

Ordinary Board Meeting

Friday October 27, 2023 at 10.30am

Teams Meeting

Agenda

PRESENT:

City of Greater Bendigo Cr Rod Fyffe Stacy Williams Loddon Shire Council Lincoln Fitzgerald Cr. Dan Straub Macedon Ranges Shire Council Cr Bill West

Maria Weiss

Mount Alexander Shire Council

Cr Rosie Annear Lisa Knight

Chief Executive Officer

Mark Hands

Also in attendance:

Erin Haughton (City of Greater Bendigo)

Acknowledgment of Country

We acknowledge the traditional owners of the lands upon which we are meeting and pay our respects to elders past and present.

1. APOLOGIES

2. DECLARATION OF CONFLICT OF INTEREST

No conflicts of interest

3. <u>CONFIRMATION OF MINUTES FROM PREVIOUS ORDINARY MEETING</u>: 15th September 2023

Moved: Seconded: Carried

4. MATTERS ARISING FROM PREVIOUS MINUTES

5. ITEMS FOR DECISION

5.1 Regional Library Agreement 2024 for Council and Ministerial Approval

Motion:

That each member Council provide a report to their Council, recommending a 28day period of exhibition and invitation for comment or submission from community on Council's intent to sign the 2024 Regional Library Agreement.

- 5.2 Financial Report for July 1 September 30, 2023
- 5.3 **Proposed changes to the Procurement Policy and Investment Policy**
- 5.4 Christmas Opening Hours 2023

6. ITEMS FOR DISCUSSION

6.1 RLC Transition documents

Comparative analysis of the collective library service and standalone library service models.

- 6.2 Ten Year Budget Plan as a lead up to 2024-25 budget development. First discussion
- 6.3 Psychological Safety in the Workplace Action Plan
- 6.4 Workplace Safety Action Plan 2023-25 Update October 2023
- 6.5 Incident Summary July to September 2023 All Libraries

7. ITEMS FOR INFORMATION

7.1 First Quarter Library Plan Report

7.2 Branch Reports

7.3 CARE Partnership

8. <u>GENERAL BUSINESS</u>

9. <u>NEXT MEETING DATE AND TIME:</u>

Next Board Meeting: AGM & Ordinary Meeting - December 8th at 10.30 a.m.



To:The Board of the Goldfields Library CorporationFrom:Gemma Rayner, Manager Engagement and OperationsDate:9 October 2023Re:Christmas and New Year's opening hours

Purpose

To provide the Board with information in relation to the opening hours of libraries and agencies for the Christmas and New Year period.

Background

Community use of libraries changes over the Christmas and New Year holiday period and library hours have been reduced in line with the anticipated reduced demand for access.

Issues

The following matters have informed the proposed opening hours:

- the opening hours of our agencies, being run by community organisations and staffed by volunteers, need adjustment to coincide with the intentions of our host organisations and availability of volunteers. The highlighted Agency hours in the following Table are still under negotiation with host organisations and partners.
- the Enterprise Agreement, at Clause 26 states that: "All Libraries will close at no later than 3pm on Christmas Eve." Given Christmas Eve falls on a Sunday this year, when libraries are already closed, this is not applicable.

Publicity for Christmas and New Year opening hours will commence in late November.

Recommendation

That the Board notes the opening hours for the Christmas and New Year's period.

	City of Greater Bendigo										
	Final opening usual hours	Sunday 24 Dec Xmas Eve	Monday 25 Dec Xmas Public Holiday	Tuesday 26 Dec Boxing Day Public Holiday	Wednesday 27 Dec	Thursday 28 Dec	Friday 29 Dec	Saturday 30 Dec	Sunday 31 Dec	Monday 1 Jan New Year's Day Public Holiday	Resume usual open hours
Axedale Agency	Thurs 14 Dec	n/a	n/a	n/a	n/a	Closed	n/a	n/a	n/a	n/a	Thu 25 Jan
Bendigo Library	Sat 23 Dec	n/a	Closed	Closed	9.30am– 5pm	9.30am– 5pm	9.30am– 5pm	9.30am– 2.30pm	n/a	Closed	Tue 2 Jan
Bendigo Regional Archives Centre	Thurs 21 Dec	n/a	n/a	n/a	Closed	Closed	n/a	n/a	n/a	n/a	Weds 3 Jan
Eaglehawk Library	Sat 23 Dec	n/a	n/a	Closed	n/a	n/a	Closed	Closed	n/a	n/a	Tue 2 Jan
Elmore Agency	Fri 22 Dec	n/a	Closed	n/a	n/a	n/a	Closed	n/a	n/a	Closed	Mon 8 Jan once per week until 29 Jan Mondays, 10.45am- 12.15pm
Heathcote Library	Sat 23 Dec	n/a	n/a	Closed	n/a	Closed	Closed	Closed	n/a	n/a	Tue 2 Jan
Kangaroo Flat Library	Sat 23 Dec	n/a	Closed	Closed	10am–3pm	10am–3pm	10am–3pm	9.30am– 12.30pm	n/a	Closed	Tues 2 Jan

	Macedon Ranges Shire										
	Final opening usual hours	Sunday 24 Dec Xmas Eve	Monday 25 Dec Xmas Public Holiday	Tuesday 26 Dec Boxing Day Public Holiday	Wednesday 27 Dec	Thursday 28 Dec	Friday 29 Dec	Saturday 30 Dec	Sunday 31 Dec	Monday 1 Jan New Year's Day Public Holiday	Resume usual open hours
Gisborne Library	Sat 23 Dec	n/a	Closed	Closed	10am–5pm	10am–5pm	10am–5pm	9.30am– 12.30pm	n/a	Closed	Tues 2 Jan
Kyneton Library	Sat 23 Dec	n/a	Closed	Closed	10am–5pm	10am–5pm	10am–5pm	9.30am– 12.30pm	n/a	Closed	Tues 2 Jan
Romsey Library	Sat 23 Dec	n/a	Closed	Closed	Closed	Closed	Closed	Closed	n/a	Closed	Tues 2 Jan
Woodend Library	Sat 23 Dec	n/a	Closed	Closed	Closed	Closed	Closed	Closed	n/a	Closed	Tues 2 Jan

Mount Alexander Shire											
	Final opening usual hours	Sunday 24 Dec Xmas Eve	Monday 25 Dec Xmas Public Holiday	Tuesday 26 Dec Boxing Day Public Holiday	Wednesday 27 Dec	Thursday 28 Dec	Friday 29 Dec	Saturday 30 Dec	Sunday 31 Dec	Monday 1 Jan New Year's Day Public Holiday	Resume usual open hours
Castlemaine Library	Sat 23 Dec	n/a	Closed	Closed	10am–5pm	10am–5pm	10am–5pm	9.30am– 2pm	n/a	Closed	Tues 3 Jan

Loddon Shire											
	Final opening usual hours	Sunday 24 Dec Xmas Eve	Monday 25 Dec Xmas Public Holiday	Tuesday 26 Dec Boxing Day Public Holiday	Wednesday 27 Dec	Thursday 28 Dec	Friday 29 Dec	Saturday 30 Dec	Sunday 31 Dec	Monday 1 Jan New Year's Day Public Holiday	Resume usual open hours
Boort Agency TBC	Final agency visit BRIC closed from	n/a	Closed	Closed	Closed	Closed	Closed	n/a	n/a	Closed	First agency visit Thu ??? Once per week until BRIC open ??
Dingee Agency	Tues 19 Dec	n/a	n/a	Closed	n/a	n/a	n/a	n/a	n/a	n/a	Tues 9 Jan
Inglewood Agency TBC	Final agency visit Wed 13 Dec. ICNH closed from 20/12.	n/a	Closed	Closed	Closed	Closed	n/a	n/a	n/a	Closed	First agency visi Wed 3 Jan. ICNH opens????
Pyramid Hill Agency	Final agency visit Tue 19/12. PHNH Fri 22/12 (12pm)	n/a	n/a	Closed	Closed	Closed	Closed	n/a	n/a	n/a	First agency visit Tue 9/1. PHNH opens Tue 9/1 (normal operating hours)
Tarnagulla Agency	Final R&C Mon 4 Dec	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	First R&C Mon 5 Feb
Wedderburn Agency	Final agency visit Wed 13 Dec. WCH closed from 20/12.	n/a	Closed	Closed	Closed	Closed	Closed	n/a	n/a	Closed	WCH open Tue 2 Jan, Agency visits Wed 3 Jan.

Highlights:

- All staff undertake Occasional Counsellor training.
- First draft of GLC's Reconciliation Action Plan submitted to Reconciliation Australia.
- Community Connections
 Project Worker appointed at
 Bendigo Library.
- New Children and Youth Programs Officer role introduced.
- Newsbank, a global newspaper eResource added to the collection.

Priority 1: Children and Young People

Collections

Updated children's eresources

- LOTE4Kids added as an online resource for story sharing in different languages, expanding our range of offered languages while also providing exposure to a variety of cultural stories in English.
- We continue to build our parenting collection to help families deal with difficult situations and relevant issues.

Engagement

On Friday 18 August we had just over 100 enthusiastic Public Libraries Victoria SIG members descend on Castlemaine library for the annual Childrens and Youth Services SIG Seminar! It was a fantastic day of talks and demonstrations (and an opportunity to showcase all GLC is doing in the children and youth space), hosted by Castlemaine Library Manager Jess Saunders and team, with several special guests including the Hon. Maree Edwards, Member for West Bendigo and Angela Savage CEO of Public Libraries Victoria.

Operations

From the July-September 2023, quarterly reporting will include reference to the child safe standards and work completed throughout the organisation with the aim of achieving outcomes outlined in the 11 standards. The addition of this formalised reporting process supports Standard 2 - Child safety and wellbeing is embedded in organisational leadership, governance and culture.

Children and Youth Programs Officer

This quarter we recruited to a new part time, fixed term position to support the coordination of programs across the region, with a focus on Children and Youth. Our new Children and Youth Programs Officer is set to begin start of October, and will assist with programs administration, planning, and regional support and delivery of school holiday programs amongst other things.

Parent-Child Mother Goose training

In September we sent three staff members, relatively new to Storytime delivery, to attend a two-day Parent-Child Mother Goose facilitation intensive in Castlemaine. It was the first time the Parent-child Mother Goose team have facilitated training face-toface in three years and it was wonderful to have library staff part of the broader cohort of early years service providers undertaking this training and forming a community of practice in the area.

Parent-Child Mother Goose is an evidence-based program that strengthens attachment and interaction between parents or carers and their young children by introducing them to the pleasure and power of using rhymes, songs and stories together. Parent-Child Mother Goose is particularly suitable for parents and carers who need extra support because of their own personal or social circumstances, or because their children have special needs or are otherwise at risk and is a recognised School Readiness initiative. We look forward to seeing some of the new skills learnt put into practice in GLC's early years service delivery.

Priority 2: Lifelong Learning Collections

Adult Learners collection approved, and first steps initiated for Kangaroo Flat library with aim to have full trial collection available for Quarter 2. Several titles have been procured from other branches to supplement new titles to be purchased to enable a

Attachment 11.1.14



July to September 2023



comprehensive collection upon introduction to Kangaroo Flat library.

Priority 3: Safety & Inclusion

Collections

Braille

 A community project created a Braille version of a popular children's title, Mulga Bill's Bicycle. This has been donated to the library and will circulate to all branches, spearheading the initiation of a small braille collection at NCGRL.

Technology

Deployed Sophos email protection which integrates with our other security solutions to alert us to real-time threats to our network. It also uses Artificial Intelligence to block SPAM and phishing emails.

Community Connections Project

From July 2023, a Community Connections Worker was appointed to the Safer Communities Grant project, located in Bendigo Library, with an organisation wide impact approach. This project is aimed at providing a necessary support service to patrons entering the library with complex needs that are beyond the scope and skill set of library staff to meet. The project will also look to embed practices for staff to better manage the increasingly intense environment in which public libraries operate and provide recommendations for training and development to support staff resilience. This is a 22month project funded by the Department of Justice and Community Safety under a Crime Prevention Grant.

Duress Systems

In response to an increase in reported incidents relating to challenging behaviours, and the need to provide safe spaces for staff and patrons alike, duress systems were installed in six branches this quarter. All GLC branches now have this safety measure in place.

Test & Tag project

The Health and Safety Committee has assembled a test and tag team of five staff to be trained in October, for subsequent testing of mobile electrical equipment across the region.

First Aid and CPR Refresher training

 33 staff were trained in First Aid or CPR Refresher training this quarter, ensuring coverage across all GLC sites. Training will continue through to November.

Occasional Counsellor Training

 All staff were given the opportunity for training to build on occasional counsellor and deescalation skills this quarter. Five group workshops were offered, aimed at professionals who are not trained as counsellors, nor expected to deliver counselling services, but who (through the nature of their work) are exposed to personal and potentially confronting interactions.

Run by Clinical and Forensic Psychologist David Cherry, the training aims to equip participants with tools and methods to better manage during and after difficult interactions. This can include applying self-care and care for our colleagues, deferral of or closing conversations, maintaining professional boundaries with patrons, approaching each other (colleagues and public) with empathy and checking our personal biases, as a few examples.

End of Year Celebrations

 A brief survey was circulated to staff this quarter asking for feedback and ideas to inform planning for end of year celebrations, to ensure we best cater to staff preferences. Planning is now underway for low-key volunteer and teambased celebrations.

Priority 4: An Informed Community

Collections

EResource addition

 We have added a global newspaper eResource, Newsbank, offering a wide range of regional and international news sources from over 200 countries. This includes LOTE titles, adding to our multicultural collection.

Communications

The 2022-23 Annual Report is almost complete.

• We continue to update and add content to our Voice Referendum webpage.

Your Potential Realised

July to September 2023

After much consideration, we reverted our Seasonal Program back to a regional approach, separated by categories that relate to the Library Plan (Special Events | Online | Authors, Writing & Reading | Lifelong Learning | Connection & Creativity | Teens & Young People | Children & Families). We also introduced a 'What's on at a glance' flyer for each shire, outlining events in chronological order. Feedback so far has been positive.



Priority 5: Connecting People

Collections

- Bookclubs
 - Our Read Now program of recently released titles has allowed us to have a regular turnover and revitalisation of the Bookclub sets, with new and popular items for loan.
 - An eNewsletter has been launched for our bookclub borrowers to keep them up to date with new sets and topical information.

Technology

Replaced our training i-Pads for our digital program delivery. Have ordered a new carry case to transport the i-Pads between branches which also keep them charged. Identified a portable PA solution from Bose which will allow us to do author talks out of our



libraries. The solution uses batteries so presentations can be done outside without the need for power.

I.T is onboarding a third staff member to fill hours left vacant from a staff member reducing hours. The upskilling of a third staff member increases the technical coverage I.T offers all staff and community members.

Communications

- This quarter we recruited a Social Media officer to join the Communications team. This is a newly created position (.1EFT) and reports to the Coordinator, Communications. This role will help support and develop content for our social media platforms across the region.
- Our jellyfish membership cards are proving to be the most popular design, moving nearly twice as quickly as other designs.

Priority 6: Respecting First Nations Peoples and Cultures

Collections

Junior collection

- We continue our focus on the purchase of Junior First Nation titles, building on our robust collection.
- Our bookclub offering has grown with the addition of a variety of First nation titles and authors.
- A core number of educational documentaries have been purchased to enhance our First Nations DVD selection.

Reconciliation Action Plan

The first draft of the GLC Reflect Reconciliation Action Plan was submitted in September to Reconciliation Australia seeking feedback. It is expected that 2-3 rounds of feedback and updates will occur before the final RAP is ready to implement.

Communications

We created a First Nations digital screen, to share across the branches, and member councils to share the First nations page on our website, as well as relevant collections.

Your Potential Realised

July to September 2023





A1-sized Uluru Statement from the Heart posters were sent to all branches to display.

All branch pages on the website now list Traditional Owners under their address. A project to update all GLC templates and collateral with First Nations acknowledgement is underway.

Priority 7: A Learning Organisation

Collections

A new Audio-visual supplier was onboarded, this is aimed to promote greater efficiency with audio visual materials purchasing and provided improved access for title curation. This changeover was well received by relevant staff with minimal training required to initiate the change. Patrons have experienced no negative outcomes from this change, as it was completed seamlessly. A review of audio-visual collections is set for quarter two, with an inclusion of staff experience with the updated supplier systems.

Technology

Replaced 5 staff Laptops that were due for replacement.

The ongoing project continued to change staff from local network drives to using Microsoft OneDrive for file storage.

I.T. have started working with the programming department to deploy Microsoft Teams as a file storage solution rather than traditional network drives. This allows greater collaboration between staff and easier access to resources while still remining secure.

Communications

 Follow-up Canva training was facilitated by Graphic Designer Jacqui. Staff have been using it for a while now, so this was a great opportunity for them to ask questions, and for Jacqui to check in on their progress, and the work being produced. There is still some work to be done in this area to build staff skills, but so far, it is being well utilised.

Priority 8: A Sustainable Future Collections

A number of DVD cleaners have been bought to allow branch staff to efficiently clean discs in the hopes of extending the lifespan of these expensive and popular items.

Sustainable Home Kits

Our Sustainable Home Kits continue to generate much interest from library sector colleagues – our recent ALIA Green blog post, for instance, generated over 1000 interactions and likes in the first day of publication:

https://aliasustainablelibraries.wordpress.com/2023/0 9/18/goldfields-libraries-sustainable-house-kits/

The kits have, more importantly, also generated much interest from our communities! To keep up with demand, we have:

- Reduced the loan period from two weeks to one week.
- Purchased 20 additional copies of The Energy Freedom Home book by Beyond Zero Emissions, which is included in the kits, so patrons can borrow this while they wait.
- Purchased five additional kits bringing our total to 17.
- Implemented efficiencies to cut back on 'down time' between borrowers.



Your Potential Realised

Inclusion and Safety Survey and Inquiry Concession and Sofety Survey and Inquiry

Attachment 11.1.15

Castlemaine Library Quarterly Report

July-September 2023



Priority 1: Children and Young People

Nature Book Week Storytime + Nature Tables

Local author and illustrator Trace Balla presented a wonderful Story Time for us during Nature Book Week, with the support of the Wilderness Society. She also ran a school holiday program called *Drawing With Nature*, teaching children how to draw the natural world around them. It was greatly inspired by the Nature Tables set up for the school holidays, which were enjoyed by hundreds of children and families throughout the holidays!

Library Lock In

Stuart ran another hugely successful Lock In event for teenagers in September, with a new cohort of teens aged 12-15 having the best time ever! He also had some staff from other branches, coming to learn the ways of the teenager lock in so it can be repeated beyond Castlemaine!



Teens get a little dress-up crazy at the Library Lock In!

Discovery Centre – Curios Kids Science Storytime Angela from Bendigo Discovery Centre delivered 2 awesome science-based story times for pre-school aged children this quarter, one of them a waterthemed session and the other was all about Cool Chemistry. Parents report these sessions as being really high quality, fun and engaging, and encouraging of young curious minds.



