree:	The tree is located within an adjoining private property/land. The tree is to be protected unless written consent from the tree owner(s) and/or responsible authority is obtained. Consider the retention of the tree unless written consent is obtained from the tree owner and/or responsible authority.
Council owned tree:	The tree is located within Council owned land. The tree is to be protected unless written consent from the responsible authority is obtained. Consider the retention of the tree unless written consent is obtained from the tree owner and/or responsible authority.

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10.5 Age

Category	Description
Young:	Juvenile or recently planted approximately 1-7 years.
Semi Mature:	An established tree but one which has not reached its potential ultimate height and has significant growth potential. Tree is actively growing.
Mature:	Tree has reached expected size in its growing conditions.
Senescent:	Tree is over mature and has started to decline.
Dead:	The tree is no longer alive.

10.6 Amenity value

Category	Description
Very Low:	Tree makes little or no amenity value to the site or surrounding areas. In some cases, the tree might be detrimental to the area's amenity value (e.g. unsightly, risk of weed spread).
Low:	Tree makes some contribution of amenity value to the site but makes no contribution to the amenity value of surrounding areas. The removal of the tree may result in little loss of amenity. Juvenile trees, including street trees are generally included in this category. However, they may have the potential to supply increased amenity in the future.
Moderate:	The tree makes a moderate contribution to the amenity of the site and/or may contribute to the amenity of the surrounding area.
High:	The tree makes a significant contribution to the amenity value of the site, or the tree makes a moderate contribution to the amenity value of the larger landscape.

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10.7 Terms within the tree data table

Category	Description
DBH:	Diameter at breast height (1.4m from ground level). Combined DBH has been calculated according to the Australian Standard AS4970 – 2009 'Protection of Trees on Development Sites'.
DAB:	(Diameter above buttress) Diameter of the trunk measured immediately above the root buttress.
CA1 / CA1.5:	Circumference of trunk at either 1m or 1.5m from ground level. Combined circumference is the sum of individual stem circumferences.
TPZ:	(Tree protection zone) An area set aside for the protection of a tree's roots and crown to provide for the viability and stability of a tree to be retained where it is potentially subject to damage by development. Typically expressed as a radius in metres that defines a circle with the trunk/stem at its centre.
SRZ:	(Structural root zone) An area around the base of a tree required for the tree's stability in the ground. Woody root growth and soil cohesion in this area are necessary to hold the tree upright. Typically expressed as a radius in metres that defines a circle with the trunk/stem at its centre.

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Waste Management Plan

28 Patterson Road, Officer South, VIC 3809

Report Number: WMP-23100604-A



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Revision Table

Revision	Date	Description
A	10/11/2023	Initial Release

Table of Terms

Term	Definition
BCA	Building Code of Australia
EPA	Environmental Protection Agency
RFI	Request For Information
WMP	Waste Management Plan

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1 Project Information

Steradian have been engaged by M&D Town Planning to undertake a Waste Management Plan for the proposed Religious Centre development at 28 Patterson Road, Officer South, VIC 3809. The report addresses the waste collection details raised as an area of interest by Cardinia Shire Council.

This Waste Management Plan does not cover waste management during the construction phase of the development but outlines how the will manage waste during its occupation and operation.

The report reviews the waste management strategies for the land use, estimates the waste and recyclable volumes, reviews the on-site bin provisions, seeks strategies to reduce the amount of waste sent to landfill, and assesses the proposed removal of waste from the site.

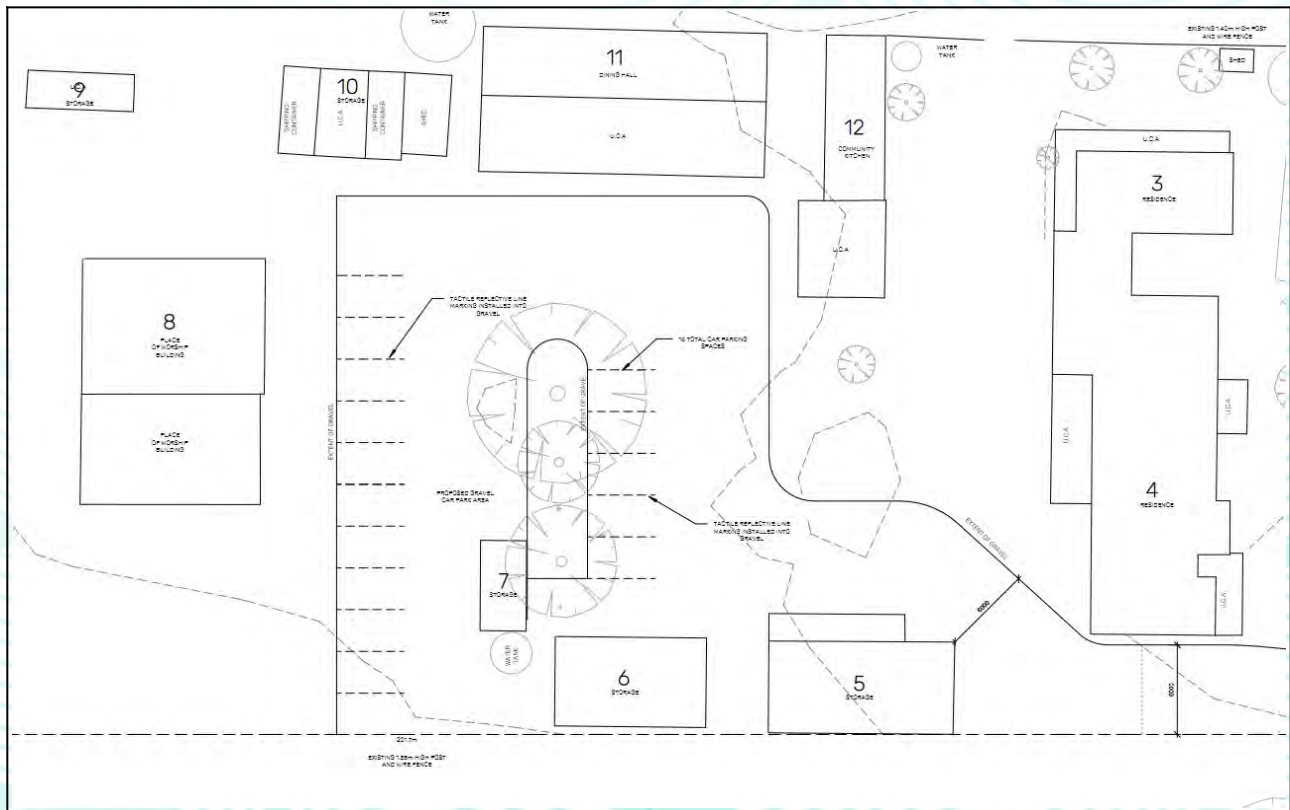
The Subject Site is located at 28 Patterson Road, Officer South, VIC 3809, an area under the jurisdiction of Cardinia Shire Council. The proposal is for a development comprising of 1 x Religious Centre on the site. It has been classed as such to calculate the waste generation volumes based on the square footage of the proposed buildings and occupants for the residency, as per Table 1. Presented in Figure 1 is an overhead view of the Subject Site.

Table 1: Waste Sources

Waste Source	Area
Place of Worship	199m ²
Dining Hall	87m ²
Residence	287m ²



Figure 1: Subject Site



Bins will be stored in a dedicated section of the parking facility with adequate access for collection vehicles from the main road. Waste collection will be undertaken at the collection point by a private contractor using a waste collection vehicle for all waste streams. The mobile bins will be transported by operators of the facility a short distance from their storage areas to the collection point so they can be lifted onto the collection truck.



2 Details of Waste

2.1 Waste Streams

There is no provision for the collection of green waste. Should any green waste be generated on the lots, it is the responsibility of the respective operators to ensure its appropriate disposal. The facility operators are accountable for disposing of green waste generated on-site, or they must make appropriate arrangements with a private waste collection contractor.

Table 2: Waste Streams

Waste Type	Waste Management
Garbage	Facility Operator will place general landfill waste in tied plastic bags and dispose of the bagged garbage directly into their respective Collection Bin.
Recycling	Facility Operator will dispose of loose recyclable items directly into their respective Collection Bin. Cardboard items shall be folded where appropriate.
Hard Waste	Facility Operator will be eligible for one free annual hard waste collection by Council. Hard waste will be stored within the facility until Council has instructed to place onto the kerbside for collection.
Other	The Facility Operator will be responsible for the collection and disposal of electric waste including batteries, phones, computers etc. at E-waste facility Future Recycling Transfer Station - Pakenham 7/30-32 Exchange Dr, Pakenham VIC 3810. Ewaste must not be disposed in landfill.



2.2 Waste Generation

The waste generation rates for the proposed development are based on the Best Practice Guide for 'Waste Management and Recycling in Multi-Unit Developments' by Sustainable Victoria. The generation of waste and recycling for the proposed development is outlined in Table 2 and Table 3.

For the purpose of these calculations the Religious Centre has been broken into two sections for classification. The Place of Worship and the Dining Hall as **Religious/social** to estimate generation rates based on the facilities square meterage. While the Residence is classified as **Boarding house/Guesthouse** and estimated based on the number of occupants.

Table 3: Waste Generation Rates

Waste Source	Garbage	Recycling
Place of Worship	50L/100m ² /week	10L/100m ² /week
Dining Hall	50L/100m ² /week	10L/100m ² /week
Residence	60L/Occupant/Week	60L/Occupant/Week

Table 4: Expected Waste Generation

Waste Source	Occupancy Size m ²	Garbage (L /week)	Recycling (L/week)
Place of Worship	199m ²	696.5	139.3
Dining Hall	87m ²	304.5	60.9
Residence	287m ²	120.0	120.0

The proposed facility is anticipated to generate approximately 1121.0 L of un-compacted general waste (per week) and 320.2 L of un-compacted recycling (per week).