Curious Kids LOVE bubbles

Have a Hoot was a hoot!

One of the most popular drop in activities we've had recently was our little owl-maker station – there were dozens of super-cute owls made for the library perch over the two weeks, and lots of kids learned how to use a hot glue gun – fun!



Some of the cute little owls created at the craft drop-in table

Priority 2: Lifelong Learning

Adult Spelling Bee

For the eighth year running, our Annual Adult Spelling Bee was held in August and my goodness the competition is fierce! Although this year was the first in recent history *without* major controversy (the word lasagne / lasagne will forever be triggering for us now!) there was enough light-hearted ribbing for an entertaining little Tik-Tok video to go (a little bit) viral!

Family History Detective + Memory Place

Once a term, Donna offers a small number of Family History Detective sessions to our community, which are

July-September 2023



1:1 help with family history research. This quarter, she managed to find someone's father and grandfather, which was a small miracle for the patron involved and may have caused a few tears to be shed. Donna also ran her first solo Reminiscing Kits session which she called The Memory Place, where a small group of seniors participated in a memory-based reminiscing session. It evoked much laughter and story sharing amongst the group.

Hey Dee Ho – Intergenerational Story Time

Two wonderful facilitators from Hey Dee Ho Educational Service came to the library to present a beautiful session of stories, songs and rhymes for ages 1-100. We had a group of 10 older people from the aged care home, along with over 30 children from Carinya Childcare enjoy each other's company while they listened, sang and joined in – it was such a lovely morning for all involved.



Hey Dee Ho Intergenerational Story Time

Priority 3: Safety & Inclusion

Safety of staff and patrons

Unfortunately, along with lots of fabulous achievements, this quarter also included some very anti-social behaviour at the library. The positive side of this though was the strengthened partnership between library, Council and Community House, all working to support each other through some tough situations. GLC leadership also responded by fast-tracking the installation of duress alarms, providing counselling support for staff and installing a security guard at the front entrance for a couple of weeks, until the behaviour had settled down.

Priority 4: An Informed Community Parenting in the Modern World

This quarter we ran two out of the total of five PITMW talks, aimed at parents and carers to help them fill their parenting toolkits as they raise their tweens and teens. The first was called *Before the Hormones Hit the Fan*, and the second, *The Emotional World of Primary School Kids*. Both talks were delivered by Bron Grieve, a community health nurse, in partnership with MASC. They are a resounding success, and we have been asked how to replicate them across other Shires. The feedback has been really positive, and essential to our evaluation and planning for 2024.

Maine FM – Library on the Air

Thanks to our friends at Maine FM, we have a regular monthly spot on the radio to talk about all the great stuff we do. It's an excellent chance to reach a new audience, and broadcast the role of modern public libraries as much more than repositories of books!

Lee Kofman: The Writer Laid Bare

After a few attempts, we managed to secure Lee Kofman for a talk for emerging writers. Lee is a renowned author, editor, memoirist and writing coach, and she had an audience very keen to hear her tips and tricks on cracking the 'writing life' code.

Priority 5: Connecting People

FOCAL Book Club

One of our FOCAL members, Susan Green, has been running a monthly book club from the library since June. They are a group who come together to have a cuppa and discuss a book from one of our book club sets, and all reports so far have been very positive. One older gentleman told me he had been looking for this kind of informal connection for a while, and was so happy to have found it.

Kids Book Club

A small group of Year 5 students have been meeting regularly on a Saturday morning at the library for about 6 months now, for book club. They run it themselves, bring flowers to decorate the table, a home-made sign, and some snacks. For this particular session, they each took it in turns to read a short story aloud to each other called Rapunzel Bacon-Hair, whose hair was made of bacon so delicious her mother had to lock her in a tall tower to prevent everyone from eating it... Then they drew pictures of what they thought she would look like. It's the absolute BEST!

July-September 2023



Rapunzel Bacon-Hair, according to the Kids Book Club

Saturday Philosophy Classes

All year, we have been running a monthly Saturday Philosophy class in partnership with the Castlemaine branch of the Melbourne School of Philosophy. A new topic is discussed each month, and these classes have been an absolute hit with a very diverse group of people diving into deep philosophical discussions together.

Dear Libranan, Thank you for providing Estelle Hobson with her Own library card. Yours Sincerely Dr Lava Kelly 11/05/81 (proud Castlemaine tibrary

Goldfields Libraries

A note of gratitude after we signed up a new member

Priority 6: Respecting First Nations Peoples and Cultures

Aboriginal Worldviews training for Castlemaine Team One of the priorities our team decided on together was to expand our knowledge of the Aboriginal Worldview in order to create a more welcoming and inclusive library service for First Nations people. Our whole team were able to participate in a 4-part, immersive training program developed and delivered by Kath Coff, CEO of Nalderun Education Aboriginal Corporation. Staff reported that the training was really powerful and informative, and has been incredibly impactful in their everyday work practices.

It was certainly one of the highlights for this year.

NAIDOC Week

As part of NAIDOC Week in July, we had a *very* special performance for children and families from Kinja. Kinja is musical duo Sarah James and proud Wamba Wamba man Ron Murray, and they performed an Aboriginal Story Time for us on a Saturday morning, with over 100 children and families in attendance.

Aboriginal and Torres Strait Islander Children's Day

As part of this special day in August, Stuart headed down to the Goods Shed to deliver some special Story

July-September 2023



Time sessions. It was an overwhelming success, with over 500 children attending throughout the morning – we were really proud to be asked to join in.

Voice Referendum Information Sessions

As we approached the national Referendum on the Voice to Parliament, we felt it was important to ensure the community knew where they could source factual information and be fully informed.

To this end, Marion created this fantastic display centred on the Uluru Statement with some simple information, as well as some of our collection that was fact-based and informative.



Collection and information displayed around the Uluru Statement from the Heart

Priority 7: A Learning Organisation

State-wide attendance at seminar in Castlemaine Castlemaine Library volunteered to host the annual Seminar for the Public Libraries Victoria Children's and Youth Special Interest Group in August. We were blown away by the record attendance of over 100 CYS library folk from all over the state, and were so proud to show off our library – we got many compliments throughout the day! It was a great way to showcase some of the special things Goldfields Libraries are doing, such as the Story Walks and the 1000 Books Before School program.

University and Secondary College work placements

This quarter we were able to host both Year 10 work experience student Eli Eagle, as well as Swinburne University student Mary Jones. The whole team really rise to the occasion with work placement students, and pass on their knowledge and experience with patience and care. We get them to do all sorts of stuff, from cataloguing to Story Time, and they seem to learn a lot! We were able to offer Mary a casual position at GLC at the conclusion of her placement, which is a great outcome for all. She even came back to volunteer at the Library Lock In – dedication!



Mary helping out with the Library Lock In!

Occasional Counsellor training for all staff

Throughout September, all staff were encouraged to take part in a 3-hour, online training workshop with experience psychologist David Cherry, to better equip us all when called upon to give emotional support or deal with difficult or challenging behaviours across the desk.

Your Potential Realised

July-September 2023

Priority 8: A Sustainable Future

Tiny House talk a winner!

One of the most popular talks we had this quarter was from Fred Schultz, of Fred's Tiny Houses. He came to chat to a very keen audience all about the pros and cons of tiny houses, common construction FAQs and other consumer information. It was perfectly timed with the decision made by Council to amend the local laws, relaxing the rules around tiny houses being constructed in town. A win for all!

Sustainable Home Kits

After feedback from the community on the long wait times for a Sustainable Home Kits, we have adjusted their loan period from 2 weeks back to 1 week, and put in place some more proactive management systems to ensure that people get them a bit quicker. This was implemented in September, and already the queues are starting to shorten. Given the current climate emergency, and the rising cost of living, these are an important tool to be able to access. First time library user was very grateful and thrilled about the free use of public pc's and ease of printing. He then couldn't believe he could pay via card for such a small transaction. He commented "it just keeps getting better!"

> "I was tearing my hair out trying to do this at home, and I thought if I came to the library, then everything would be totally fine. And it is! You guys deserve a gold medal!!"

Goldfields Libraries

Feedback

"The library is really the hub of this town - it's great to see it so vibrant and busy on the school holidays!"

The remote printing service is really excellent, it saves me so much time - thank you for providing it! A mum told her toddler it was time to go home, after sitting and reading for almost an hour. Toddler replied (in cute toddler voice) "But mum, I just really want to stay with all the books!"

"Can you relocate the accessible car park so that it's at the end of the ramp, instead of the end of the stairs please?" "Dear Library Staff, so more people can access the Sustainable Home Kits, we need to double the number of kits and reduce loan periods from two to one week. We're in a climate and cost of living crises. Increasing community access to these should be a high priority".

Your Potential Realised



Ordinary Board Meeting

Friday September 15, 2023 at 10.30am

Teams Meeting

Minutes

PRESENT:

City of Greater Bendigo Cr Rod Fyffe Stacy Williams Loddon Shire Council Lincoln Fitzgerald Macedon Ranges Shire Council

Cr Bill West

Maria Weiss

Mount Alexander Shire Council

Cr Rosie Annear

Lisa Knight

Chief Executive Officer

Mark Hands

Also in attendance:

Loren L'Hotellier (City of Greater Bendigo), Erin Haughton (City of Greater Bendigo)

Acknowledgment of Country We acknowledge the traditional owners of the lands upon which we are meeting and pay our respects to elders past and present.

1. <u>APOLOGIES</u> Cr Dan Straub (Loddon Shire Council)

2. <u>DECLARATION OF CONFLICT OF INTEREST</u> No conflicts of interest

3. CONFIRMATION OF MINUTES FROM PREVIOUS ORDINARY MEETING: 28th July 2023

Moved: Stacy Williams Seconded: Lincoln Fitzgerald

4. MATTERS ARISING FROM PREVIOUS MINUTES

Items for decision 5.1: Modify to include unit of measure for long service - \$m to be included to note that allocation is \$1,500,000 for LSL.

5. ITEMS FOR DECISION

5.1 Review and approval of the Annual Report and Financial Statements for the period 1st July 2022 to the 30th June 2023.

Application. For consideration: national award for annual reports – details to be forwarded to CEO.

Motion:

That the Board:

- 1. Record its approval of the Draft Financial Report for the year ended 30 June 2023,
- 2. authorise the CEO and two Board members to certify the Financial Statements in their final form on behalf of, and with the full authority of, the Board, and
- 3. review the draft Goldfields Library Corporation Annual Report 2022/23 for publication, pending any recommended changes as noted in these minutes.

Moved: Bill West Seconded: Lisa Knight

carried

5.2 Budget timeline for 2024/25 budget

Motion:

That the Board notes the proposed timeline and will accommodate any variation that may be required to meet Council budget planning schedules.

Moved: Lincoln Fitzgeral Seconded: Maria Weiss

carried

6. ITEMS FOR DISCUSSION

6.1 Investment Policy- proposed shift to investment decision triggers or approval process to allow for appropriate and timely investment decisions. Discussion on options only. Board agreed that flexibility with limits regarding investments is important. CEO will provide draft changes to the policy at the October 27 meeting.

6.2 RLC transition update. Methodology approach.

The higher-level economic findings regarding collective model vs stand alone to be presented at the October 27 meeting.

7. ITEMS FOR INFORMATION

7.1 CEO Report

8. GENERAL BUSINESS

Correspondence received from Victoria Pride group. Flagging – October 11th National Coming Out Day, program opportunities.

9. NEXT MEETING DATE AND TIME:

Next Board Meeting: October 27, 2023 at 10.30 a.m.

Shire Council

Mount Alexander Shire Council **Reconciliation Plan** 2022–2026

Walk together with courage and purpose



Working together for a healthy, connected shire

Acknowledgement of country

Mount Alexander Shire Council acknowledges that the traditional custodians of this land, the Dja Dja Wurrung and Taungurung peoples, proudly survive. We acknowledge their continued practise of custom and their close cultural, spiritual, physical, social, historical and economic relationship with the land and waters that make up their Country, which includes Mount Alexander Shire.

Council recognises the Victorian Government's Recognition and Settlement with both the Dja Dja Wurrung Clans Aboriginal Corporation and the Taungurung Land and Waters Council.

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Native wreath - Boorp Boorp Boondyil exhibition launch



Front cover: Sculpture by Artist Alvin Darcy Briggs - 2022 Pyrography on wood

Depicting the three sacred leaves of the Dja Dja Wurrung- Bulortj (Cherry Ballart) represents community, the Dju Wurrk (Manna Gum) represents Elders, wisdom and knowledge and the Warrarrak (Silver Wattle) depicts the resources of the land. For information about the Boor Boorp Boondyil exhibition visit: <u>www.mountalexander.vic.gov.au/Explore-the-shire/Our-exhibitions-and-event-venues/Boorp-Boorp-Boondyil</u>.

Inside cover acknowledgement artwork by local artist Dja Dja Wurrung artist Daikota Nelson.

Mayor's message



Councillor Rosie Annear Mayor

Mount Alexander Shire Council

On behalf of Council, I am proud to share our Reconciliation Plan 2023-2026 with our community.

This plan commits us to continue working with our First Nations community with courage and dedication, and walking beside them for a shared vision of reconciliation here on beautiful Djaara Country.

We know that by working together, and remaining open and curious, we can help shape a better and more inclusive future for all.

Some of the ways we are already working together include listening to and being guided by our Traditional Owners and First Nations community, working in genuine partnership locally, not shying away from truth-telling, and always trying to be inclusive, rather than divisive.

On a personal note, it has been an honour during my Mayoral year to cochair the Indigenous Roundtable with Uncle Rick Nelson, and on occasion Aunty Kerri Douglas, to be part of the co-design for our yearly Australia Day - Survival Day event, and to speak from the heart on Sorry Day.

Through these meetings and events, I have learned so much from our First Nations' Elders and community, about how to really listen, about how to feel sorry in a way that helps, about how to reflect on painful things, about how to put myself and my own feelings aside and make space for others', about the many different things reconciliation means to different people, about what I can do to be an ally and a leader in this space. I thank all those who have contributed to this journey, and who have shared knowledge, patience, forgiveness, and grief with me.

Council is lucky to have such strong relationships with our local First Nations community and will continue to nurture these relationships, and learn and grow from them.

As identified in this plan, we will:

- Continue to listen, respond to, and be led by local Traditional Owners and First Nations community in the way we work with and for them.
- Lead a culturally safe community, with a shared vision for reconciliation.
- Continue to provide opportunities for our whole community to learn about local indigenous culture, and to walk together towards reconciliation.
- Foster wellbeing and opportunities for First Nations' kids and young people, and ensure all kids and young people have opportunities to care for Country and learn about local First Nations' culture.

I look forward to being a part of this work, as Mayor, Councillor, mum, ally, community member – whatever my role may be.

CEO's message



Darren Fuzzard Chief Executive Officer Mount Alexander Shire Council

On behalf of the staff of Mount Alexander Shire Council, it gives me great pleasure to commit us all to delivering the Mount Alexander Shire Council Reconciliation Plan 2023-2026.

This is our Council's second Reconciliation Plan and builds on the outstanding work of staff and community members over many years that has created meaningful progress towards reconciliation with First Nations people in our community. Importantly, this plan was developed through many conversations with Traditional Owners, First Nations community members, Reconciliation partners and members of the Indigenous Roundtable. Feedback from the wider community has also helped to ensure that the actions we have committed to will have a strong positive impact in our community. In addition, I am very proud to say that the plan has been met with great energy and commitment throughout our organisation. The plan has been structured around 3 central themes:

- 1. Partnership
- 2. Recognition
- 3. Empowerment.

Underneath these, we have 11 objectives, and 45 actions to deliver on those objectives.

This plan furthers the many successes of Council's Reconciliation Plan 2020-2023, and while it is important for us to recognise and celebrate our past achievements, it is equally important to look to the future and provide greater opportunities for First Nations people, families, communities and organisations to thrive within our shire.



Traditional Owner's Message



Uncle Rick Nelson

Djaara Traditional Owner, Co-chair of the Indigenous Roundtable

As a Djaara Elder and Traditional Owner, Mount Alexander Shire resident for over 50 years, and as the co-chair on the shire's Indigenous Roundtable for over 10 years, it is my honour to offer my personal endorsement of this plan.

Djaara people have been the custodians of the lands and waters of Mount Alexander Shire for 70,000 years. My ancestors practiced ceremonies and cared for Country for uncounted generations before white settlement.

More recently my father, Uncle Brien Nelson, pioneered cultural education and reconciliation between Djaara people and other Australians. I believe in that same culture of passing down knowledge to the generations who will step up and take up the mantle of reconciliation. It is the culture of our ancestors. In keeping with tradition, I continue my dad's legacy in this role as a Traditional Owner. For over 10 years I have partnered with this Council to deliver important initiatives. Among many, we have seen the Indigenous Roundtable, Survival Day, Sorry Day, Reconciliation Week, and most recently the Boorp Boorp Boondyil exhibition in Castlemaine's Market Building.

The previous plan saw a long-held aspiration of my father's come to fruition when we completed Boorp Boorp Boondyil.

Under this new Reconciliation Plan this wonderful space will keep educating and inspiring residents and visitors alike. It is a place to share my culture, and pass down knowledge to the next generation.

After all this time working in partnership with the Council, I know how strong their drive for reconciliation is. The way that Council has stepped up again and again inspires me to recommit and pursue reconciliation in my community.

And that is the third piece of this reconciliation puzzle. We truly walk together on the journey. The whole community drives Reconciliation, not just Traditional Owners and Council. It is a unique three-way partnership.

We wouldn't have come this far without this partnership. We won't be able to do it in future without it either. This plan understands that connection. It harnesses the community energy I see every day. It's a great map as we walk together towards Reconciliation.

I look forward to the next three years of this journey, and I'm excited to see what comes next.

About the plan

The Mount Alexander Shire Council Reconciliation Plan 2023-2026 provides Council with a framework that brings together our reconciliation initiatives, reflects the various processes Council participates in with its partners, and also includes our responsibilities under the Dja Dja Wurrung Clans Aboriginal Corporation and Taungurung Land and Waters Council Recognition and Settlement Agreements.

Building upon the success of the Reconciliation Plan 2020-2023, it captures the reconciliation initiatives we are delivering as well as the aspirational goals of what we would like to deliver, both internally as an organisation and externally with our partners and for our community.

Our vision for this plan is to 'Walk together with courage and purpose'.

This vision has taken shape over time through reflection and discussion with our local Elders. It is a statement that we collectively believe captures the spirit in which we work: in partnership, facing the challenges unique to our own perspective, but always driven by a shared goal.

The Mount Alexander Shire Council Reconciliation Plan is structured around three core themes:

- Partnership
- Recognition
- Empowerment

Underneath these three themes are eleven key objectives and forty-five actions to address them.

Some of the actions included in this plan are initiatives we are already implementing. These have been included to ensure we maintain our commitment to delivering them.