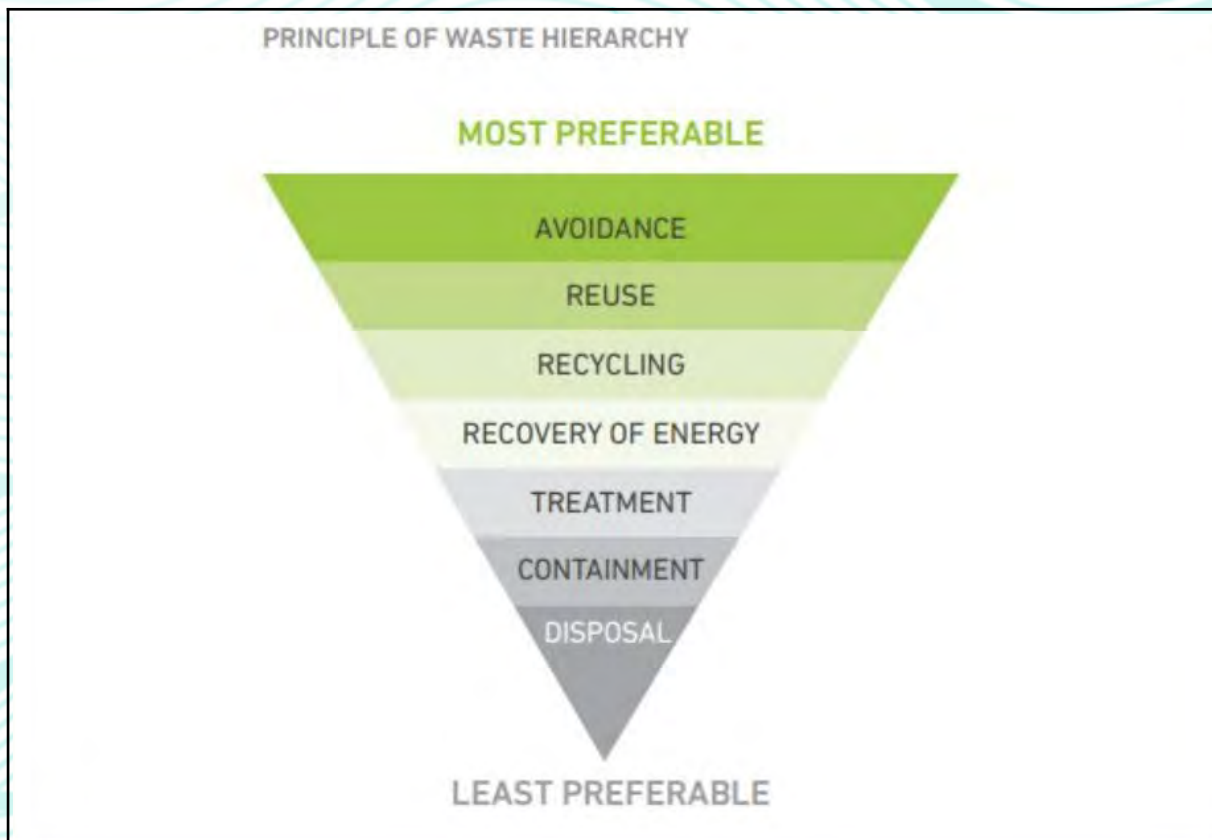
As the typical bins issued by Cardinia Shire Council are 120 L for garbage and 240 L for recycling, Council waste collection is considered insufficient for the purposes of this business. Therefore, the use of private waste collection is recommended.



2.2.1 Waste Reduction

The Facility Operator will be responsible to encourage all users of the facility to reduce waste disposal and recycle materials based on the waste management hierarchy set out by Sustainability Victoria. The hierarchy is detailed in Figure 2.

Figure 2: Principal of Waste Hierarchy [1]



Additionally, the Facility Operator can set targets and measures to reduce garbage going to landfill and increase recycling and choose to participate in Council's waste programs to promote sustainability initiatives.



3 Waste Equipment

3.1 Equipment Details

Further details regarding the waste equipment required for the proposed development are detailed in Table 5.

Table 5: Bin Details and Colours [4]

Waste Source	Bin Capacity	Dimensions (H x W x D)	Bin Lid Colour
Garbage	1,100 L	1470 x 1370 x 1245 mm	Red
	660 L	1250 x 1370 x 850 mm	Red
	240 L	1080 x 580 x 735 mm	Red
Recycling	1,100 L	1470 x 1370 x 1245 mm	Yellow
	660 L	1250 x 1370 x 850 mm	Yellow
	240 L	1080 x 580 x 735 mm	Yellow

Bin capacity, dimensions and colours are based on guidelines set out by Cardinia Shire Council and Sustainable Victoria. Where the data shown is the maximum available bin size appropriate to the site, with dimensions from Sustainability Victoria relevant to AS 4123.1.

Appropriate signage will be displayed on the bins, within the bin storage area in accordance with Sustainability Victoria and Cardinia Shire Council. Indicative signage is illustrated in Figure 3 and Figure 4. The signage will assist in guiding and encouraging occupiers of the proposed development to dispose of waste correctly into the appropriate waste streams.

Figure 3: Waste Signage Example - Rubbish



Figure 4: Waste Signage Example – Recycling





3.2 Bin Configuration

Based on the rates previously specified, Table 6 provides a summary of the waste storage requirements and the frequency of collection.