Uncle Rick Nelson, Welcome to Country ceremony - Australia Day - Survival Day event







Reconcilliation artwork

The reconcilliation artwork on page ten is by Dja Dja Wurrung artist Daikota Nelson. It represents the vision and themes of this plan.

The three symbols reflect the purpose and intention of each of the three themes: Partnership, Recognition and Empowerment.



Partnership – represents collaboration between First Nations and other Australians, in coming together to progress reconciliation.



Recognition – depicts history and cultural practice deeply rooted in Djaara Country.



Empowerment – represents tools and weapons traditionally used by First nations people to hunt, gather, nourish and protect themselves.

The foot prints, the gum leaves and the snake represent the people, plants and animals of the land, and together they make up the shape of a shield which represents the courage we draw upon to keep fighting for a more reconciled Australia.

Our Reconciliation Partners

The partners referred to in this plan are those groups we are working with on our reconciliation journey.

There are three main partner organisations referenced throughout the plan. Outlined below is a description of these three organisations and our relationship with them.



BALAKI WUKA

Dja Dja Wurrung Clans Aboriginal Corporation (DJAARA)*

Dja Dja Wurrung Clans Aboriginal Corporation is the registered legal entity that represents Dja Dja Wurrung people, now trading under the name DJAARA.

DJAARA was incorporated on 10 September 2004 and was granted RAP (Registered Aboriginal Party) status in September 2008 over a large area of Central Victoria that encompasses the Mount Alexander Shire.

In 2013 DJAARA entered into a historic Native Title settlement with the State of Victoria called a '*Recognition and Settlement Agreement*' which secured a range of important rights for Dja Dja Wurrung people, some of which are the responsibility of Local Government to uphold. The agreement is a means by which Dja Dja Wurrung traditions and the unique relationship of Dja Dja Wurrung people to Djaara Country are recognised and protected.

We work with DJAARA as the Registered Aboriginal Party covering most of Mount Alexander Shire on cultural heritage, and as the Traditional Owner Group Entity on matters of land management, use of traditional language, enterprise opportunities, the Recognition and Settlement Agreement, cultural protocol and Dja Dja Wurrung rights.

We are committed to strengthening our partnership with DJAARA, and have commenced discussions to jointly explore the potential for a local Treaty-like agreement to be developed as part of their 'Balaki Wurrekang Nation Building' project. The guiding principle of these discussions is an 'Opportunity to enter into a mutual agreement on equal footing'. Through this agreement making process, we aim to develop a stronger relationship and identify opportunities to support the self-determination, goals and aspirations of DJAARA, in recognition that doing so delivers benefit for the entire community.

* Throughout the plan we refer to this partner as DJAARA, as distinct from 'Djaara' which is used when referring to the entire clan group or their Country.

Our partners



Nalderun Education Aboriginal Corporation (NEAC)

'Nalderun' is a Dja Dja Wurrung word meaning 'all together'.

NEAC is an Aboriginal Corporation that operates holistic education, wellbeing and cultural services for First Nations people in Mount Alexander Shire. The work undertaken by NEAC is First Nations designed and led, centred on First Nations children and young people, the First Nations community and the broader community.

NEAC is led by a board made up of First Nations Elders and people living on Djaara Country, including our senior Dja Dja Wurrung Elder Uncle Rick Nelson, and trusted allies. The Friends of Nalderun committee is made up of volunteers and partner organisations, including Mount Alexander Shire Council.

We have enjoyed a meaningful and productive relationship with NEAC (previously known as Nalderun Aboriginal Services) for over 15 years, and prior to the formation of Nalderun Aboriginal Services, informally with its members since 2000. NEAC acts as both a collective body for First Nations people living on Djaara Country within the Mount Alexander Shire, and the primary Aboriginal Corporation delivering education services in the Shire.

This means we consult with NEAC on matters to gain First Nations perspectives, and also advocate for and support the vital work that NEAC does in our shire. NEAC Chairperson and Dja Dja Wurrung Elder Uncle Rick Nelson is also the Co-chair of the Mount Alexander Shire Indigenous Roundtable, alongside the Mayor of Mount Alexander Shire.



Taungurung Land and Waters Council (TLAWC)

Taungurung Land and Waters Council is the registered legal entity that represents Taungurung people.

Previously known as Taungurung Clans Aboriginal Corporation, TLAWC was incorporated in 2003 and was granted RAP (Registered Aboriginal Party) status in July 2009. The Taungurung RAP area covers a large section of north central Victoria to the east of the Mount Alexander Shire, including a small portion that overlaps with our shire boundary, encompassing the small township of Barfold.

In October 2018, TLAWC entered into a Recognition and Settlement Agreement with the state which has now been formalised.

In June of 2019, we participated in the TLAWC 'Permanent Councils' Forum'. The forum aimed to start the conversations with the Local Governments under the TLAWC RAP area and further develop partnerships.

The Mount Alexander Shire Indigenous Roundtable

We also work in partnership with a range of other stakeholders through their membership of the Mount Alexander Shire Indigenous Roundtable:

- Dhelkaya Health
- Castlemaine Secondary College
- Bendigo District Aboriginal Corporation
- Castlemaine Police
- Castlemaine Community House
- Department of Education
- ANTaR (Australians for Native Title and Recognition)

Our vision

Walk together with courage and purpose

Themes

Theme one: Partnership

Aim

Develop and maintain strong partnerships that foster a collaborative approach to reconciliation.

Objectives

- Demonstrate our commitment to reconciliation
- Invest in our partnerships
- Be a strong and unified partner

Objective		Action	Responsibility	
1.1	Demonstrate our commitment to reconciliation Ensure effective mechanisms and supports are in place to enable success	 1.1.1 Indigenous Roundtable Host the Mount Alexander Shire Indigenous Roundtable to: Work collaboratively with our partners and other relevant stakeholders to address the needs of the local First Nations community. Progress Council initiatives that recognise and celebrate First Nations people, culture and history within the Mount Alexander Shire. 	Chief Executive Officer	
		1.1.2 Local Government Reconciliation Network Co-coordinate the delivery of the Central Victorian Local Government Reconciliation Network to inform the delivery of best practice activities that support reconciliation.	Community Partnerships	
		1.1.3 Reporting structure Implement an organisational wide system for improved reporting, monitoring and reviewing of the Reconciliation Plan.	Community Partnerships	
		1.1.4 Improved processes Develop improved processes to enhance Land Use Activity Agreements (LUAA) audit and record keeping.	Director Infrastructure and Development	

Ob	jective	Action	Responsibility
1.2	Invest in our partnerships Work with our partners in a way that is flexible and responsive to their needs.	 1.2.1 Dja Dja Wurrung Clans Aboriginal Corporation (DJAARA) Continue to meet our responsibilities under the Dja Dja Wurrung Recognition and Settlement Agreement 2013 (RSA) Local Government Engagement Strategy in relation to strategic planning, procurement, initiatives and works undertaken within DJAARA's prescribed Recognition and Settlement Agreement area. 	Whole of Council
		1.2.2 Explore the development of a local agreement between Council and DJAARA which fosters and strengthens a two way partnership.	Chief Executive Officer
		1.2.3 Host an event for Councillors and DJAARA Board members to strengthen relationships and build cultural understanding, once per council term.	Governance
		1.2.4 Convene 6 monthly meetings between Council's Executive Management Team and DJAARA Executives to explore opportunities that deliver increased community benefit.	Chief Executive Officer
		 1.2.5 Nalderun Education Aboriginal Corporation Through continued partnership, deliver the support, initiatives and joint projects as determined within the Mount Alexander Shire Council and Nalderun Education Aboriginal Corporation Memorandum of Understanding 2022 - 2025. Explore opportunities to support the strategic priorities of NEAC as outlined in the Nalderun 	Community Partnerships
		Education Aboriginal Education Strategic Plan 2022 - 2025. 1.2.6 Taungurung Land and Waters Council	Whole of
		 (TLAWC) Continue to meet our responsibilities under the TLAWC Recognition and Settlement Agreement in relation to initiatives and works undertaken within TLAWC's prescribed Recognition and Settlement Agreement area. 	Council
		 Participate in TLAWC Permanent Councils Forum. 	

Objective	Action	Responsibility
1.3 Be a strong and unified partner Inform, educate	1.3.1 Reconciliation Plan Working Group (RPWG) Invest in the development of the RPWG and build the capacity of RPWG members to be reconciliation champions.	Community Partnerships
and build the cultural competency of the whole organisation.	1.3.2 Acknowledgement of Country Develop, implement and communicate a cultural protocol resource for Welcomes to Country and Acknowledgements of Country	Community Partnerships
	1.3.3 Cultural competency Improve the cultural competency of Councillors and Council staff through delivery of a program of Aboriginal and Torres Strait Islander cultural awareness and competency training with an emphasis on procuring training from our partners.	Organisational Capability
	 1.3.4 Communications and Engagement strategy Implement a Communications and Engagement strategy that ensures First Nations people's rights, aspirations and perspectives are considered when developing Council plans and strategies. This includes ensuring First Nation representation on the reference group to guide 	Communications and Customer Service

Children's activity, Councils annual Reconciliation Week program.


Aunty Kerri Douglas, Welcome to Country ceremony - opening of Councils' Peace and Reconciliation playspace, Victory Park.

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Theme two: Recognition

Aim

Acknowledge our history and celebrate our local Indigenous culture, past and present.

Objectives

- Acknowledge our history and enable truth telling
- Celebrate culture
- Protect our history
- Value and utilise knowledge

Objective		Action	Responsibility
2.1	Acknowledge our history and enable truth telling Explore our shared history and its lasting impacts to further healing, justice and reconciliation.	2.1.1 National Reconciliation Week and Sorry Day In partnership with Nalderun Education Aboriginal Corporation continue to deliver the Mount Alexander Shire National Reconciliation Week and Sorry Day program.	Community Partnerships
		2.1.2 Survival Day Continue to partner with Nalderun Education Aboriginal Corporation to shape the inclusion of Survival Day in Council's dual named Australia Day – Survival Day event each year.	Communications and Customer Service



Objective	Action	Responsibility
2.2 Celebrate culture Recognise our Traditional	2.2.1 Signage Support the development of Shire entry signage and explore opportunities for funding to implement this initiative.	Communications and Customer Service
Owners, celebrate their culture and ensure our stories of place	2.2.2 Djaara History Support initiatives that showcase the historical presence of Djaara and acknowledge historical Djaara figures of significance.	Economy and Culture
are captured.	2.2.3 Boorp Boorp Boondyil Promote the educational aspect of the Boorp Boorp Boondyil exhibition and explore aligned opportunities to encourage community	Economy and Culture
	 learning, training and resource development. 2.2.4 Community initiatives Support community led initiatives that recognise and celebrate Djaara culture and amplify stories of place. 	Community Partnerships
	2.2.5 NAIDOC Week Deliver a Council led initiative to acknowledge and celebrate NAIDOC Week annually.	Community Partnerships



Objective		Action	Responsibility
2.3	Protect our history Protect and preserve Country and	2.3.1 Cultural Heritage Support the ongoing management and protection of cultural heritage sites, and undertake Cultural Heritage Management Plans as required.	Whole of Council
	our future	2.3.2 Strategic Planning	Development
	generations.	Ensure relevant strategic planning tools and methods are utilised to recognise and protect places of significant Aboriginal cultural heritage.	Services
		2.3.3 Traditional Language Place Naming	Governance
		Advocate for the naming of new sites, and the dual naming of significant sites within the Mount Alexander Shire to include or reinstate traditional language place names.	
2.4	Value and	2.4.1 Utilise Cultural Knowledge	Parks,
	utilise knowledge Be guided by cultural knowledge, and recognise its worth.	Explore opportunities to align our land management practices with the goals identified in <i>Dhelkunya Dja</i> – the DJAARA Country Plan 2014-2034 and associated strategies, and support DJAARA to see their vision and aspirations for managing Country realised.	Recreation and Community Facilities
		2.4.2 Strategic Planning	Development
		Encourage and enable early engagement with our reconciliation partners, and explore the co- design of place-based planning approaches.	Services
		2.4.3 Indigenous Burning	Community
		In partnership with the member agencies of the Municipal Fire Management Planning Committee, continue to incorporate Indigenous burning practices into our Fire Prevention strategies.	Partnerships
		2.4.4 Remuneration and Consultation	Whole of
		Ensure culturally appropriate consultation processes and remuneration is provided to the Registered Aboriginal Party (RAP) and Traditional Owners to participate in meaningful engagement.	Council

Nalderun Women's dancers, performing a cleansing of the ceremonial area

Nº4



Theme three: Empowerment

Aim

Build an inclusive and empowered community where First Nations people can thrive.

Objectives

- Support self determination
- Empower First Nations children and youth
- Enhance and increase opportunities
- Engage the community in reconciliation

Objective		Action	Responsibility
3.1	Support self determination Using inclusive practice, support our First Nations people to freely determine their own economic, social and cultural development.	3.1.1 Employment Pursue opportunities to improve and increase Aboriginal and Torres Strait Islander employment outcomes within our workplace.	Organisational Capability
		3.1.2 Procurement Identify and implement measures that strengthen economic benefits for the Djaara community through the procurement program, and embed this into policy at the time of review.	Procurement
		3.1.3 Business Development Explore a First Nations led option within the Business Mentoring Program.	Economy and Culture
		3.1.4 Business Recognition Explore opportunities to increase recognition of First Nations enterprises through the Mount Alexander Business Awards program.	Economy and Culture
		3.1.5 Tourism Support the delivery of Djaara led cultural tourism products and initiatives.	Economy and Culture

Ob	jective	Action	Responsibility
3.2	Empower First Nations children and youth Create opportunities for First Nations children and youth to be supported and celebrated.	3.2.1 The Meeting Place Continue to implement initiatives that support First Nations children through The Meeting Place program, in partnership with Nalderun Education Aboriginal Corporation.	Community Partnerships
		3.2.2 Engagement Establish processes to ensure First Nation children's voices are heard to help guide the development of Council plans and strategies that impact them.	Community Partnerships
		3.2.3 Celebrate First Nations children Deliver an event that celebrates National Aboriginal and Torres Strait Islander Children's Day.	Community Partnerships
		3.2.4 Schools Encourage and support local schools to deliver initiatives that increase cultural safety and awareness.	Economy and Culture
		3.2.5 First Nations Youth Leaders Continue to support the First Nations Youth Leadership Program as a core part of Council's State Government funded Youth Development program <i>Engage! 2022-2024</i>	Community Partnerships
3.3	Enhance and Increase opportunities Enhance and increase opportunities for First Nations people to benefit from the Arts, Cultural Development and Events programs.	3.3.1 Opportunities Provide a range of opportunities and platforms for First Nations art and culture to be recognised and celebrated.	Economy and Culture
		3.3.2 Public Art Support First Nations artists in accordance with the Public Art Policy	Economy and Culture
		3.3.3 Events Investigate opportunities to better support First Nations artists and enterprises through the Venues and Events program.	Communications and Customer Service

Objective	Action	Responsibility
3.4 Engage the community in reconciliation Lead an inclusive and culturally safe	3.4.1 Build Community Capacity Provide and promote opportunities for the wider community to develop a deeper understanding of First Nations culture and help to build the community's capacity to address reconciliation.	Community Partnerships
community with a shared vision for reconciliation.	3.4.2 Showcase our work Explore opportunities to showcase and celebrate our reconciliation journey and share our stories with the broader community.	Community Partnerships
	3.4.3 Resource and Inform the Community Promote resources and educational opportunities that enable the community to be well informed about State and Federal Government treaties.	Community Partnerships
	3.4.4 Combat Racism Establish Council's role as a leader in combatting racism within the community, by producing and publicising anti-racism protocols.	Economy and Culture

Attendees at Councils Australia Day - Survival Day event



Throughout our Reconciliation Plan we refer to our First Nations Peoples in a number of ways. This reflects the gradual evolution of what is considered to be the most appropriate terminology, and our desire to be respectful of the preferences of our local Elders at the time, or the different roles within cultural structures. Here is an outline of the different terminology used throughout the plan, including definitions, and why we've used these terms in the plan.

Aboriginal and Torres Strait Islander

'Aboriginal' and 'Torres Strait Islander' refer to different groups of peoples. Aboriginal refers to the original peoples of mainland Australia. Torres Strait Islander refers to the original peoples of the 274 islands located north of Australia, in the Torres Strait. This term is used when referring to the title of National Aboriginal and Torres Strait Islander Children's Day, and when referencing employment and training related actions, as this aligns with the terminology used in those sectors.

First Nations People

In recent times, 'First Nations people' has emerged as a name that recognises Aboriginal and Torres Strait Islander people as the first peoples of Australia. Using the term 'First Nations People' recognises Aboriginal and Torres Strait Islander people as the sovereign people of this land, and beyond that, it also recognises various language groups as separate and unique sovereign nations. This term is now widely considered to be the preferred term for respectfully referring to Aboriginal and Torres Strait Islander peoples. Guided by conversation with our local Elders throughout the development of this plan, when referring to people, as distinct to culture and Country, we will use the term First Nations.

Indigenous

The true definition of 'Indigenous' means 'belonging or occurring naturally in a particular place' but the term became popular in Australia as a convenient all-inclusive term to describe both Aboriginal and Torres Strait Islander people. However, we now understand that some First Nations People consider the term 'Indigenous' to be offensive, because of the scientific connotations which have been used historically to describe Aboriginal and Torres Strait Islander peoples as part of the 'flora and fauna' rather than the human population of Australia. Sometimes, it is also seen as a problematically homogenising label for what are, in reality, highly diverse identities.

In our plan we make reference to the Indigenous Roundtable. The Indigenous Roundtable was named in collaboration with our local senior Elder in 2013, when the use of this term was not understood to be offensive to some, and considered to be inclusive of all First Nations people.

Traditional Owners

A 'Traditional Owner' is an Aboriginal person directly descended from the original Aboriginal inhabitants of a culturally defined area of land or country, and has a cultural association with this country that derives from the traditions, observances, customs, beliefs or history of the original Aboriginal inhabitants of the area.

Our plan uses the term Traditional Owner when referring to direct descendants of the clan groups within Mount Alexander Shire, Dja Dja Wurrung and Taungurung clans, who hold the authority to speak on behalf of their clan group.

Elder

An 'Elder' is defined as a significant person within Aboriginal communities who is respected and consulted due to their experience, wisdom, knowledge, background and insight. Often described as the "custodians of knowledge" of a community. Elders are chosen and accepted by their own communities and are highly respected. The term Elder does not necessarily equate with age.

Our plan refers to our senior Dja Dja Wurrung Elder, which has been the customary term we use as an alternative to Traditional Owner. Uncle Rick Nelson, Survival Day Dawn Ceremony on Liyanganyuk Banyul (Mt Alexander)

Mount Alexander Shire Council Cnr Lyttleton and Lloyd streets Castlemaine VIC 3450 Djaara Country

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Shire Council



ORDER MADE PURSUANT TO THE **DOMESTIC ANIMALS ACT 1994** SECTION 25 AND 26

Passed by Council Resolution, 15 February 2022

This Order revokes all previous Orders of Council by Mount Alexander Shire Council made under the **Domestic Animals Act 1994**.