Table 6: Private Waste Bins and Collection Frequencies

Waste Source	Waste Stream	Waste Volume (L/week)	Bin Capacity (L)	No. of Bin Required	Collection Frequency (per week)
Place of Worship	Garbage	696.5	1,100	1	1
	Recycling	139.3	240	1	1
Dining Hall	Garbage	304.5	660	1	1
	Recycling	60.9	240	1	1
Residence	Garbage	120.0	240	1	1
	Recycling	120.0	240	1	1

Based on the findings, it is not recommended to utilise council bin collection as the sole method of waste collection as it is deemed insufficient and inefficient.

Thus, one 1,100 L capacity, one 660 L capacity and one one 240 L capacity, private collection bins are recommended for the purposes of collecting garbage waste, and three 240 L capacity, private collection bins are recommended for recycling waste. A private collection schedule should be organised such that, both garbage and recycles are **collected weekly**. The bins are to have permanent well-fitting lids and conform to appropriate Australian Standards. Figure 5 outlines the sizing of bins as outlined in Victoria's 'Waste Management and Recycling in Multi-unit Developments' and relevant to AS 4123.2.



Figure 5: Typical Bin Sizing [1][5]


MOBILE CONTAINERS WITH A CAPACITY FROM 500L TO 1700L WITH FOUR WHEELS						
Bin Type	660L Bulk Bin	660L MGB	770L MGB	1100L MGB/ Bulk Bin	1300L MGB	1700L MGB
Height (mm)	1235	1250	1425	1470	1480	1470
Depth	765	850	1100	1245	1250	1250
Width	1360	1370	1370	1370	1770	1770

Note: Crate dimensions may vary between different bin manufactures



Dome or flat lid containers

TABLE 15 MOBILE CONTAINERS WITH A CAPACITY FROM 80L TO 340L WITH TWO WHEELS					
Bin Type	80L MGB	120L MGB	140L MGB	240L MGB	340L MGB
Height (mm)	870	940	1065	1080	1100
Depth	530	560	540	735	885
Width	450	485	500	580	600



Accordingly, the Facility Operator is responsible for confirming with the waste collection contractor, the allowable materials which can be deposited in the respective bins for collection. General waste shall be placed in tied plastic bags and stored within waste bins, while all recyclables including loose paper, cardboard, glass, aluminium etc. must be placed in the recycling bin without plastic bags. The operator is responsible for ensuring correct use, maintenance and management of bins, see Section 5.1 Site Management for full details. Ownership of all bins is to be identified by individual numbering on the middle of the face, opposite the handle. Waste or recyclables which exceed the capacity of the bins provided need to be disposed of via an appropriate disposal method by the operators.

Refer to the further information provided on the Cardinia Shire Council's website for waste disposal facilities locations, operating hours and contact information



4 Waste Transfer

4.1 Facility to Bin Storage Area

The waste management systems of the proposed development comprise of the following components:

- Collection Bins,
- Bin Store Area.

It is important to note that general waste shall be placed in tied plastic bags and stored within waste bins, while all recyclables including loose paper, cardboard, glass, aluminium etc. must be placed in the recycling bin without plastic bags. Also, recycling containers must be un-capped, drained, and rinsed prior to disposal into the appropriate bin. Bagged recycling is not permitted.

4.1.1 Storage Point

Adequate storage space is to be provided for the bins within the property boundary to ensure that they are out of sight, well screened, and located an appropriate distance from public areas. As per Figure 6, there is an area located near the entrance to the facilities car park that is appropriately located for a safe and effective transfer and pickup for the waste collection services.

Pedestrian access to the waste bin store areas will be accessible by the driveway. An example of the bin storage areas is illustrated at Figure 6, it is proposed that this area is utilised for the purposes of storing bins.



Figure 6: Bin Storage Area: Place of Worship

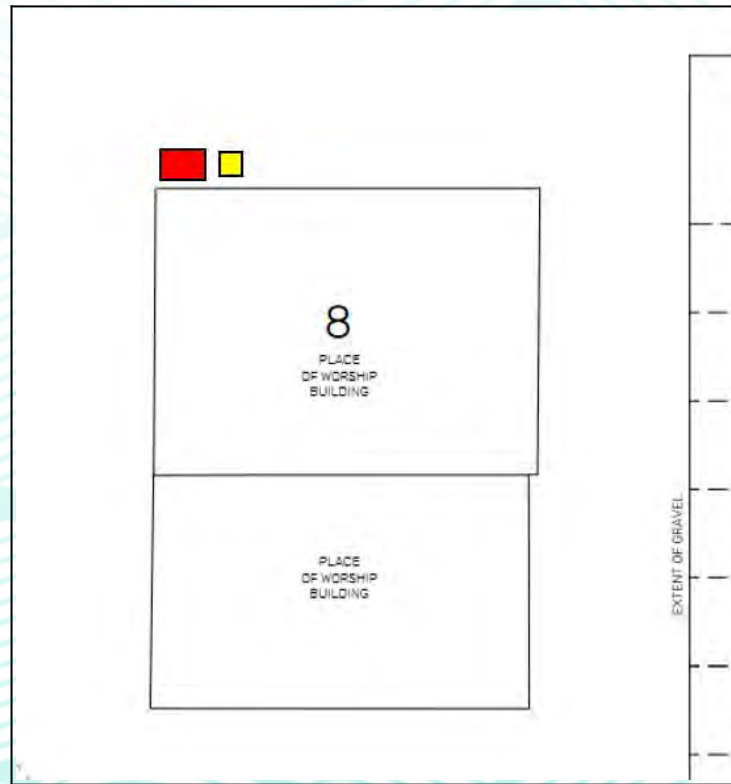


Figure 7: Bin Storage Area: Dining Hall

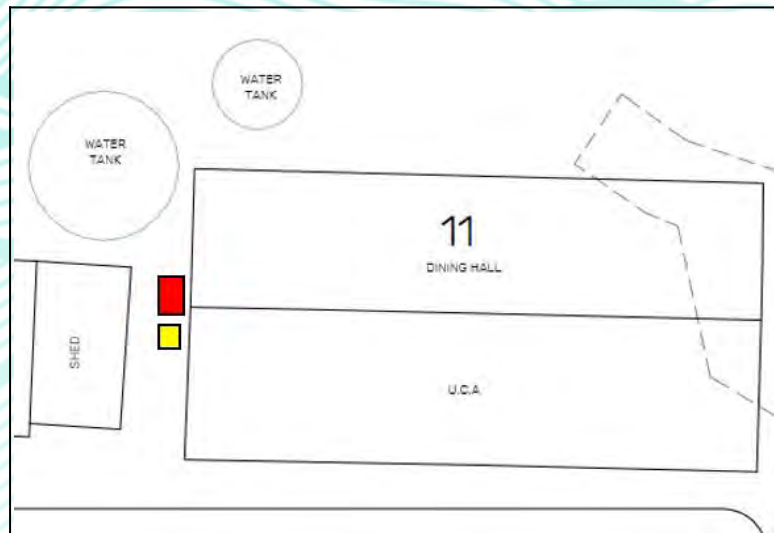
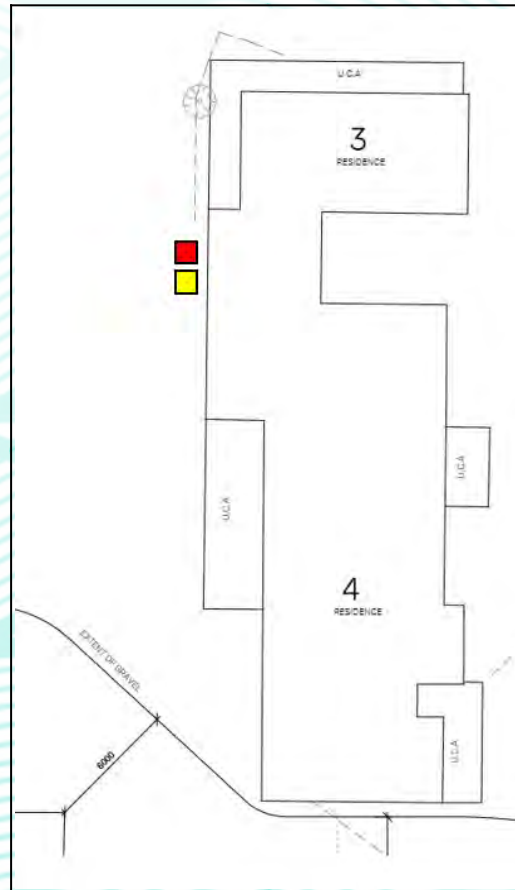




Figure 8: Bin Storage Area: Residence



Based on the above specified bin dimensions, the bin storage will require approximately 7.68m² for the garbage bins (2x 1,100 L, 1x 240L) and recycling bins (2x 1,100 L, 1x 240L). Table 7 details the storage area requirements based on the waste equipment proposed. This area will allow for convenient bin manoeuvring, cleaning of the storage area and sufficient space from services to reduce the risk of damage.



Table 7: Bin Store Area Requirements

Use	Waste Equipment	Net Area	Qty	Total Storage Area Required	Bin Storage Area Provided
Place of Worship	1,100 L (Garbage)	1.71m ²	1	2.13m ²	>2.13m ²
	240 L (Recycling)	0.43m ²	1		
Dining Hall	660 L (Garbage)	1.16m ²	1	1.59m ²	>1.59m ²
	240 L (Recycling)	0.43m ²	1		
Residence	240 L (Garbage)	0.43m ²	1	0.85m ²	>0.85m ²
	240 L (Recycling)	0.43m ²	1		

As an additional safety measure, bins transfer should always be encouraged to be conducted during off-peak periods.

4.2 Bin Storage Area to Collection Point

The waste management plan for the proposed development includes a clear process for the transfer of bins from storage to collection point and back. This process is outlined in Figure 9, Figure 10 and Figure 11 which shows the blue path from the storage area to the collection point. It is the responsibility of the Facility Operator to ensure that this path is kept clear on collection dates to ensure the safe transfer of bins for collection services.