In accordance with the **Domestic Animals Act 1994** from 15 February 2022 dogs and cats are to be controlled in the following manner at all time:

Pursuant to section 25 cats within the municipality are to be controlled:

Cat Curfew

All cats within the municipality must be securely confined to their owners' premises between the hours of sunset to sunrise.

Pursuant to section 26(2) dogs and cats within the municipality are to be controlled:

On-Leash

The person in control of any dog must keep the dog in effective control by means of a chain, cord, or leash held by the person and attached to the dog while the dog is in:

- all **roads*** in the areas of Campbells Creek, Castlemaine, Chewton, and Maldon prescribed in Schedule 1; and
- the Castlemaine Botanical Garden; and
- all other parks and reserves:
 - between sunset to 6 am; and
 - when park maintenance is being performed; and
- the principal location of an organised public meeting, sporting or community event, or festival when occurring or being prepared for; and
- within five metres of a permanent barbeque or picnic area when in use; and
- at any place where Council has placed signs indicating that dogs must be on a lead.
- *Roads as the meaning is ascribed to it in the Local Government Act 1989.

A person may exercise a cat in a public place but must keep the cat on a chain, cord, or leash held by the person attached to the cat at all times.

Off-Leash

With the exception of the above, a dog may be exercised off-lead providing the person in control actively supervises the dog and maintains a clear and unobstructed view of the dog at all times, and:

- carries a chain, cord or leash sufficient to bring the dog under effective control if the dog behaves in a manner which threatens any person or animal; or
- remains in effective voice or hand control of the dog so as to be able to bring the dog under effective control by placing the dog on a chain, cord, or leash if that becomes necessary; or
- is in a prescribed dog park and places the dog on-lead when exiting the park.

Prohibited areas

Dogs are prohibited at all times:

• within five metres of any playground;

- from the playing surfaces of the following:
 - Camp Reserve Oval Castlemaine,
 - Castlemaine War Memorial Stadium,
 - Western Reserve Oval Castlemaine,
 - Elsie Palmer Field Oval Castlemaine,
 - Doug Powell Oval Castlemaine,
 - Wesley Hill Recreation Reserve Castlemaine,
 - Campbells Creek Recreation Reserve Oval,
 - Chewton Soldiers Memorial Park Oval,
 - John Powell Recreation Reserve Oval Guildford,
 - Harcourt Recreation Reserve and Leisure Centre Oval,
 - Cricket Ground and Recreation Reserve Oval Newstead,
 - Bill Woodfull Reserve Oval Maldon,
 - Public Recreation Reserve Station Oval Taradale, and
- at any place where Council has placed signs indicating that dogs are prohibited.

Pursuant to section 26(2A) dogs within the municipality are to be controlled:

By Agreement with owner of private land

The person in control of any dog must keep the dog in effective control by means of a chain, cord, or leash held by the person and attached to the dog while the dog is on:

• 149 Duke Street, Castlemaine (Wesley Hill Market).

Pursuant to section 26(4) a condition as to the means of restraint of a dog does not apply to a dog in any circumstances listed in section 20(2).

Exemptions to Order of Council

A dog that is an Assistant Animal within the meaning of the **Disability Discrimination Act 1992** (Cth) that is under the effective control of the handler/patient.

A dog may be temporarily tethered to a post or pole on a short leash or chain while the person in control of the dog conducts a short-term activity provided the dog's behaviour is monitored and immediate action is taken to bring the dog under control.

An Authorised Officer may temporarily suspend or amend a provision of this Order for the purposes of facilitating a planned event or in an emergency.

Prescribed Dog Parks

The following has a prescribed off-leash dog park:

• Wesley Hill Dog Park, Wesley Hill Recreation Reserve.

Schedule 1: Maps of prescribed on-leash areas

Castlemaine prescribed on-leash area



Campbells Creek prescribed on-leash area



Chewton prescribed on-leash area



Maldon prescribed on-leash area



Should dogs be allowed off leash at Western reserve?

In the August 2023 Council meeting, Councilors voted to ask the community what they think about the current prohibition of dogs at Western Reserve.



Should dogs be allowed on-lead at Western Reserve?

Throughout September we used our Shape page to ask the community what they thought about the prospect of letting dogs on a leash back on Western Reserve. We used a mix of posters, newspaper advertisements, our website, radio, social media and email newsletters to promote the consultation.

Who we engaged with

During the engagement period (31 August - 2 October 2023) there were 474 contributions. The contributions were received via our online engagement platform, Shape Mount Alexander, and also by direct email.

What we heard

In considering all 474 contributions, the majority was in favour of reviewing the current ban. Though some residents remained concerned



72.36% (343)

Supported the return of dogs to Western Reserve.

5.06% (24) were unsure. 22.57% (107) were against allowing dogs back on Western Reserve.

Common concerns



Mount Alexander Shire Council Waste Management Strategy 2023–2033

Working together for a healthy, connected shire



Acknowledgement of country

Mount Alexander Shire Council acknowledges that the traditional custodians of this land, the Dja Dja Wurrung and Taungurung peoples, proudly survive. We acknowledge their continued practise of custom and their close cultural, spiritual, physical, social, historical and economic relationship with the land and waters that make up their Country, which includes Mount Alexander Shire.

Council recognises the Victorian Government's Recognition and Settlement Agreements with both the Dja Dja Wurrung Clans Aboriginal Corporation and the Taungurung Land and Waters Council.

Artwork this page by Daikota Nelson.

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Mayor's message



Councillor Rosie Annear Mayor Mount Alexander Shire Council

On behalf of Council, I'm pleased

to present our Waste Management Strategy 2023-2033.

So often during my time on Council, I've been surprised to find myself becoming passionate about things that I really haven't given much thought to before. Now, I can be regularly heard to say, "I never thought I'd care so much about waste management". It's true.

Up until recently, I was one of many people who didn't really think about what happens to rubbish or recycling after it went in the bin – it just wasn't my problem any more. Now, though, I know that's not true, and it's more important than ever that we all think a little more about the ways we generate and manage waste. Local governments are all experiencing big changes when it comes to waste management.

This presents us with both challenges, and excitingly, opportunities.

Our vision for waste management is outlined in this strategy, and we have ambitious goals to achieve.

In collaboration with our community and businesses, we aim to reduce waste to landfill and support people to think differently about the way they consume and dispose of goods.

Our shire is full of people who are passionate about protecting the natural environment, many of whom are leading innovative projects that support a future with less waste.

While a zero-waste future won't be achieved quickly or effortlessly, it's something we can all strive for and every action counts.

Whether it's choosing to reuse, recycle or repair, buying second-hand or composting at home – every little bit will make a difference.

Thank you to everyone who has contributed to the development of this strategy, particularly the Community Waste Reference Group for their input and enthusiasm.

Let's work together towards a more sustainable future, where we all take more responsibility for what we're leaving behind, in and above the ground.



Purpose and scope

Waste management is an important function of Council which seeks to protect human health, the environment and maintain visual amenity. The purpose of this document is to provide a strategic pathway in an environment where there is significant regulatory and technological change and to inform the localised and cost-efficient management of waste that is generated within Mount Alexander Shire. The scope of the strategy covers the collection and processing of four domestic waste streams - general, food and garden organics, glass and mixed recyclables, and public place waste. The strategy will further explore opportunities for expansion into commercial and industrial, construction and demolition waste, and new waste streams as they emerge. The strategy also seeks to provide the blueprint for investigations to process certain reusable material locally within the shire, such as organic waste, glass and plastics.



Vision

Mount Alexander Shire Council engaged extensively with our community to produce the 2021 - 2031 Community Vision. The vision reflects the community's hopes, aspirations and priorities for Mount Alexander Shire over 10 years. The Community Vision states:

In 2031, our community is connected to each other, and comes together to build and celebrate an inclusive, creative shire. We are a healthy community that values the natural beauty of the Djaara Country we live on. We also know that preserving our natural environment means living sustainably. We are protecting our shire from the threat of climate change by working together. We are a welcoming community where everybody has access to services and opportunities for housing, education, employment and creative and social pursuits. We're known as a vibrant place which draws upon its creative spirit and shared heritage. We're building a place where everyone can enjoy the beauty, history and friendliness of the shire.

Council's focus is to reduce waste to landfill, increase the rate of reuse and recycling, and maintain a high level of community satisfaction in line with evolving legislative requirement. The following vision guides all aspects of our waste management practice.

Our vision

A future with zero waste, where avoidance, reduction, repair and reuse are part of our daily lives.



Key issues/influences

The following issues have influenced the development of Council's strategic direction and the development of the goals and future actions. These are all significant issues that need attention and strategic approaches.

Increasing amount of waste to be managed

With an increase in population and an increase in consumerism comes the increase in the volume of waste generated within our community. General waste and mixed recyclables collected at the kerbside and the Castlemaine and Maldon transfer stations has increased significantly by 20 percent over the past ten years¹.

In the year 2020-2021, an average of 412kg of household waste and 228kg of recyclable material was generated in Mount Alexander Shire per service. While this is comparable to the average for other Large Rural Shires in Victoria (453kg of general waste and 226kg of recyclable materials) our shire generated more waste and recyclable material than fifty percent of other Large Rural Shires in Victoria².

With the increase in waste and recyclable materials generated comes a responsibility for residents, councils, and industry to ensure the management of the material is optimised through practices that promote avoidance, increase recycling, reuse and repair wherever possible.

Demand for improved reuse and recycling

With greater awareness of opportunities as well as concern for the environment, there is an increased expectation from the Mount Alexander Shire community to increase the volume and type of material that is reused or recycled. For example, an audit of kerbside waste and recycling bins conducted in 2022 identified that 34.1 percent of the collected rubbish contained food and organic material that could be recycled and diverted from landfill. This rate can and must improve. Mount Alexander Shire could achieve an estimated diversion rate of 53.7 percent if all recyclables, food and organic waste are separated. This is a 28 percent increase from the current diversion rate of 25.7 percent.

Furthermore, as our community grows and increases its awareness of recycling and reuse opportunities, it seeks greater diversity in the materials that are processed through the Castlemaine and Maldon transfer stations to make their own contribution to a reduction of waste to landfill.

The circularity of our economy

At the local, national and international level there is the ever-growing realisation we need to transition to a more circular economy. A circular economy is loosely described as creating products that are more durable, reusable, repairable and recyclable, and therefore kept in circulation for as long as possible. A circular economy starts at the design stage and advocacy is key to inform future outcomes, however it also means changing the way the community consume and use goods and services.



Figure One: Resource Flows in a circular economy, Recycling Victoria, A New Economy, 2020.

² Recycling Victoria, Local Government Annual Waste Service Survey 2020-2021,

¹ Recycling Victoria, Local Government Area Summary 2013 - 2023

www.vic.gov.au/victorian-local-government-waste-data-dashboard

While the generation of waste cannot be eliminated entirely, there are opportunities to adjust behaviour and to consider waste in terms of resource. The separation of waste into streams which can be processed into new products creates an environment that maximises the use of resources whilst also minimising the impacts of climate change and creating less waste and pollution.

The cost of waste and recycling

It is expensive to collect and manage waste. The cost of transporting waste and recyclables to centralised processing locations is both financially and environmentally (greenhouse gas) costly. Contrary to popular thought, the recycling of materials also comes at a cost with only a few exceptions. Car batteries and metals are two examples where the value of recycled materials covers the cost of processing. This is due to the high demand for these types of materials in manufacturing. Other items such as drumMUSTER containers or domestic batteries incur no disposal fees as the cost to recycle is built into the purchase price as a result of state or federal product stewardship schemes. Electronic waste, end of life solar panels and new aged batteries are a relatively new waste material requiring industry wide planning, the cost of which ranges from free to there being a charge as product stewardship schemes and the recycling system develops.

With a wholistic perspective on the impact and opportunities of waste management, consideration of local processing options become more viable. A challenge for a small shire is to meet the minimum supply levels required to ensure sustainability and end market demand. However, options include opportunities at the household (food and garden organics), shire wide (glass), or regional partnership (soft plastic) together with local industry and academia.

Government policy and regulation

Waste policy at the federal and state level has been under reform, and is driven by a focus on the circular economy and developing local markets for recycled and reusable products.

At the national level, the National Waste Policy (2018) and National Waste Policy Action Plan (2019) seeks to reduce total waste generation in Australia by ten percent per person, halve the amount of organic waste sent to landfill, and increase the resource recovery rate from all waste streams by 2030.

The National Waste Policy incorporated the waste hierarchy, that sets out the prioritisation of waste management practice, with a focus on reusing, recycling and reprocessing materials.

Recycling Victoria: A new economy 2020, is the Victorian Government's ten-year action plan to fundamentally transform our recycling sector, to reduce waste, and seek a more sustainable future. The most significant part of the reform is the creation of four separate waste streams, including glass, mixed recyclables, food and garden organics and general waste. The four-stream waste system will be further complemented by a container deposit scheme and targeted investment in industry and business to improve processing and end market opportunities.



Figure Two: Waste Hierarchy, National Waste Policy, 2018

Goals

The strategy is guided by four overarching goals that will help achieve the vision of the Strategy. Each goal has a number of focus areas that more clearly identify the outcome. Collectively the four goals respond to the key issues which are guiding the direction of the future of waste management services within Mount Alexander Shire.



Goal 1 - Reduce the generation of waste

An underlying principle of the Waste Strategy is that waste is a resource. However, it is understood that not all waste can be reused. Where we cannot re-use recyclable materials ourselves, we are committed to ensure it is processed by others for a net benefit.

The introduction of the four waste streams will achieve a greater separation of waste types, allowing for increased reuse and recycling as well as a reduction in the volume of waste sent to landfill. General and targeted waste education programs will help residents separate material and maximise resource opportunities via the kerbside bin collection system and at our transfer stations.

Through a systematic approach, Council will advocate for more comprehensive product stewardship schemes to include material like electronic waste, tyres and packaging products. Such advocacy will seek to reinforce the responsibility of manufacturers for end of life treatment of their products.

Mount Alexander Shire Council, will also continue the implementation of workplace waste avoidance and minimisation practices across all services and project design and implementation.

Focus Area 1.1

Increase understanding of domestic waste composition and volumes

Focus Area 1.2

Generate less waste through awareness and education

Focus Area 1.3

Expand waste service provision for our community

Focus Area 1.4

Advocate for increased product stewardship

Focus Area 1.5

Minimise waste from Council's own operations



Goal 2 - Increase resource recovery of reusable and recyclable material

In keeping with the principle that waste is a resource, actions to increase the total volume and number of waste types that are recycled or reused drives goal two. Council will explore opportunities to enhance the recovery of waste at the two transfer stations, through improving current operational practices and investing in new infrastructure that allows the acceptance of new recyclable or reusable materials.

Such approaches may include the local processing of materials at a shire level for reuse within Council operations, or for resale to local or state and national end markets. This will be complemented by assessing the potential for expanding household level processing options, primarily for food and garden organics.

From specific and targeted campaigns through to longer-term programs, Council will work with households to improve waste separation rates and understand the consequences of disposal and recycling behaviour to help improve resource recovery and reduce the amount of waste ending up in landfill.

Focus Area 2.1

Increase Council's capacity to increase local resource recovery

Focus Area 2.2

Increase awareness of available recycling and reuse streams





Goal 3 - Support a local circular economy

By embracing the circularity of our economy, Council will seek to reuse waste resources as locally as possible. In a circular economy, waste is designed out and products and materials stay in use for as long as possible. In our shire, we will not only aim for a circular economy but also a more localised economy. Wherever possible Council will re-use the waste generated within our shire to create economic and social benefit within our community.

This will include investigating Council's capacity and the establishment of partnerships with local businesses and community groups for the processing and reuse of glass and food and garden organics locally. The potential of emerging technology to create new markets and new business opportunities for recycled material will be considered, alongside the benefits of local employment opportunities. Such action will be complemented by the exploration of programs that enhance household level and shire wide repair and reuse programs together with community partners.

Council will also seek to increase the use of recycled products within its service and project delivery. This will include among other actions introducing updates to design specifications for recycled materials and partnering with academia to trial options for technological advances where relevant.

Focus Area 3.1

Introduce local processing of recyclable and reusable material

Focus Area 3.2

Council's practice promotes circular outcomes





Goal 4 - Minimise the environmental impact of waste management

Council has committed to minimising the negative impact waste generation, collection and processing have on our environment³. We all generate waste, so minimising the environmental impact of waste is a shared responsibility and challenge.

Council is committed to achieving zero-net emissions for waste in its own operations by 2025⁴, in doing so we will continue to monitor the environmental legacy of the Castlemaine landfill site, as well as explore the transition of our fleet and equipment to zero emissions. We further include in the criteria of future waste contracts and commercial arrangements, the energy efficiency performance of landfills and Material Recovery Facilities that Council may be required to access.

We will seek ways to ensure our public places remain clean and safe, through reviewing the management of our public place bins as well as working in partnership with community groups who contribute towards the management of sporting grounds, reserves, open spaces and community facilities. While illegal dumping and littering is not endemic within our shire, it can have a major impact on our environment. As such it is important that we continue to monitor and work with land management organisations to stamp out incidents when they occur.

Focus Area 4.1

Minimise Greenhouse gas emissions

Focus Area 4.2

Community is supported to maintain clean and safe public places

Focus Area 4.3

Reduce incidence of illegal dumping and littering



³ Mount Alexander Shire Council Environment Strategy 2015-2025

⁴ Mount Alexander Shire Council Roadmap to Carbon Neutrality 2020–2025



How Council will deliver this strategy

To achieve the strategic goals of the Waste Management Strategy, Council will require support from across our community. All segments of our community generate waste, and while Council has a role to play, minimising the generation, and maximising the reuse and recycling of waste is a shared responsibility and challenge.

The four strategic goals set the direction for what is to be achieved. The focus areas are supported by a number of actions that have been identified to achieve the desired outcomes. The actions have been grouped into short (0-3 years), medium (4-6 years), and longer term (7-10 years) timeframes. The alignment of goals, focus areas and actions are presented in appendix one of this strategy. The implementation of the Waste Management Strategy will be supported by the development of annual action plans detailing timeframes and resource requirements. Council will also conduct internal reviews of the Strategy at a minimum of every four years, in line with development of Council Plans. Reviews will also be undertaken when there are legislative or strategic updates or changes.

The details and specific actions of the action plan will be developed in partnership with community groups and specifically the Community Waste Reference Group, which was established in 2020 as an advisory group. The group will assist Council in drafting the actions and assessing performance in meeting the goals.

Monitoring, evaluating and reporting

The monitoring and review of the Waste Management Strategy implementation is critical to ensure delivery against focus areas and ensuring outcomes are achieved against the four strategic goals.

A monitoring and evaluation framework (appendix two) sets out the approach which aims to:

- Keep our community informed
- Balance resource requirements for reporting and those for efficient service delivery

Council will report on the progress of this strategy each year through a report to Council and via the Council website.