Figure 9: Transfer to Collection Point: Place of Worship

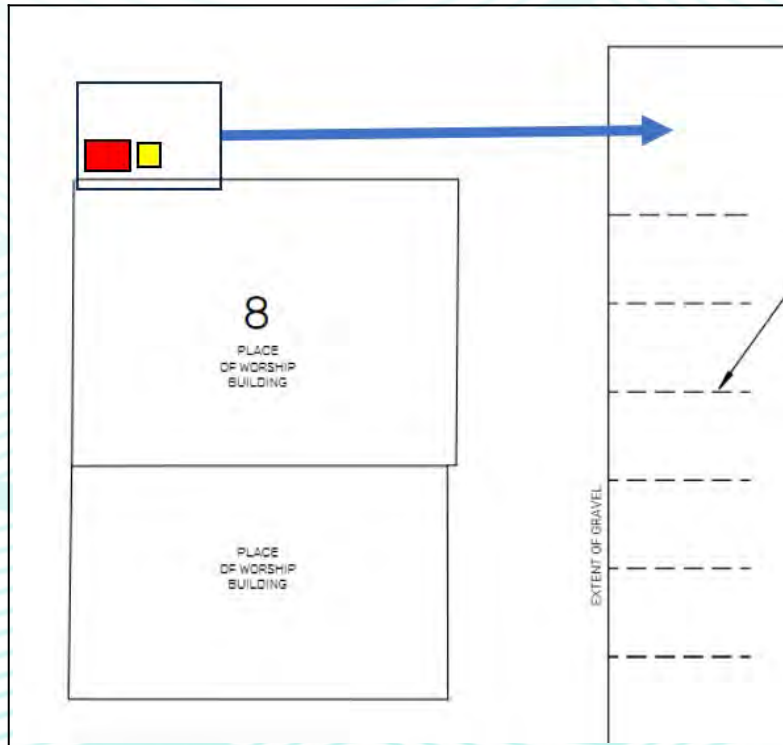




Figure 10: Transfer to Collection Point: Dining Hall





Figure 11: Transfer to Collection Point: Residence

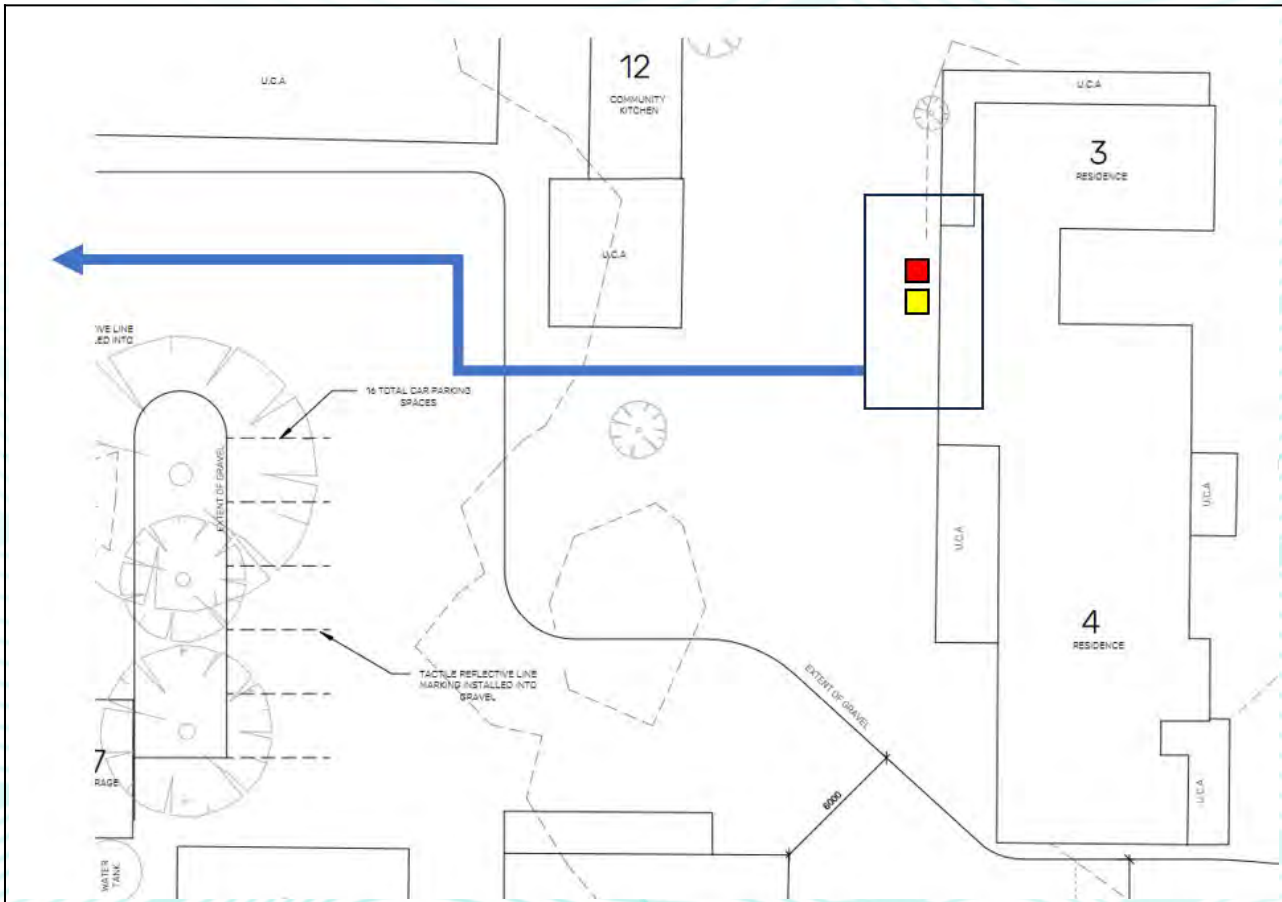
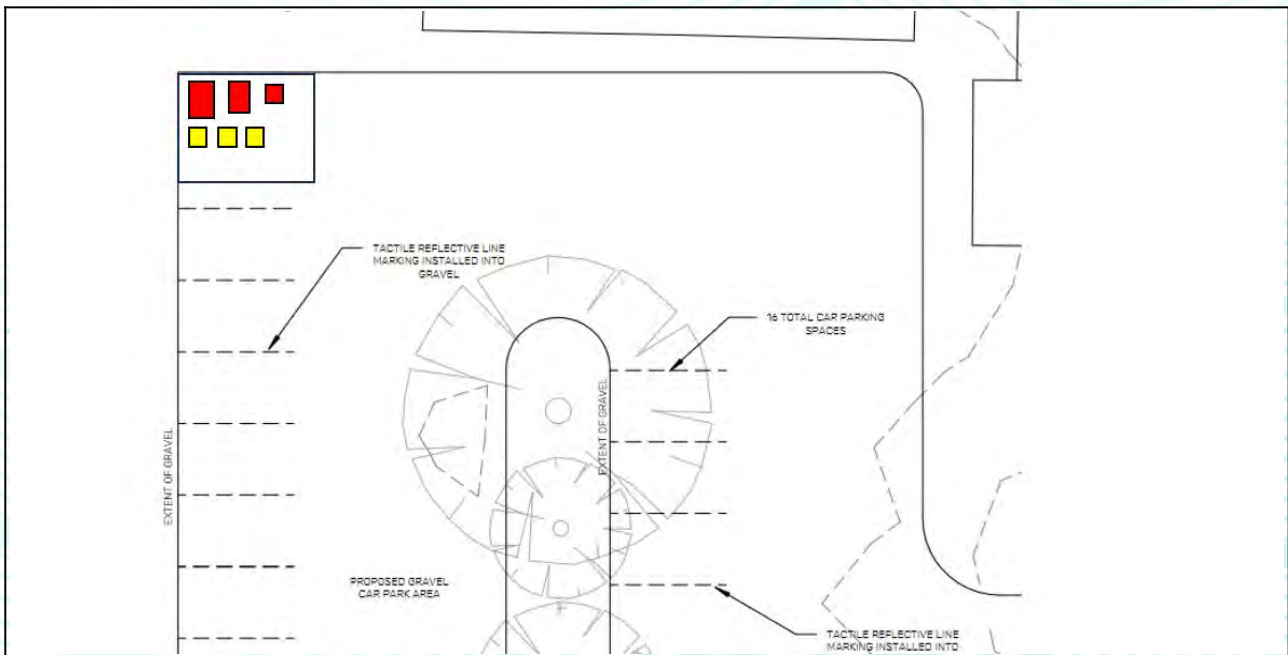




Figure 12: Collection Point



The Facility Operator is also responsible for making sure bins are properly returned to their storage location as soon as possible following collection to minimise the risk of theft or damage, and to improve the visual amenity of the common property. Overall, the Facility Operator must ensure the maintenance of a safe and organised waste management system to minimise the risk of damage and theft of the bins.



4.3 Waste Collection

Steradian encourages waste collection to be conducted via a private waste collection contractor to minimise the number of bins and to simplify the collection processes.

The operator of the facility shall enter or continue a private waste collection provider of their choice, negotiate a service agreement and pay for these services as per Section 5.1.4 Contract Management.

4.3.1 Collection Point

The waste management plan for the proposed development includes recommendations for the use of private waste collection contractor in order to minimise the number of bins and simplify the collection process. The operator of the facility will be responsible for arranging and paying for these services.

In terms of bin placement, based on the arrangement of the site, it is recommended that the private waste collection contractor collects the bins from the area adjacent to the driveway. There are also general guidelines for bin placement to ensure safe and efficient collection, such as not placing bins too close to trees or parked cars, ensuring a 50cm clearance between bins, and putting bins out for collection no earlier than the night before the scheduled collection day.

4.3.1.1 Truck Access

The recommended location for the private waste collection contractor to collect the bins from is the area adjacent to the parking spaces. This location is expected to allow for the collection vehicle to prop within the area and collect the bins in less than 5 minutes per collection. Additionally, this area is close to the path and provides sufficient space for a waste collection vehicle to load the waste in a safe and efficient manner.



4.3.1.2 *Pickup Time*

In accordance with EPA guidelines, waste collection must occur during specific hours. For Monday to Saturday, collection times must occur between 7:00am and 8:00pm. For Sundays and public holidays, collection times must occur between 9:00am and 8:00pm.

For collections occurring once a week, the hours of collection should be restricted to 6am to 6pm on Monday to Saturday. For collections occurring more than once a week, the hours of collection should be restricted to 7am to 6pm on Monday to Saturday.

On the day before the collection, the Facility Operator of the facility will be responsible for transferring the bins to the kerbside.

For the option of privately collected waste: Waste collection will be undertaken outside of commuter peak periods. Garbage and Recycles will be collected **once per week**. Additionally, two days will be allocated for the collection of waste such that a maximum of 3 bins can be set outside for collection at any one time.



5 Maintenance

5.1 Site Management

5.1.1 Responsible Party

The facilities operator shall be responsible for maintaining the bin storage area, including regular cleaning and upkeep. This includes using the provided facilities to clean the enclosure and bins. Additionally, the operator shall handle all dealings with the Council, such as ordering initial bins, ordering replacements or additional bins, and organising Council clean-ups or other special services.



5.1.2 System Management

The facilities operator shall be responsible for cleaning and maintaining the bin storage area. This will involve using the provided facilities to clean the enclosure and bins. Management shall also be responsible for Council dealings, including, but not limited to: ordering initial bins, ordering replacements or additional bins, and organising Council clean-ups or other special services.

Further to the occupation of the proposed development, it is the responsibility of the Facility Operator for the ongoing operation and maintenance of the Waste Management Plan. The Facility Operator will ensure that maintenance work and upgrades are carried out on the waste areas and components of the waste system. When required, the Facility Operator will engage an appropriate contractor to conduct maintenance services, replacements or upgrades.

The operator is to ensure that: all waste placed in the waste bin is wrapped or in plastic bags; the bins are not overloaded and the lids can be fully closed; waste and recycling is not forced into the respective bins as it may jam in the bin and not be emptied; the bins are regularly cleaned. If any wheelie bins need replacing or fixing, then the cost associated with this, if any, is to be borne by the Facility Operator of the respective lot.

5.1.3 Plan Enforcement

The proposed development's waste management plan includes a range of responsibilities for the Facility Operator, including ensuring that all occupiers are provided with the relevant information and materials regarding the waste management system and sustainability strategies of the proposed development. In addition, the Facility Operator will be responsible for monitoring and reviewing the plan on a regular basis to ensure that it meets regulatory requirements and expected waste generation rates.

To ensure safe practice when utilising the waste facilities, relevant information will be provided at the waste areas. The Facility Operator will also be responsible for monitoring the plan and, where necessary, conducting a waste audit to identify any modifications or improvements to the waste management system. The Facility Operator will also be responsible for ensuring that all waste is properly stored and maintained and that all bins are stored within the lot boundaries at all times. Additionally, the Facility Operator will be responsible for ensuring that all costs associated with the waste management system are met.



5.1.4 Contract Management

The operator of the development is responsible for entering into and maintaining a valid contract with a private contractor to provide waste collection services for the development. The contract should specify the collection the correct sizes and quantity of bins, to be collected on a specified day once a week. This will ensure the proper disposal of waste and recycling materials for the facility.

5.2 Cleaning

It is recommended to provide the storage area with hot and cold water taps for cleaning purposes.

The area shall be appropriately drained, and completely isolated from storm water. Alternatively cleaning services can be obtained off-site through a contractor.



6 Facility Impact

It is the responsibility of the Facility Operator to carry out the ongoing maintenance of all waste areas to minimise the following amenity impacts.

6.1 Ventilation

The bin storage area will be located outdoors, providing a high level of ventilation and protection from build up of fumes and waste-related odours.

6.2 Noise

The waste facilities will comply with BCA and AS2107 acoustic requirements. Collection days and times are pre-determined in accordance with Council collection schedules. To ensure minimal noise disruption, waste collection times should comply with the EPA Noise Control Guidelines [6]. Being located within the ground level, noise associated with the waste disposal process shall be minimal.

6.3 Litter

Bins will be monitored by the Facility Operator to ensure that they are not overfilled and any spillage resulting from waste collection is appropriately addressed.

6.4 Vermin

All bin lids will be kept closed at all times to prevent vermin access to the bin storage areas.

7 Conclusion

We trust that the information provided within this report sufficiently outlines the on-going waste management strategy to be adopted by the proposed land use.



8 References

The following documents have been reviewed and referred to in this report:

- [1] Waste Management and Recycling in Multi-Unit Developments – Better Practice Guide – Sustainability Victoria.
- [2] Town Planning Submission – 28 Patterson Road, Officer South, VIC 3809 - M&D Town Planning.
- [3] RFI notice from Cardinia Shire Council for the address
- [4] AS 4123.1 - Containers with two wheels and a capacity up to 400 L for lifting devices—Dimensions and design
- [5] AS 4123.2 - Containers with four wheels with a capacity from 500 L to 1200 L with flat lid(s), for trunnion and/or lifting devices—Dimensions and design
- [6] EPA Noise Control Guidelines (Publication 1254)