Strategic and legislative framework alignment

The strategic and legislative context at the Local, State and Federal level which has influenced the development of the Waste Management Strategy is outlined in table one. Of particular note is the Circular Economy (Waste Reduction and Recycling) Act 2021 which mandates that Council implement a four-waste stream recycling service through the broader context of the Recycling Victoria policy.

The Circular Economy Act determines certain actions for Council and defines what materials must be accepted through kerbside collection and the Container Deposit Scheme. The General Environmental Duty (GED) is at the centre of the Environmental Protection Act 2017 and applies to all Victorians. Through this, all Victorians must reduce the risk of activities potentially harming the environment or human health through pollution or waste. The GED applies to Victorian councils with a key requirement that all waste must be managed at a place that can lawfully receive it. This includes sorting, recovery and disposal.





Table C	One:	Strategic	and	Legislative	Context
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Name	Level of Government	Relevant aims and objectives	Purpose and influence on Council
Mount Alexander Shire Council, Council Plan 2021 – 2025	Local	 Reduce waste and increase resource recovery Implement Recycling Victoria actions, including FOGO and glass recycling 	 Provides community vision and objectives for the four- year term of Council
Mount Alexander Shire Council, Municipal Public Health and Wellbeing Plan 2021 - 2025	Local/State	 Advocate for a healthy food system, from soil through to the impacts of food waste management 	• Recognises the key role of councils in improving the health and wellbeing of people in their municipality
Mount Alexander Shire Council, Environment Strategy 2015 - 2025	Local	 Increase diversion of waste from landfill, including green organic waste. Influence community behaviour through education and compliance Reduce greenhouse gas emissions from current waste management facilities 	 Clearly defines and communicates Mount Alexander Shire Council's strategic approach to its environmental stewardship role for the period 2015- 2025
Mount Alexander Shire Council, Roadmap to Carbon Neutrality 2020 – 2025	Local	 Zero-net emissions waste for Council operations by 2025 Support community- wide waste reduction 	 Sets out Mount Alexander Shire Council's roadmap to carbon neutrality that will lead to zero net emissions for Council operations by 2025

Name	Level of Government	Relevant aims and objectives	Purpose and influence on Council
Mount Alexander Shire Council, Climate Change Strategy	Local	• Goal 6: "Our shire is zero waste and has a resilient, circular economy"	 Describes how Council will: respond to climate change in our own operations partner with our community to respond to climate change advocate to support our response to climate change. work towards the goal of zero waste and promoting a circular economy.
Environment Protection Act 2017	State	• Environmental obligations and protections, including the General Environment Duty which makes it clear that businesses have a responsibility to reduce risk to human health and the environment	 Provides the regulatory framework to help reduce and eliminate the discharge of pollutants into the air, land and water
Circular Economy (Waste Reduction and Recycling) Act 2021	State	 Creates the legislative framework for the new state wide, four-stream household waste/ recycling system Creates the legislative framework for the new container deposit scheme New regulations, compliance and enforcement powers with the creation of a new body: Recycling Victoria 	 Provides for stronger regulation of the state's waste and recycling sector for more and better recycling, less waste and landfill

Table One: Strategic and Legislative Context

Table One:	Strategic	and	Legislative	Context
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Name	Level of Government	Relevant aims and objectives	Purpose and influence on Council
Recycling Victoria: A New economy 2020	State	 All Victorians to have access to food and garden organic waste recycling services or local composting by 2030 Divert 80 per cent of waste from landfill by 2030, and an interim target of 72 per cent by 2025 Cut total waste generation by 15 per cent per capita by 2030 Halve the volume of organic material going to landfill between 2020 and 2030, with an interim target of 20 percent reduction by 2030 	 Victorian Government's 10- year policy and action plan for waste and recycling
Regional Circular Economy Plan, Loddon Mallee October 2022	State	 Resource recovery is the primary focus Product Stewardship is paramount Better use of plastic (prioritising avoidance) to support the circular economy Consumers are supported to engage in the circular economy Recognised as a leader in the circular economy in Victoria 	 Sets out the region's aspirations to 2030 for a sustainable and thriving circular economy
National Waste Policy (2018), and National Waste Action Plan (2019)	Federal	 Reduce total waste generated in Australia by 10 percent per person by 2030 Halve the amount of organic waste sent to landfill by 2030 	 Provides a framework for collective, national action on waste management, recycling and resource recovery to 2030


Appendix One

	Timetable					
Goal	Focus area	Action	Ongoing	Short (0-3 yrs)	Medium (4-6 yrs)	Long (7-10 yrs)
Ā	1.1 Increase understanding of domestic	Determine tonnages of the four domestic waste streams and monitor annually		\oslash		
1. Reduce the generation	waste composition and volumes.	Analyse bin compositions and volumes to understand waste trends and opportunities to reduce waste and increase reuse and recycling.		\oslash	\oslash	\bigcirc
of waste.		Record and monitor data on requests for hard waste services to inform future action.		\bigcirc		
		Record and monitor data on incidences and type of waste illegally dumped to inform future action.	\oslash			
	1.2 Generate less waste through awareness and education.	Promote services provided by Council, community groups, private sector, within shire and the region.	\oslash			
		Develop and promote waste avoidance education programs.	\odot			
		Develop and implement behavioural change programs to reduce waste contamination.	\bigcirc			
		Work with commercial and community events organisers to enhance resource management practices.	\oslash			
	1.3 Expand waste service provision for our community.	Introduce four stream waste and recycling services prior to the state mandated deadlines i.e. transition to glass separation before 2027, organic waste separation before 2030.		\oslash	\oslash	
		Provide resources for households to separate waste streams at home e.g. information, receptacle.		\bigcirc	\bigcirc	
		Support the expansion of household level organic processing together with community partners e.g. Yes in My Backyard.		\bigcirc		

			Timetable			
Goal	Focus area	Action	Ongoing	Short (0-3 yrs)	Medium (4-6 yrs)	Long (7-10 yrs)
		Introduce alternative methods/ solutions of waste collection and disposal services in areas not covered by kerbside collection.			\odot	
		Reduce the volume of household chemicals within the waste stream by promoting facilities and services that accepts this material e.g. Detox Your Home program.			\odot	
		Investigate processing options at waste facilities to promote further separation of materials with a robust reuse/recycle path e.g. soft plastics, glass, textiles.		\oslash		
		Explore opportunities for the provision of commercial, industrial, construction and demolition waste collection within the shire.			\odot	
	1.4 Advocate for increased product stewardship	Advocate for Product Stewardship models for waste types e.g. all electronic waste, tyres, product packaging.	\odot			
		Encourage local businesses to reduce product packaging and introduce recyclable or bio- degradable packaging.	\odot			
	1.5 Minimise waste from Council's own operations	Include in service and infrastructure project designs, requirements for the avoidance, the recycle and the reuse of waste generated.			\odot	\oslash
		Include in service and infrastructure contracts the requirement to document waste avoidance and management approaches.			\odot	\bigcirc
		Continue the implementation of workplace waste avoidance and minimisation programs, including use of Wash Against Waste trailer.	\odot			

			Timetable			
Goal	Focus area	Action	Ongoing	Short (0-3 yrs)	Medium (4-6 yrs)	Long (7-10 yrs)
	2.1 Increase Council's capacity to increase local	Review Castlemaine and Maldon transfer station operational practices to increase recovery of recyclable and reusable materials.		\oslash		
2. Increase resource	resource recovery.	Investigate the establishment of a resource recovery centre at Castlemaine transfer station.			\oslash	
recovery of reusable and recyclable		Investigate in-house collection of glass and food and garden organic waste streams.		\bigcirc		
material.		Investigate options for the separation and management of additional waste streams e.g. soft plastics, nappies, EV batteries, solar panels, textiles, etc.			\odot	\oslash
		Stay informed of developments in technology and resource management practice that increase recycling and reuse.	\odot			
	2.2 Increase awareness of available recycling and reuse streams	Promote Council managed free green waste drop off campaigns.	\odot			
		Promote waste streams accepted at Mount Alexander Shire transfer stations.	\oslash			
		Promote Recycling Victoria's Container Deposit Scheme.	\odot			
		Promote Recycling Victoria public education campaigns aimed at increasing reuse and recycling and reducing littering.	\odot			
		Work closely with local businesses and community groups within the shire that provide services that reduce waste to landfill e.g. Repair Café, Mount Alexander Sustainability Group, op shops, etc.	\oslash			

			Timetable			
Goal	Focus area	Action	Ongoing	Short (0-3 yrs)	Medium (4-6 yrs)	Long (7-10 yrs)
	3.1 Introduce local processing of recyclable and reusable	Investigate in-house capacity and partnerships with local businesses for local processing of glass and food and garden organic waste streams.		\oslash	\oslash	
3. Support a local circular economy.	material.	Explore partnerships with private sector and community groups for increasing the reuse of recoverable materials.		\oslash	\odot	
		Investigate household level repair and reuse programs together with community partners.		\oslash	\oslash	
z X C C		Provide advice to residents on how to reuse, recycle or dispose of bulky items that are more difficult to handle.	\odot			
		Promote and support partnership approaches that support management of commercial, industrial, construction and demolition waste generated within the Shire.		\oslash	\odot	
		Increase reuse of material through upgrading the Council 'tip shops'.		\bigcirc		
	3.2 Council's practice promotes circular outcomes.	Consult Sustainability Victoria's Buy Recycled directory during procurement processes.		\bigcirc	\oslash	\bigcirc
		Council services and infrastructure program designs and specifications identify options for increased use of recycled materials.	\odot			

				Time	table	
Goal	Focus area	Action	Ongoing	Short (0-3 yrs)	Medium (4-6 yrs)	Long (7-10 yrs)
	4.1 Minimise Greenhouse gas emissions.	Continue the monitoring of gas converted from methane to carbon dioxide post installation of the gas flare at the Castlemaine landfill site.	\oslash			
4. Minimise the environmental		Investigate transition of Council's transfer station plant to zero emission options.			\odot	
impact of waste management.		Include in kerbside collection contracts specifications for landfill, processing and plant greenhouse gas emission requirements.	\odot			
	4.2 Community is supported to maintain clean and safe public places.	Review the location and management of public place bins for general and recyclable materials.			\odot	
		Review arrangements for supply and collection of public place bins at all sporting grounds, reserves, open spaces and community facilities.			\odot	
		Work with community groups and Community Asset Committees on ways to reduce waste and improve resource collection.		\bigcirc	\odot	
	4.3 Reduce incidence of illegal dumping and littering.	Promote the Litter Report Line managed by EPA.	\oslash			
		Develop and promote information on the risks to human health and biodiversity from illegal dumping of waste.		\oslash		
		Partner with EPA and land management organisations to coordinate action on illegal dumping.	\odot			
		Support where relevant community land management group(s) clean up campaigns and deterrent programs.	\odot			
		Consult with second hand and opportunity shops on the issue of dumped, non-resalable waste items.		\oslash		



Appendix Two

CLE TRO

Monitoring and Evaluation framework

Goal	Focus area	Action	Evaluation
A	1.1 Increase understanding of domestic	Determine tonnages of the four domestic waste streams and monitor annually.	# tonnes that can be diverted from landfill; # tonnes recycled
1. Reduce the generation of waste.	waste composition and volumes.	Analyse bin compositions and volumes to understand waste trends and opportunities to reduce waste and increase reuse and recycling.	# bin audits conducted
		Record and monitor data on requests for hard waste services to inform future action.	# of service requests received
		Record and monitor data on incidences and type of waste illegally dumped to inform future action.	# of service requests received
	1.2 Generate less waste through awareness and education.	Promote services provided by Council, community groups, private sector, within the shire and the region.	# messages/publications and list of mediums
		Develop and implement behavioural change programs to reduce waste	# campaigns delivered
		Work with commercial and community events organisers to enhance resource management practices.	# events with successful waste management
	1.3 Expand waste service provision for our community.	Introduce four stream waste and recycling services prior to the state mandated deadlines i.e. transition to glass separation before 2027, organic waste separation before 2030.	Glass and food and garden organic services introduced
		Provide resources for households to separate waste streams at home e.g. information, receptacle.	# resources provided
		Support the expansion of household level organic processing together with community partners e.g. Yes in My Backyard.	# household uptake of community-lead organics processing solutions
		Introduce alternative methods/ solutions of waste collection and disposal services in areas not covered by kerbside collection.	# tonnes of materials collected from areas not covered by kerbside collection

Monitoring and Evaluation framework

Goal	Focus area	Action	Evaluation
		Reduce the volume of household chemicals within the waste stream by promoting facilities and services that accepts this material e.g. Detox Your Home program.	Audits conducted
		Increase processing options at waste facilities to promote further separation of materials with a robust reuse/recycle path e.g. soft plastics, glass, textiles.	Investigation report and potential business case
		Explore opportunities for the provision of commercial, industrial, construction and demolition waste collection within the shire.	Investigation report and potential Business Case
	1.4 Advocate for increased product stewardship.	Advocate for Product Stewardship models for waste types e.g. all electronic waste, tyres, product packaging.	# messages/representations
		Encourage local businesses to reduce product packaging and introduce recyclable or bio- degradable packaging.	# programs/representations undertaken
	1.5 Council's own waste minimisation practice.	Include in service and infrastructure project designs, requirements for the avoidance, the recycle and the reuse of waste generated.	# designs incorporate requirement
		Include in service and infrastructure contracts the requirement to document waste avoidance and management approaches.	# tenders incorporate requirement.
		Continue the implementation of workplace waste avoidance and minimisation programs, including use of wash against waste trailer.	# practices maintained; # events which employed waste reduction

Monitoring and Evaluation framework.

Goal	Focus area	Action	Evaluation
	2.1 Increase in- house capacity to increase local resource recovery.	Review Castlemaine and Maldon transfer station operational practices to increase recovery of recyclable and reusable materials.	Review report; # improvements implemented
2. Increase resource recovery		Investigate the establishment of a resource recovery centre at Castlemaine transfer station.	Investigation report and potential business case
and recyclable material.		Investigate in-house collection of glass and food and garden organic waste streams.	Investigation report
		Investigate options for the separation and management of additional waste streams e.g. soft plastics, nappies, EV batteries, solar panels, textiles, etc.	Investigation report and # additional waste streams implemented
		Stay informed of developments in technology and resource management practice that increase recycling and reuse.	record of opportunities
	2.2 Increase awareness of available recycling and reuse streams.	Promote Council managed free garden/green waste campaigns.	# messages and types of medium # volume of green waste collected
		Promote waste streams accepted at transfer stations.	# messages and types of medium # volumes of separated waste streams
		Promote Recycling Victoria's Container Deposit Scheme.	# messages and types of medium
		Promote Recycling Victoria public education campaigns aimed at increasing reuse and recycling and reducing littering.	# messages and types of medium
		Promote local businesses and community groups within the shire that provide services that reduce waste to landfill e.g. Repair Café, Mount Alexander Sustainability Group, op shops, etc.	# messages and types of medium

Monitoring and Evaluation framework.

Goal	Focus area	Action	Evaluation
	3.1 Local processing of recycle and reusable material.	Investigate in-house capacity and partnerships with local businesses for local processing of glass and food and garden organic waste streams.	Investigation report, # partnerships explored or established
3. Support a local circular economy.		Explore partnerships with private sector and community groups for increasing the reuse of recoverable materials.	#/partnerships explored #/suitable partnership established
		Investigate household level repair and reuse programs together with community partners.	# discussions with community groups # programs implemented
	3.2 Council's practice promotes circular outcomes.	Provide advice to residents on how to reuse, recycle or dispose bulky items that are more difficult to handle.	# messages and types of medium
		Promote and support partnership approaches that support management of commercial, industrial, construction and demolition waste generated within the Shire.	# discussions with industry and businesses and # partnerships explored
		Increase reuse of material through upgrading the Council 'tip shops'.	Detail of upgrades to 'tip shops'
		Consult Sustainability Victoria's Buy Recycled directory during procurement processes.	Procurement documents to refer to directory
		Service and infrastructure program designs and specifications identify options for increased use of recycled materials.	# designs and specifications that include identification options for increased use of recycled materials

Monitoring and Evaluation framework.

Goal	Focus area	Action	Evaluation
	4.1 Minimise greenhouse gas emissions.	Continue the monitoring of gas converted from methane to carbon dioxide post installation of the gas flare at the Castlemaine landfill site.	Monitoring results
4. Minimise the environmental impact		Investigate transition of Council's transfer station plant to zero emission options.	Investigation report; # plant/equipment transitioned
of waste management.		Include in kerbside collection contracts specifications for landfill, processing and plant greenhouse gas emission requirements.	# procurement documents incorporate specifications
	4.2 Community is supported to maintain	Review the location and management of public place bins for general and recyclable materials.	Investigation report and # changes made
	clean and safe public places.	Review arrangements for supply and collection of public place bins at all sporting grounds, reserves, open spaces and community facilities.	# discussions with community groups; # adjusted arrangements
		Work with community groups and Community Asset Committees on ways to reduce waste and improve resource collection.	List of actions introduced
	4.3 Reduce incidence of illegal dumping and littering.	Promote the Litter Report Line managed by EPA.	# messages and types of medium
		Develop and promote information on the risks to human health and biodiversity from illegal dumping of waste.	# messages and types of medium
		Partner with EPA and land management organisations to coordinate action on illegal dumping.	List of actions undertaken
		Support where relevant community land management group(s) clean up campaigns and deterrent programs.	# and type of support provided
		Consult with second hand and opportunity shops on the issue of dumped, non-resalable waste items.	# discussions held

Mount Alexander Shire Council Cnr Lyttleton and Lloyd streets Castlemaine VIC 3450

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First-Year Action Plan Waste Managent Strategy



Action

Delivery deadline

GOAL 1	Reduce the ge	eneration of waste	
G1. FOC	US AREA 1	Increase understanding of domestic waste composition and volu	mes
	Determine toni configuration o	nages of the four domestic waste streams to inform the of the kerbside contract commencing in October 2024	Jun 2024
	Conduct kerbs the four domes	ide bin audits to determine type and volume of contaminants in stic waste streams.	Jun 2025
	Record and mo inform future a	onitor data on incidences and type of waste illegally dumped to ction.	Ongoing
G1. FOC	US AREA 2	Generate less waste through awareness and education	
	Work with house existing service collection servi	seholds to help them understand and use the new, upcoming, or es correctly, to achieve low levels of contamination (kerbside ices)	Jun 2025
	Work with hous their loads prio	seholds to improve separation of waste at source and to sort or to using the transfer stations	Jun 2025
	Develop and in contamination.	nplement behavioural change programs to reduce waste	Jun 2024
G1. FOC	US AREA 3	Expand waste service provision for our community	
	Investigate the areas not cove	provision of communal collection points for waste streams in ared by kerb side collection.	Jun 2025
G1. FOC	US AREA 4	Advocate for increased product stewardship	
	Advocate for fu stewardship sc	urther in-scope E-waste types to be included under the product cheme	Jun-25
	Encourage loca recyclable or b	al businesses to reduce product packaging and introduce io-degradable packaging.	Ongoing
G1. FOC	US AREA 5	Minimise waste from Council's own operations	
	Continue the ir program, inclue	nplementation of workplace waste avoidance and minimisation ding use of wash against waste trailer.	Ongoing
GOAL 2	Increase reso	urce recovery of reusable and recyclable material	
G2. FOC	US AREA 1	Increase Council's capacity to increase local resource recovery	

Review Castl increase reco	emaine and Maldon transfer station operational practices to overy of recyclable and reusable materials.	Jun 2024
Investigate in streams.	-house collection of glass and food and garden organic waste	Jun 2024
G2. FOCUS AREA 2	Increase awareness of available recycling and reuse streams	
Promote Cou	ncil managed free green waste campaigns.	Annually
Promote was	te streams accepted at Mount Alexander Shire transfer stations.	Ongoing
Promote Rec	ycling Victoria's Container Deposit Scheme.	Jun 2024
Promote Rec reuse and rec	ycling Victoria public education campaigns aimed at increasing cycling and reducing littering.	Ongoing
Work closely provide servio Alexander Su	with local businesses and community groups within the Shire that ces that reduce waste to landfill e.g. Repair Café, Mount istainability Group, Op Shops, etc.	Ongoing

GOAL 3	Support a local circular economy
--------	----------------------------------

G3. FOCUS AREA 1	Introduce local processing of recycle and reusable material
------------------	---

Investigate material to over all oth	e systems, programs and equipment that allow valuable waste stay in the Shire; and if commercially viable prioritise local recycling her recycling options.	Jun 2025
Increase re	euse of material through upgrading the Council 'tip shops'.	Jun 2024
Explore op stations e.	portunities for additional waste stream separation at transfers g. soft plastics and glass.	Jun 2024

G3. FOCUS AREA 2 Council's practice promotes circular outcomes

Consult Sustainability Victoria's Buy Recycled directory during procurement processes.	Ongoing
Increase the use of crumbed rubber and soft plastics in road pavements being constructed and renewed through the resealing program	Jun 2025

GOAL 4 Minimise the	environmental impact of waste management	
G4. FOCUS AREA 1	Minimise Greenhouse gas emissions	
Implement rep landfill site	porting frame work for landfill gas flaring at the Castlemaine	Jun 2024
Include in kerl and plant gree	oside collection contracts specifications for landfill, processing enhouse gas emission requirements.	Dec 2023

G4. FOCUS AREA 2 Community is supported to maintain clean and safe public places

	Investigate futu	re use of remediated Castlemaine landfill site.	Jun 2025
	Collaborate with points to fruther	h VISY (CDS Provider) to explore opportunities for collection r support businesses, charities and community groups	Jun 2024
G4. FOCl	JS AREA 3	Reduce incidence of illegal dumping and littering	
	Participate in th Victoria to enab	e Asbestos Pilot Program led and funded by Sustainabilty ble best practice asbestos managment	Jun 2024
	Partner with EP illegal dumping	A and land management organisations to coordinate action on .	Ongoing
	Support where campaigns and	relevant community land management group(s) clean up l deterrent programs.	Ongoing
	Engage with se challenges in th	cond hand and opportunity shops to understand existing neir management of dumping of non-resalable waste items.	Jun 2025

Q1 - Do you think this Strategy is a good guiding document?

The goals are excellent and provide everything required for Mt Alexander to become a regional leader in waste management. I am particularly impressed with the setting out of actions with timeframes and the monitoring and evaluation section. These are parts of a well thought out strategy that are typically missing. Unfortunately many of the actions fall below the expectations set in the goals. There are too many actions which are poorly defined, or will not do enough to meet the goal. Just one instance is the action to "explore opportunities for additional waste stream separation, e.g. soft plastics". This is unlikely to have a significant impact on the goal, particularly when Council is planning to take 4-6 years to do this exploring.

I totally agree with the goals and actions proposed and think the document is very well thought-out.

I agree with the goals and actions. It's a good strategy.

Yes I agree it is a good guiding document

Yes

council should be investigating how to use recyclable materials and identifying markets. For instance like mattresses can be completely stripped and very little waste left. The cost of leaving stuff at the tip is far too high so encourages people to dump in the bush, E waste should be free .

The goals are very broad and there are no targets. How much reduction in non-recyclable waste do we want to see, by when. There are a large number of actions but many are not measurable. There is no analysis to show the cost of landfill vs waste recovery/recycling for different streams. This would help determine priorities for action rather than just a long list of nice-to-do things.

Broadly speaking, the goals and actions are good, but the plan is far from ambitious enough. For example, the goal of having glass recycling bins by 2027 and organic waste bins by 2030 is awful. Council should aim to Yes

People don't change their behavior because of a Strategy. We need clear actions and activities that are easy and convenient to follow, such as the Yimby program, or a specific place to take our soft plastics or plastic Yes - a good strategy now for the details.

Yes

Yes, its a good strategy.

Yes

the strategy is too broad -0 broad enough that you can do almost nothing and think you have met your targets - get real and detail something that makes us think you really care

Yes, it is mostly a good guiding document.

Yes, its good. Please bring in the separate glass and plastic bins asap!!

I agree with the goals but I think you've missed a massive opportunity to reduce waste by investing in reuse/reduce/recycle by investing in a social enterprise at the tip shop. I'm looking to the The eaglehawk tip model but this is something that could be tendered for... So much reusable waste went over the wall under the most recent stewardship, MASC could have a great and much loved tip shop if it partnered with the hub/windarring and there are community leaders ready to support and

Yes, in broad terms

yes

Yes but it's very general. What's not to love?

Yes

The objectives seem abstract and seem to

be largely satisfied by current programs, while budgetary consideration have already been released there's no indication of how these relate to the objectives of council.

Yes, but the proposed Mount Alexander Bioenergy waste to energy plant should be prohibited and Council should follow the lead of the Australian Capital Territory Government and prohibit new facilities, proposing thermal treatment of waste, by means of incineration, gasification, pyrolysis or variations of these for energy recovery, chemical transformation, volume reduction or destruction in the Shire.

Yes

p7, 2nd para - significant costs of landfilling wastes and waste levy should be included.

p13, penultimate action - council-subsidised compost bins should be considered.

p16, 5th action - council should work with EPA to install "report littering to EPA signs - with phone number" (this is a very effective deterrent for potential litterers).

p16, 7th action - council must take, and publicise, enforcement action against rubbish dumping (it has failed to do so in a blatant case of dumping by an earthmoving contractor onto the Campbells Creek waterfront reserve (simply asked them to remove the wastes and no further action, sending a very poor signal to rubbish dumpers).

p18, "minimise Greenhouse emissions" - simply monitoring landfill gas emissions does nothing to reduce GHG emissions - I understand a LFG gas collection system and flare(s) are being installed at the (closed)

I think this is a goos guiding document as waste does need to be reduced, and more ways of

Good guiding document,

Goals are sound but will this be able to be done or just talked about surveys etc etc foe years to come and nothing actually done. Kyneton has been doing a great job for several years and our shire is still "talking"

Great goals and intentions but where is the composting FOGO bin? Mount Alexander seems to be the only shire without it. YIMBY is completely full (I have been on their waitlist to compost for over 2 years).

If the Council continues to open up new areas for settlement, then waste collection for those residents is compulsory. Point 1.3

I think the processes of collection need more attention in terms of efficiency in the long term. Citizens in some cities are required to deposit empty plastic bottles back in collection stores at supermarkets. The plan lacks integrating commercial and industrial waste streams.

The draft strategy provides summative guidence for council work to consider waste reduction. However, many of the goals do not result in tangable outcomes that will reduce waste or increase resource reuse. There seems to be a reliance on producing reports, consulting, promoting and identifying options without outcome measures to track change and actions to improve waste reduction.

The goals and actions need refinement, they need to stretch further and have tangible, measurable outcomes that result in actual change, not just dicussion.

If as the draft suggested, Mount Alexander wants to lead the way, then the strategy and goals need to be more aspirational and lead rather than react to legislative requirements, market restrictions and community Yes but the timeframe is all too slow. The first time frame for providing glass recycling collection, green waste etc should be immediately.

I've read the summary and it seems reasonable to me

Mostly. Assistance with hard waste disposal is needed. There is no annual hard waste collection for citizens without trailers or trucks to dispose of waste. Exploring ways to address this is essential to prevent disposal illegally or build up around properties. Practical and affordable solutions need to be found.

It is pretty comprehensive.

I am still not sure how people who is not doing the right things will cooperate.

One contaminated recyclable material will ruin the whole bin full of cleaned recyclable materials.

Yes, especially educating the community about reducing waste and reuse and repair of items.

More education about separating waste and recycling properly. There are many, many people who still don't care!

Yes, but I think a lot more could be done in encouraging small waste businesses. This could be depots for metal, glass. food waste for composting, natural textiles, concrete and bbuilding waste, tyre use, recycling whitegoods and electronics, perhaps ceramics. Individuals could be supported to collect certain items and deliver them to a secondary market, like paper and packaging waste. Everything that goes into households

Yes, I agree with reducing waste, I don't believe the carbon emissions are as urgent to deal with as household & industrial litter & water contamination

I don't think it goes far enough and isn't very innovative or creative. I would be expecting something more leading edge from a council with our community experts.

iys a step in the right direction. It is a little wordy and could do with clearer timelines and brought to life with a visuals including a gang chart so it's clear what will be delivered by when

The strategy is a good guiding document. Goals are admirable, and actions if they eventuate would go a long way to assisting the community get on board.

Yes the Strategy seems to be a good guiding doc

yes I agree with the goals/actions

Up to a point. We need to address the underlying causes, not just the symptoms. I do not see any real discussion of the role of corporates here - for example supermarket chains not addressing things such as excessive packaging, no options for bulk buying or bring your own containers.

As a consumer I want less packaging (wrapped fruits and vegetables!), an inability to bring my own containers and buy in bulk and an absurd range of junk. Ever tried to take a child through a supermarket checkout? A nightmare for parents with pressure to buy rubbish and poor food choices. Just greed that

Q2 - What do you need the most to get better at reducing your waste and reusing and recycling more?

I feel there is a willingness make a greater contribution to the goals. There are some really easy wins, such as providing more opportunities to recycle - glass, electronics, etc. Recycling should be free, and Council should find other ways to pay for waste recycling than from people looking to recycle (i.e. no fees at the tip for electronics, etc). Council could also raise the bar on poor sustainability practices by banning single use

At the moment I use the YIMBY scheme, which is an excellent initiative. Having moved from Melbourne just over a year ago I was used to putting my compostable items in my Green bin but I believe you do not have the facilities with the high temperatures required to treat this waste stream. I think this should be a priority for the Council. It is SO easy and Maribyrnong Council provided a kitchen bucket with a lid to put your waste in and then just tip it into the Green bin. I know you can do this in Bendigo. Is there any chance you could apply for funding from somewhere to provide this service? So many more people would be inclined to do this rather than put compostable waste in their garbage.

I also think there is a desperate need for recycling soft plastics or taking a strong line with both supermarkets and food manufacturers/suppliers to change their packaging. Compostable containers are available for products such as small tomatoes, strawberries etc instead of the plastic ones you find in most greengrocers/supermarkets. That is why I shop at Harvest at The Mill.

Some products I buy come in packing that I can't recycle or re-use. I have no option to avoid it.

I have been able to reduce my waste re Yimby and give to Op shops and enquire with people

Separate glass recycling. Container return in Castlemaine.

At Eaglehawk There is a brilliant system of selling and recycling and it is a cheaper place to go than

Better information about what can be recycled e.g. metals (not drink containers)

Information about what happens to the stuff that goes in the recycling bin

Information about where material can be recycled that should not be deposited in the recycling bin e.g.

Introduction of separate bins

More confidence and transparency in knowing that material that is sorted and placed in appropriate bins is in fact recycled.

More options for composting. I currently use YIMBY which is fantastic and works well for me but it could be expanded with council interest.

A blanket ban on plastic bags and other disposable items where there are viable alternatives.

We are part of the Yimby program which we find extremely helpful. I estimate it has reduced our weekly waste by about a third. Strategies that are based at the shops/supermarket where I buy my food and supplies, such as providing boxes or borrow bags are also very helpful. Finding a way to recycle/reuse milk, detergent and other plastic bottles would make a big difference, as would glass and tin containers.

Confidence that items are really recycled.

Easier separation for different types of recycling or reuse. For example I compost all food with Yimby. I'd be happy to separate items in the general recycling bin. Lack of a soft plastic recycling is a problem - it's hard to completely avoid soft plastic packaging even if you take your own bags and containers for refilling.

I have a tiny garden so use YIMBY for my scraps. Can't manoeuvre my own compost now so YIMBY is essential. I have to park the car at the HUB Community garden every week so wish I could leave the bucket at my back gate (back lane behind houses in Duke Street). It would be great if the council collected it & Option for compostable organics bin - like FOGO

- More high quality information, support and resources about composting at home, eg long-term commitment to YIMBY (including active promotion and financial support) and promotion of local composting courses and workshops.

- More active support of Castlemaine markets - FM weekly, FM monthly, and Wesley Hill including ongoing education about eating locally, eating seasonally, reducing packaging, and reducing food waste.

- Voucher program in partnership with markets to enable low-income families to access local food (the Open

a more end result focus from our recycle and refuse systems - people are more likely to adhere to guidelines than you might think - in europe we see up to six bins in use in multiple municipalities - and there is amazing self imposed compliance - we need glass metals plastic paper green and finally waste bins - and if council is not going to do it at street collection level then allow us to do it at waste transfer stations - in italy we even saw three glass bins in use 0 clear brown green - and upon checking there was no crossover

Implement the four stream waste services sooner than the proposed 2027 for glass. Other Councils are implementing this now, so it's difficult to understand why this action is another 3.5 years away?

Soft plastic drop off site in Castlemaine. A functioning tip shop to donate to and buy from

I live outside the roadside collection service area so I use the C'maine waste transfer station (akka 'tip'). I am constantly surprised and appalled at what people dump there that could be reused/repurposed. Other rural municipalities have great 'tip shops' desired to help people reuse/repurpose and be creative. We are a creative community. A great tip shop could work here. But it needs to be run by creative folks with staff support. The aim should be reducing waste and NOT earning money at the tip shop. The existing tip shop is hopeless. I am sure that by reducing waste MASC will save money that could be put into a tip shop staff person PLUS a community of people who are keen to make it work. I have spoken to lots of builders over the years who have been shocked at the dumping of good materials rather than reuse. I am involved in a major revegetation project and always need fencing materials - and its so sad when I often see fencing materials

Council could help by supporting local initiatives such as compost collection in the west end, and the repair Soft plastics form the bulk of our waste. We run composting bins. It's taken quite a while to get them working properly, to understand just how much brown material is needed to keep the brew from stagnatingwood chips, dry leaves, shredded paper, and how you need to stir the mixture every time you add material. I think composting failures lead many people to abandon attempts and chuck all food scraps in the waste bin.

We need to allow scavenging at the tip.

There are too many things thrown away that are serviceable.

There is a high demand for these things at the tip,

but we are not allowed to pick them up off the ground.

If everything was layed out so we could take it home,

this would reduce consumerism, which as we all know is the

primary cause of climate collapse and environmental destruction.

It would also save the council heaps of money building new cells.

A repair cafe could be set up on site where retired people with skills

could fix broken items. This would also help alleviate poverty.

The tip should be more like a swap meet where everyone is encouraged to bring

everything they don't want, but other folks need.

All usable building materials should be put aside to be used by homeless people to build themselves a little house.

The council should provide space for building those dwellings

and help organize mentors to show folks how to build.

The council should then provide land for those dwellings to dwell on.

Let's get started. There is no time to lose!

Im a land owner and have waste management problems coming out of my ears.

We need more sharps disposal points and greater access to those yellow bottle things. I'm forced to clean up used syringes thrown onto my land, onto my works land, onto public land. I think part of the issue is the lack of privacy at disposal points, I'm afraid of being accused of IV drug use and I'm just the poor sod who's cleaning them up.

Last time we spoke I had pulled 8 car tires out of the creek, now I've got 13, by next week I'll have 15. Do you want them?

Green waste remains a headache, everyone is forced to pay for services which punishes people like me who buy mulchers and build compost bins. There are a dozen pensioners in my neibourhood who can't even saw Council should promote the economic and environmental benefits of waste avoidance in the first instance and not forge partnerships with hypocritical groups which encourage more waste by supporting waste to

We currently generate very little waste and work hard on recycling appropriately. However it's difficult to maintain that when you know little is actually being recycled. Living in a tiny old house, there is no space to store batteries, soft plastics and the like so a way of recycling those that doesn't involving keeping enough to justify a trip somewhere to drop them off would be good. Green waste is challenging, especially gum leaves, bark, etc - we can't use it as mulch, because of fire risk over summer, so either must burn it or pay to take it

We compost virtually all of our food wastes in two "Gede" compost bins (on rodent-proof bases). About 90% of our general waste now consists of soft plastics and other non-recyclable packaging.

We either mulch garden wastes from our large garden or take larger prunings etc to the transfer station. Council could help us reduce our general wastes further by strongly advocating for the re-establishment of facilities to process soft plastics into useful products.

There need to be greater incentives to recycle. You have to pay to recycle eWaste here in Mount Alexander Shire. In other council areas, this is free of charge. I recently had a family member recycle eWaste in Bendigo for me because it's free. If people have to pay to recycle, then they simply won't do it - not in this current

The council to actually provide bins to my address.

To have green waste as well as recycle and rubbish bins.

To have a system that is easy to understand "plastic ain't plastic" so to speak most people find it difficult to work out if the plastic they have in their hand is recyclable or rubbish.

FOGO bin.

To encourage those idiots to do the right thing, charges must be reduced. This will hopefully stop people I hardly use my waste bin. I put it out every month or two, say 6–10 annually but I pay for waste collection weekly.

Could households in township blocks deposit their waste in collective big bins (say one big bin per 20 households) rather than collection be house to house?

1. The ability to recycle more types of products at council facilities e.g. Bendigo proides for plastic bag collection which is them made into road base, and the collection of polystyrene for recycling, neither of which is available in Mount Alexander.

2. Ongoing education and information about the types of waste, how to reduce/reuse/recyle them, especially in the shire

3. Respoinsive communication about Council actions and responses when emergent issues arrise e.g. what Separated kerbside collection

Cost free drop off at the transfer stations for e-waste

Cost free drop off at the transfer stations for green waste

Improved recyclable options for drop off at the transfer stations such as polystyrene

We produce very little landfill waste (about one small bag a week for a family of five). This is predominantly made up of consumer goods packaging which can't be recycled. So getting rid of soft plastics, waxed

Preventing buildup of waste especially goods that may be of use to others. Furniture and white goods for example.

Guilt tactic. If you are in township, there could be a watchdog system where neighbors watch out for each other.

If contaminated, no collection.

Provide more detailed fun and colorful illustrations and instructions to each household on how to clean recyclables before you put them in the bin.

Make it fun for children and young people who otherwise don't bother to clean. Making it a point system might work too.

More bins. We need a separate organics bin and a separate glass bin.

Better education about the negative impacts that waste and packaging has on our natural environment. Better education about how shop without bringing home unnecessary plastic packaging.

People can only 'reduce' waste by consuming less. You can go so far and then it doesn't work. You need

lateral thinking, like finding a secondary use/market. Blaming people for waste isn't going to help, it's never Kerbside hard rubbish collection for proper recycling or re-using (tip shop). Reduced unnessesary packaging of products for purchase, this needs to go back to the manufacturer

1. The opportunity to recycle more types of items - e.g. soft plastics. I currently store up my soft plastics and drive to Bendigo to have them recycled there.

2. Reduce the transfer station fees - I feel like this is why there are people dumping items in public places.

Fast tracked investment in green / organic waste. Given it makes up the largest component of waste it does not make sense to leave a green bin until 2030. This should be delivered asap. The council obviously have the facilities/means as it's currently a paid service. Also more investment in composting is require beyond

I need some clear guidance in the form of a leaflet or magnet for the fridge which tells me exactly which items, especially which type of plastics, can currently be recycled in Australia.

I also need some ideas or ways to recycle food scraps which aren't already given to

chickens/dogs/compost/worms, that won't attract rats.

Make it very clear on the lids of our bins what can go where. Yarra City for example have detailed bin info on the lids.

encourage everyone to compost or join sharewaste/the hub

encourage everyone to use less of anything and make sure whatever they do use gets reused

start in kinder, primary school and continue with educational programs for all ages

As I said above - pressure on suppliers to provide options for me to never get the waste in the first place. Too much emphasis on handling rubbish that I want to avoid in the first place. **3. How would you like to find out about the implementation of the strategy and any future changes?** Required Multi Choice | Skipped: 0 | Answered: 45 (100%)



Answer choices	Percent	Count
Through Council's website	55.56%	25
Through a waste management eNewsletter you can subscribe to	46.67%	21
A media release	31.11%	14
Social media	35.56%	16
Bin flyers or stickers	24.44%	11
Drop-in sessions	13.33%	6
Other	13.33%	6

Shape Mount Alexander - Form Results Summary (25 Jun 2023 to 01 Aug 2023)

4. Which of the following is most important to you when thinking about waste and recycling services? Required Ranking | Skipped: 0 | Answered: 45 (100%)



	1	2	3	Count	Score	Avg Rank
The natural environment (environmental sustainability)	82.22% 37	8.89% 4	8.89% 4	45	2.73	1.27
Cost	13.33% 6	40.00% 18	46.67% 21	45	1.67	2.33
Convenience	4.44% 2	51.11% 23	44.44% 20	45	1.60	2.40

Score - Sum of the weight of each ranked position, multiplied by the response count for the position choice, divided by the total contributions. Weights are inverse to ranked positions.

Avg Rank - Sum of the ranked position of the choice, multiplied by the response count for the position choice, divided by the total 'Count' of the choice.



Infrastructure Asset Management Plan

Part A – Roads

November 2023



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1 Overview

The Asset Management Plan encompasses all the assets under Council's control and connects the investment of community wealth with service outcomes. The Road Asset Management Plan (AMP) aims to enable the provision of agreed levels of service throughout the entire road asset lifecycle within financial, resource and risk constraints.

The AMP should not be confused with the Road Management Plan which is a statutory plan under the Road Management Act 2004 that identifies Council's responsibilities relating to road assets and sets out inspection and hazard maintenance regimes.

1.1 Alignment with Council Plan

The development of AMPs incorporating service level assessments for all asset classes is a key strategic direction in the Council Plan 2021-25. Table 1 below outlines the organisational Objectives and Strategies directly addressed by this AMP.

Pillar	Objective	Strategies
1 – A healthy, connected and inclusive community	Services in our community are accessible and coordinated	Enhance Council's services to be more coordinated and collaborative
	Our community is supported to be physically and mentally healthy	Build resilience to the impacts of climate change.
2 - A flourishing environment.	We are working locally to address the climate emergency	Reduce Council's Emissions to Zero by 2025
	Our Community is growing in harmony with nature.	Review, maintain, renew and expand sustainable assets of our community.

Table 1 - Alignment with Council Plan Strategic Objectives

1.2 Council Policy, Strategies and Plans

Council plans, policies and strategies considered in the development of this AMP include:

- Asset Plan 2022
- Asset Management Policy 2022
- Community Engagement Policy 2021
- Road Management Plan 2021
- Financial Plan 2022/23 to 2031/32
- Financial Sustainability Strategy 2020 2030
- Customer Service Charter 2019



1.3 Relevant Legislation

Key requirements relating to the management of road assets considered in the development of this AMP can be found in the following legislation and regulatory frameworks:

- Catchment and Land Protection Act 1994
- Disability Discrimination Act (DDA) 1992
- Local Government Act 1989
- Local Government Act 2020
- Local Government Finance and reporting Regulations 2004
- National Asset Management Framework Legislation 2010
- Native Title Act 1993
- Occupational Health and Safety Act 2004
- Occupational Health and Safety Regulations 2007
- Planning and Environment Act 1987
- Road Management Act 2004
- Water Act 2019.

2 Review Date

The AMP will be reviewed and updated periodically (minimum 4 yearly) taking into account changes with the Council plan and budget.

Review date 30 June 2027.

3 Stakeholders

Council Stakeholders in the lifecycle management of road assets are detailed in Table 2 below.

Owner	Director Infrastructure and Development	
Client	Manager Engineering	
Planning Renewal	Asset Management & Systems Coordinator	
Design	Manager Engineering	
Construction	Manager Engineering	
Operation	Works Coordinator	
Maintenance	Works Coordinator	
Asset Accounting	Asset Management and Systems Coordinator	
Acquisition Disposal	Director Infrastructure and Development	

Table 2 - Council Stakeholders in the Lifecycle management of Road Assets



Asset planning 4

Asset Types 4.1

This AMP covers the Road Asset Sub-Class shown in Table 3 below:

Road Asset Sub-types	Description
Road Surface	The wearing surface which also acts to preserve the underlying pavement.
Road Pavement Base	The road pavement is the structural portion of road made up of compacted crushed rock or gravel. This base is the upper layer of the pavement.
Road Pavement Sub-base	The lower layer of the road pavement.
Road Formation	The finished earthworks beneath the road pavement.
Car Parks	On & Off street car parks
Traffic Management Devices	Retaining Walls

Table 3	Road	AMP	Asset	Sub-	Class

4.2 Asset Composition and Lifecycle Management

The composition of assets covered by this AMP within Council's asset register (as of July 2023) is summarised in Table 4, 5 and 6 below.

able 4 - Road Allin Asset Network Dimensions by Type			
Asset Type	Measure	Units	
Sealed Roads	544.09	Kms	
Unsealed Roads	876.89	Kms	
Unformed Road	6.28	Kms	
Car Parks	1,793.51	Sq.m	

Table 4 - Road AMP Asset Network Dimensions by Type

10010 0	noude by material	
Road Material	Length (km)	Area (m ²)
Asphalt	41.55	303,367
Concrete	0.23	1,753
Spray Seal	501.17	2,865,067
Unsealed - Gravel	884.31	3,572,412
Total	1,427.27	6,742,600

Table 5 - Roads by Material

Table 6 - Roads by Type and Classification

Road Classification	Length (km)	Area (m2)
Unsealed Urban	93.60	397,735
Unsealed Rural	783.29	3,159,351
Sealed Urban	164.97	1,088,522
Sealed Rural	379.13	2,088,534
Unformed Urban	0.47	1,460
Unformed Rural	5.81	6,996
Total	1,427.27	6,742,600



Council does not currently maintain an inventory of road related infrastructure (ie. Road signage, guide posts, guardrail etc). Data collection to enable the proactive management of these assets is an improvement action in Section 9 of this AMP.

4.3 Asset Value and Useful Lives

Road assets are revalued on a regular basis, most recently in June 2020. The next valuation will be at the end of the 2025/26 financial year.

Table 7 below summarises the financial details for the assets covered in this AMP as of June 2023.

Financial Class	Financial SubClass	Asset Category- Component	Replacement Value (\$)	Accumulated Depreciation (\$)	Written Down Value (\$)
Roads	Sealed	Roads - Surface Main	\$31,758,137	\$13,153,575	\$18,604,561
Roads	Sealed	Roads - Pavement Base	\$66,622,421	\$11,007,531	\$55,614,890
Roads	Sealed	Roads - Pavement Subbase	\$56,554,864	\$8,478,613	\$48,076,251
Roads	Sealed	Roads - Formation	\$27,168,583	\$0*	\$27,168,583
Roads	Unsealed	Roads - Pavement Base	\$22,223,966	\$12,162,996	\$10,060,970
Roads	Unsealed	Roads - Pavement Subbase	\$14,853,337	\$1,066,508	\$13,786,829
Roads	Unsealed	Roads - Formation	\$30,016,462	\$0	\$30,016,462
Roads	Traffic Management Devices	Structures - Main	\$15,212	\$1,588	\$13,624
Total			\$249,212,986	\$45,870,812	\$203,342,173

Table 7 - Road AMP Assets Value

Note* The formation of a road is not a depreciating asset so no value is provided.

Council's standard useful lives for road assets are shown below in Table 8.



Asset Type	Туре	Useful Life
Surface	Spray Seal	15
Surface	Asphalt	35
	Concrete Pavement	60
Base	Sealed Pavement	80
	Unsealed Pavement	20
Sub-base	All	200
Formation	All	N/A
Road Infrastructure - RW	Structures - Main	60

Table 8 - Road AMP Assets Useful Lives

4.4 Asset Hierarchy

In accordance with the International Infrastructure Management Manual, Council acknowledges that the primary purpose of asset criticality is to ensure that appropriate management, engineering standards and planning practices are applied to the asset based on its function.

Council's road hierarchy framework has been developed according to usage volumes, type of user and road function. The road hierarchy as defined in the Mount Alexander Shire Road Management Plan 2021 is detailed below in Table 9.

Hierarchy Level	Description
Link Road (LK)	Link roads provide a strategic link between identifiable points of interest, may carry a large volume of vehicles, have a high percentage of heavy vehicles and a high percentage of the vehicles will be travelling the entire length of the road.
Collector and Strategic Roads (CS)	Collector and Strategic roads provide a means of transporting traffic from the local access roads and connecting them to the main transport infrastructure. These roads generally have lower traffic volumes than Link roads.
Local Roads (LL)	Local access roads provide vehicle access to urban properties and are the predominant road classification throughout the municipality. These roads generally have lower traffic volumes than Collector and Strategic roads.
Minor Roads (MN)	Minor roads provide vehicle access to rural properties and include roads that provide access to sparsely located properties and farm outlets. These roads generally have lower traffic volumes than Collector and Strategic roads.
Unformed Roads (UR)	Unformed roads consist of roads that provide driveway access to properties, also included are seldom-used tracks such as fire access tracks. They receive minimal maintenance. Re-active inspections are considered on a case by case basis.

Table	9 – F	Road	Hierarchy	Definitions
	-			





Figure 1 below provides the distribution of Council roads across the hierarchies for sealed and unsealed roads.

4.5 Condition

Council undertakes condition assessments of its road assets to evaluate network performance and inform future investment decisions at minimum four-yearly intervals. The next road condition audit is scheduled for 2025/26, this will be done in conjunction with the financial revaluation.

Asset condition for flexible pavements (i.e. spray seal and asphalt roads) is assessed by collecting the extent and/or severity of individual defect types either visually or with instrumentation as appropriate. The overall condition of rigid pavements (i.e. concrete) and unsealed roads is qualitatively assessed through a visual inspection.

Council's road inspection methodology is undertaken in accordance with industry standards and Institute of Public Works Engineering Australasia guidelines where applicable. The raw condition data is converted to a 0-6 rating scale in line with industry benchmarks and professional judgment. Council's road asset condition rating definitions are provided in Table 10 below.



Score	Condition	Description
0	New	Asset is newly constructed. Schedule routine maintenance is required.
1	Excellent	Asset is 'as new' condition with no defects or signs of use. Scheduled routine maintenance is required.
2	Good	Asset is in sound condition with occasional defects and minor signs of use. Scheduled routine maintenance is required. Occasional unplanned maintenance is required.
3	Fair	Asset is in acceptable condition with obvious signs of use and defects occurring regularly. Scheduled routine maintenance is required. Unplanned maintenance is required.
4	Poor	Asset is in a degraded condition which is reducing the level of service it is providing. Increased scheduled routine maintenance is required. High levels of unplanned maintenance are required. Early asset renewal may be warranted for the highest priority assets.
5	Very Poor	Asset is in a severely degraded condition which is limiting the level of service it is able to provide. Increased scheduled routine maintenance is required. High levels of unplanned maintenance are needed. Planned asset renewal is required for all assets.
6	End of Life	Asset is no longer providing service and may be unsafe. Scheduled routine maintenance is no longer required as it provides no benefit. Unplanned maintenance is required to manage risk exposure. Asset should generally be renewed, closed or disposed immediately.

Table 10 - General Definitions of Condition Ratings

Council's most recent road condition audit was undertaken in 2020/21. Road asset conditions are reported in terms of a Surface Condition Index (SCI) and Pavement Condition Index (PCI) in line with industry standards.

Intervention standards are provided in Section 7.4 and have been used to develop modelling options covered in Section 7.

The current SCI distribution of roads is summarised below in Figure 2. Note the SCI only applies to sealed roads.



Figure 2 – Road Surface Condition (SCI) Distribution





The current PCI distribution of Council's sealed and unsealed roads are shown below in Figures 3 and 4 respectively.

Figure 3 – Sealed Road Pavement Condition (PCI) Distribution



Figure 4 – Unsealed Road Pavement Condition (PCI) Distribution

Levels of service for road asset condition and funding scenarios are discussed further in Sections 5 and 7 respectively.

4.6 Capacity

Capacity relates to how well a road or road network can meet user demand. It is generally assessed based on surface widths and traffic data including volume and composition. The


required capacity of a given road will depend on attributes such as road hierarchy and classification.





Figure 5 - Sealed Roads by Hierarchy and Daily Traffic Vs Lengths



Figure 6 - Unsealed Roads by Hierarchy and Daily Traffic Vs Lengths

The width distribution of Council's roads is detailed below in 7 and 8 for sealed and unsealed roads respectively.









Figure 8 - Unsealed Roads by Hierarchy and Road Width

Capacity data can inform demand management, upgrade, expansion, and renewal and or disposal strategies. An improvement action under Section 9 is for Council to implement practices where this data is used more proactively in decision-making.



Levels of service for road asset capacity are further defined under Section 5.

4.7 **Prioritisation Principles**

Council resources are limited, and works must therefore be prioritised. This occurs through consideration of:

- Council Strategies and Plans
- Condition assessment
- Annual budget allocations
- Technical standards and industry guidelines
- Maintainability (for existing assets)
- Safety data, such as crash statistics
- Councillor and Customer requests
- Asset attributes including hierarchy, physical location, and material which provide a risk profile for the asset.

5 Levels of service

Levels of service are the link between organisational goals and asset management objectives as well as detailed operational objectives. In effect, they define the target performance standards for assets of a given type.

The development and implementation of levels of service require an ongoing continuous improvement. Council does not currently possess the information required to assess its current performance for some proposed indicators. Improvement plan actions in Section 9 have been created to address these gaps in knowledge.

5.1 Community Levels of Service

Community levels of service focus on measuring how the customer receives the service offered by assets. They are primarily measured through community feedback and requests logged in Council's customer request management system.

Community Levels of Service are detailed below in Table 11. They have been developed based on Council's Customer Service Charter 2019 (adopted 17/12/19) and Council's Road Management Plan.



Service Attribute	Objective	Target Performance	Performance (2021/22)
Quality / Function /Capacity	Complaints and requests are handled in a timely manner.	Annual reduction in the number of customer service requests relating to existing road assets.	Increased from 929 in 2020-21 to 1,071 in 2021-22.
Function	Complaints and requests are handled in a timely manner.	95% of customer service requests logged, investigated and responded to in accordance with timeframes within the Customer Service Charter	69% of customer requests in 2020/21 inspected within 5 days
Quality / Safety	Roads are maintained in a timely manner.	At least 80% of work orders are completed on time.	In 2021-22, 70% of Work Orders completed within RMP's* designated time frames.
Quality / Safety	Council's road assets are kept safe and pose a low risk to the community.	Zero annual successful claims relating to road assets.	No successful claims in 2021- 22.
Quality	Roads meet community standards.	Annual Community Satisfaction Survey results equal to or better than the average of other similar Councils for sealed and unsealed roads.	From 2021 Local Government Community Satisfaction Survey Report, Page 9, Sealed roads score of 56 versus a large rural average score of 50. Unsealed roads score of 46 versus a large rural average score of 44.

Table 11 - Community Levels of Service for Road Assets

* RMP - Road Management Plan 2021

5.2 Technical Levels of Service

Technical levels of service are based on specific measurable criteria that demonstrate network performance. Established technical levels of service for road assets are detailed below in Table 12.



Service Attribute	Objective	Target Performance	Performance (2021-22)
Quality	Council can make informed evidence-based decisions about its road assets.	Condition audits undertaken at least every five years.	The road, Kerb & Channel condition audit were undertaken in FY 2020-21.
Safety	Council's roads are kept safe for users in accordance with legislative requirements.	100% of RMP inspections undertaken on time . 100% of RMP Hazards made safe within required timeframes.	In 2021-22, 95% of RMP inspections undertaken on time and action it accordingly in the perspective of ensuring safe access for all road user groups.
Quality	Sealed roads are of a suitable condition for intended use.	99% of sealed Link and Collector road surfaces in condition 4 or better	99.8% of sealed Collector and Link road surfaces in condition 4 or better.
		Minor road surfaces in condition 4 or better. 95% of sealed pavements in condition 3 or better	Minor road surfaces in condition 4 or better. 99.3% of sealed pavements in condition 4 or better
Quality	Unsealed roads are of a suitable condition for intended use.	90% of unsealed Collector and Local roads in condition 4 or better. 80% of unsealed Minor roads in condition 4 or better	99.99% of unsealed Collector and Local roads in condition 4 or better. 100% of unsealed Minor roads in condition 4 or better
Capacity	Road capacities are suitable for intended usage.	Upgrade and/or expansion is considered for roads that do not meet capacity requirements.	Framework for assessing capacity to be developed.
Functionality	Roads are fit for purpose for intended usage.	Upgrade or reconfiguration considered for roads that do not meet functionality requirements.	Framework for assessing functionality to be developed.

Table 12 - Technical Levels of Service for Road Assets

5.3 Operational Levels of Service

Levels of service relating to specific maintenance defects on road assets are defined in Council's Road Management Plan 2021.

6 Future Demand

6.1 Demand Forecasts

Network demand can be influenced by factors such as changes in demographics, technological changes, environmental awareness and new assets.

Demand factor trends and impacts on service delivery are summarised in Table 13 below.



Demand Factor	Present position	Projection	Impact on services
Population	20,253 in 2021	Projected population in 2031 is 22,151 as increase of 0.9 % per year.	Minimal Increase in impervious area resulting in increased flow through downstream assets and into receiving water bodies.
Network Growth	Total network length of 1,425.76 km	Network increase of 0.1% annually	Slight increase to maintenance requirements, capacity requirements for downstream assets, long- term increases in renewal liability.
Community Expectations	Community engagement is the key part in developing Council Plan and Strategic Objectives in Council Plan 2021-25 are to be achieved through this AMP.	Community will be engaged in future Council Plan development.	Community expectations relating to transparency and justification of expenditure within local governments are increasing, resulting in a greater need for decisions to be evidence-based.
Legislation	Road Asset Management Plan are to be finalised & adopted by Council.	An enhanced modelling tool has to be used to predict the future financial projections and to develop a 10-year renewal program.	The model will help the council to figure out the optimum level of service delivery to the community based on the existing financial capacity and surely help to predict the financial requirements to sustain the existing service delivery and future demands.
Engineering Standards	Using IDM standards for suitable renewal & upgrading / expansion projects.	Gradually Incresing the usuage of modern design standards to capital work projects.	Introduction of new design standards over time mean older assets generally do not meet modern service standards.
Climate Change	Increased frequency and severity of weather events	Increasing impacts on maintence budgets.	Extreme weather to gradually become more frequent and intense. Maintenance frequency will increase for unsealed roads. Adaptation of design standards to adapt to climate changes.

Table 13 - Demand Forecasts and Impact on Services

6.2 Demand Management Plan

Opportunities identified for demand management, including opportunities for expansion, upgrade, disposal and decommissioning, are shown in Table 14.



Service Activity	Demand Management Plan
Road Network Growth	Increasing population results in new road assets being handed over to Council and increased capacity requirements in activity centres. New road assets to be monitored through entry into Council's asset register and inclusion in regular condition audits. These roads will increase Council's maintenance expenditure and require renewal over the coming decades as they age.
Capital/Maintenance Expenditure	Ageing assets, community expectations relating to the quality of road network increases pressure for asset upgrades. Monitor community expectations and communicate service levels and financial capacity with the community. Regular condition monitoring enables Council to identify assets for surface before pavement reconstruction is required, thereby minimising lifecycle costs.
Land Development	Additional infrastructure required due to development will require continuous monitoring and management of development controls, flood management, and infrastructure planning. Council uses the Infrastructure Design Manual to specify the requirements of new infrastructure and has or is developing Infrastructure plans for land which is being zoned for development.
Capital Works Planning	Long-term capital works plan to be scheduled in accordance with regulatory requirements. Implementation of levels of service and improved modelling will produce more effective, evidence-based programs.
Disposal and decommissioning	Typically, road reserves will only be disposed of where Department Energy, Environment and Climate Action identifies a surplus in Crown Land assets or an opportunity for sale arises. There may also be opportunities for licencing of road reserves to adjacent land owners for grazing or miscellaneous purposes, where licencing reduces Council's maintenance requirements of unused roads.

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7 Financial Management

Council's Financial Plan 2022/23 to 2031/32 has forecast allocations for budget towards maintenance, capital upgrade, new, and renewal of road assets. This section will evaluate long-term funding scenarios and their impact on levels of service.

7.1 Maintenance

Council's 2021/22 operating budget for maintaining the road network was approximately \$800,000 for sealed roads and \$1,162,000 for unsealed.

Typical maintenance activities for the assets covered in this AMP include:

- Unsealed Grading
- Patching
- Crack Sealing
- Kerb and Channel Repair
- Pothole Repair.

7.2 Current Funding

The 2022-23 total budget allocation is \$3.115M of which \$1.837M is allocated to Road Renewal. This incorporates a grant of approximately \$1.1M from the Federal Government Roads to Recovery program.

Road renewal works are undertaken through the following programs:



- **Resheet:** topping up gravel on unsealed roads
- Reseal: applying new spray seals in addition to some asphalt replacement work
- **Reconstruction:** rehabilitation or reconstruction works including resurfacing with major patching or full pavement rebuilds and associated works such as kerb and channel
- Road design: of future reconstruction works

The total yearly road budgets shown in Table 15 have been taken from Council's Financial Plan 2022/23 to 2031/32. The renewal budgets shown are based on percentages derived from the actual spending breakdown for 2021-22. The derived renewal budgets have been used for the modelling outputs under Scenario 1 cases for all forecasting.

Year	Renewal Sealed (,000)	Renewal Unsealed (,000)	Upgrade (,000)	New (,000)	Total Road Budget (,000)
2022-23	\$ 1,685	\$ 647	\$ 638	\$ 649	\$ 3,619
2023-24	\$ 1,776	\$ 658	\$ 853	\$ 695	\$ 3,982
2024-25	\$ 1,881	\$ 695	\$ 771	\$ 53	\$ 3,400
2025-26	\$ 1,843	\$ 682	\$ 741	\$ 134	\$ 3,400
2026-27	\$ 1,575	\$ 582	\$ 685	\$ 558	\$ 3,400
2027-28	\$ 1,488	\$ 550	\$ 826	\$ 536	\$ 3,400
2028-29	\$ 1,584	\$ 586	\$ 943	\$ 287	\$ 3,400
2029-30	\$ 1,871	\$ 692	\$ 839	\$ 48	\$ 3,450
2030-31	\$ 1,887	\$ 697	\$ 1,065	\$ 51	\$ 3,700
2031-32	\$ 1,949	\$ 721	\$ 948	\$ 82	\$ 3,700

Table 15 -	Forecast	Capital	Expenditure	2
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7.3 Predictive Modelling

The predictive modelling of road assets is complex, Council has recently introduced "myPredictor" software that allows predictive modelling of the asset condition at a period of time in the future.

The key components to undertaking the modelling works are:

- Existing asset condition
- Proposed intervention levels
- Financial forecast scenarios

Each road segments future condition is then predicted using this information, this is represented in the flow chart below.

The modelling of road assets is displayed for the first 25 years for clarity and because accuracy decreases over the longer modelling period.





Existing Asset Condition

The existing asset condition plays an important role in the modelling outputs, the more accurate and complete the condition data is, the greater confidence there is in the modelled outputs.

All intervention models utilise the following service criteria (asset condition data):

Service Criteria	Description
Flushing	A measure of the surface texture
Stripping	Surface stone lose in a spray seal surface
Ravelling	Loss of aggregate particles from an asphalt surface
Linear Cracking	Long surface cracks that appear in the road surface
Crocodile Cracking	Cracking in the surface that appears like small "scales" or squares that look similar to crocodile skin
Surface Defects	Typically potholes or edge breaks on a sealed road
Pavement Defects	Larger failures in the road
Roughness	A measure of how rough the road is to drive on
Rutting	Typically a longitudinal depression in the road surface where the wheels of vehicles travel
Rigid Condition	How much the surface deflects when a heavy vehicle drives over it.
Unsealed Condition	General condition of an unsealed road segment

Note that sealed road condition is represented by a number service criteria while unsealed roads due to their highly variable nature are represented by a single criteria.

Proposed Intervention levels

The intervention level utilises the service criteria data to set a level at which a road segment should be treated or repaired. A treatment may be triggered by one or many of the Service Criteria reaching a certain level.



An example is provided in the Table 18 below for when a spray seal is triggered within the model:

Model	Treatment	Intervention Level
Sealed Road - Milestone Model	Spray Seal	Minor Rd - Cracking >=5, Pavement Good Condition<3
Sealed Road - Milestone Model	Spray Seal	Major Rd - Cracking >=4, Pavement Good Condition<3
Sealed Road - Milestone Model	Spray Seal	Surface Defect >=5, Pavement Good Condition<3
Sealed Road - Milestone Model	Spray Seal	Ravelling >=5, Pavement Good Condition<3
Sealed Road - Milestone Model	Spray Seal	Flushing >=5, Pavement Good Condition<3
Sealed Road - Milestone Model	Spray Seal	Stripping >=5, Pavement Good Condition<3

Table 18 - Sample Spray Seal Intervention criteria

This is only a small example of the intervention levels used within the model, a full list of these levels is provided in the "Basis of Design" document prepared in development of the model.

Various intervention levels can also be tested utilising different intervention models for the same treatment, these were represented by the following models.

- Milestone: Treatment condition considered as good asset management practice
- Early intervention: Treatment condition earlier than the milestone model
- Failure: Run the asset to failure and then treat

This plan only provides the outputs from the "Milestone" model, the "Early Intervention" was financially not sustainable by Council, while the "Failure" model did offer considerable savings it would not be tolerable by the community or financially viable in the longer term.

Financial Forecast Scenarios

The model enables various funding scenarios to be investigated the scenarios considered for each asset type were:

- 1. Current Funding based on Council Financial Plan (Table 15).
- 2. Yearly depreciation value.
- 3. Optimised funding to provide the desired level of service, renewing assets as they reach intervention.

Scenarios 1 and 2 are self-explanatory, Scenario 3 is optimised to deliver an average overall pavement condition in line with the Technical Levels of Service defined in Table 12 at the end of the roads useful life.



7.4 Sealed Roads Forecast

Council's sealed roads model incorporates both the resealing program, as well as the reconstruction program. The three 25-year scenarios investigated are:

- Scenario 1 Long Term Financial Plan Budget (LTFP)
- Scenario 2 Annual Depreciation Value
- Scenario 3 Optimised Funding (Average overall condition of 4 at end of life)

The following useful life have been applied for the various sealed road components:

- Spray seal 15 years
- Asphalt 35 years
- Granular pavement 80 years
- Concrete 60 years

Figure 9 below depicts funding scenario over time against (bar graph) the average overall sealed network condition (line graph).



Figure 9 - Sealed Road Scenario Forecasts vs Overall Condition

The bar graph in Figure 9 represent the scenario funding levels for each year while the line graph represents the average overall condition rating of the sealed road asset each year. The graph demonstrates that the average network condition under Scenario 1 (current funding) gradually declines to year 13 and remains steady after that.

Scenario 2 and 3 maintain average network condition relatively steady with a slight uplift from year 20 onwards.

The modelling highlights the importance of consistent long-term investment in maintaining overall asset condition. It also demonstrates that it takes considerable increased investment to make appreciable changes to overall asset condition.



7.5 Sealed Surface Condition

Figure 10 to 12 below depict the network sealed surface condition forecast under each scenario, these graphs are impacted by the levels of reseal and major patch works that are undertaken on the network.



Figure 10 – Seal Condition Under Scenario 1 – Council Financial Plan





Figure 11 – Seal Condition Under Scenario 2 – Depreciation

Figure 12 – Seal Condiction Under Scenario 3 – Optimised Funding

All scenarios modelled show a decline of the sealed surface condition out to year 13, this is typically the useful life of a sealed surface. Scenario 2 then shows gradual improvement over the next 12 years with increased investment. Scenario 1 and 3 hold steady after year 12 with nearly 50% of the sealed surface in condition 6 and no overall sealed surface improvement occurring.



7.6 Sealed Pavement Condition

Figures 13 to 15 represent forecast changes to the pavement condition under each scenario. Pavement condition is influenced by levels of major patching and reconstruction. Pavements have a long useful life so deteriorate slowly over time in comparison to the sealed surface.



Figure 13 – Sealed Pavement Condition Under Scenario 1 – Council Financial Plan





Figure 15 – Sealed Pavement Condition Under Scenario 3 – Optimised Funding

Under Scenario 1 and 3 there is a gradual decline in the overall pavement condition, this is due to the model putting emphasis on maintaining the sealed surface. For Scenario 2 there is a general gradual uplift in overall pavement condition in future years with more investment in pavement rehabilitation treatments.



7.7 Sealed Roads Recommendation

The modelling undertaken would indicate that there is significant under expenditure under the current financial plan in sealed road resurfacing in conjunction with major patching. This is evident in Scenario 1 and the decline in seal condition in the first 13 years.

Maintaining a waterproof sealed surface improves the longevity of the pavement and reduces expensive pavement reconstruction treatments in the future. Typical reseal rates should be between 8% and 10% of the network length per year, this is in line with a 10 to 15 year seal life. Council is currently sealing less than 3% each year expecting seals to last between 30 and 40 years.

While the modelling indicates that additional funding will maintain overall sealed road network condition over the model period, it also requires a further \$1M (or \$3M in total) in investment each year. This nearly 33% increase in current funding does not however translate to the same level of improvement in network condition after 25 years.

Under the current restricted budget environment this is probably not achievable by Council. It is recommended that funding levels be maintained at levels currently forecast in Council's Financial Plan (approximately \$1.8M per year). This level of funding however should be directed primarily to reseal and major patching programs, Council should limit investment in future reconstruction, upgrades and new works.

In the 2022/23 budget, investment in the reseal program is \$651,000 and \$153,000 for major patching works. This is considerable less than the forecast available Financial Plan budget and highlights the need for redirection of available existing funding.

7.8 Unsealed Roads Forecast

The unsealed roads model relates to Council's resheeting program. A 10-year horizon has been selected for this forecast due to the dynamic nature of unsealed roads. The three scenarios investigated are:

- Scenario 1 Long Term Financial Plan Budget (LTFP)
- Scenario 2 Annual Depreciation Value
- Scenario 3 Optimised Funding (Holding strategy)

The following useful life have been applied for unsealed roads:

- Link and Collector Roads: 17 years
- Local and Minor: 24 years.

The useful life of an unsealed road represents when the model expects the asset condition to be below an expected level of service.





Figure 16 below depicts each funding scenario over time (bar graph) against the unsealed average network condition (line graph).

Figure 16 - Unsealed Road Scenario Forecasts and Overall Condition

The bar graph in Figure 16 represent the scenario funding levels for each year while the line graph represents the average overall condition rating of the unsealed road asset each year. The graph demonstrates that the average network condition continues to fall (become worse) under funding Scenarios 1 and 2, while Scenario 3 holds average condition levels relatively the same over 10 years.



Figure 17 to 19 to follow depict the unsealed road condition forecast under each scenario.

Figure 17– Unsealed Forecast Condition, Under Scenario 1 – Current Budget





Figure 18 – Unsealed Forecast Condition, Under Scenario 2 – Depreciation



Figure 19 - Unsealed Forecast Condition, Under Option 3 - Optimised Funding

None of the funding Scenarios considered will see an improvement in the overall unsealed asset condition. Scenario 3 maintains the overall average condition but still sees increasing levels of condition 5 and 6 roads.

In reviewing the modelling outputs it is also important to consider the Unsealed asset hierarchy. Over 65% of Council's unsealed roads are classified as Minor. These assets generally provide access to a very limited number of properties and see daily traffic volumes below 50 vehicles per day.

The model prioritises available funding to Local and Collector/Strategic roads, if these are isolated a different picture is apparent for asset condition. These filtered condition graphs are shown in Figures 20 to 22.





Figure 20 – Unsealed Local and Collector Forecast Condition, Under Scenario 1



Figure 21 – Unsealed Local and Collector Forecast Condition, Under Scenario 2



Figure 22 – Unsealed Local and Collector Forecast Condition, Under Scenario 3

When considering only Local and Collector/Strategic unsealed roads it is apparent that all funding scenarios provide a general uplift in their overall condition. Scenario 2 however provides the best balance of cost versus improvement.



7.9 Unsealed Roads Recommendation

As highlighted the unsealed road network is very dynamic and can be impacted greatly by rainfall activity and traffic volumes. Being so dynamic makes unsealed roads difficult to accurately model over time.

Based on the modelled scenarios, current funding levels are sufficient to maintain or improve Local and Collector unsealed roads. Unsealed minor roads under current funding levels will continue to deteriorate over the next 10 years.

Based on the modelled scenarios it is recommended the unsealed renewal budget is increased to match the proposed funding profile presented in Scenario 2.

7.10 Improved Use of Predictor

The modelling contained in this section will be improved as the outcome of Council business processes enhancements are achieve.

In future iterations of this AMP, the use of Predictor could be improved by:

- Obtaining condition data for greater samples of the network for kerb and channel.
- Analysing historical unsealed resheets to better estimate useful lives.
- Incorporating maintenance costs to improve lifecycle modelling.
- Using levels of service to assist in determining when treatments other than like-for-like renewal are appropriate.
- Ensuring asset inventory data is up to date, fields are populated, and formats are consistent.
- Collecting inventory data for other road assets including guard rails and developing predictor models for these assets.
- Further embedding Council's prioritisation principles in the model to improve works programs.

8 Renewal Backlog

The renewal backlog demonstrates the cost to treat all assets that exceed the proposed intervention levels highlighted in Section 7.4. It rises when capital expenditure is unable to match the rate of network deterioration and falls when annual requirements are exceeded. A growing backlog is indicative of a declining level of service and increased risk of asset failure.

Road assets are considered in "backlog" when the road assets condition falls outside of the intervention levels established in Section 7.4. The model predicts significant backlog under all intervention models and funding scenarios.

This is to be expected considering large size and high replacement value of the assets and current investment levels. The predictive model factors in the critically of the asset to ensure where ever possible critical segments are given priority treatment and avoid the backlog list.

The modelling also highlights the importance of consistent funding levels over multiple years and to avoid peaks and troughs to maintain or improve asset condition levels.



8.1 Recommended Renewal Funding

The outcome of the financial modelling recommends the following:

Sealed Roads – Scenario 1, Maintain existing renewal funding levels with a focus on increasing reseal levels to 8% of the network area and a larger major patch program. This redistribution of budget will come with a reduction in upgrade and new works.

Unsealed Roads – Scenario 2, Increase funding levels to match current depreciation levels.

Table 16 below presents recommended forecasting levels against Council's Financial Plan 2022/23 to 2031/32 over the next ten financial years.

Financial Year	Renewal Sealed Roads Recommended	Renewal Unsealed Roads Recommended	Upgrade Sealed and Unsealed Roads	New Sealed and Unsealed Roads (.000)	Total Roads Budget (.000)
	(,000)	(,000)	(,000)	(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	(,,
2022/23	\$1,685	\$ 647	\$638	\$649	\$3,619
2023/24	\$1,776	\$ 658	\$853	\$695	\$3,982
2024/25	\$1,880	\$1,080	\$440	\$0	\$3,400
2025/26	\$1,880	\$1,080	\$440	\$0	\$3,400
2026/27	\$1,880	\$1,080	\$440	\$0	\$3,400
2027/28	\$1,900	\$1,080	\$420	\$0	\$3,400
2028/29	\$1,900	\$1,080	\$420	\$0	\$3,400
2029/30	\$1,900	\$1,080	\$470	\$0	\$3,450
2030/31	\$2,000	\$1,080	\$620	\$0	\$3,700
2031/32	\$2,000	\$1,080	\$620	\$0	\$3,700

Table 16 – Forecast Expenditure versus Recommend Renewal Expenditure

As previously highlighted there is significant backlog evident in both the sealed and unsealed road networks. None of the Scenario's modelled under this plan will address the outstanding backlog, it is not financial achievable under the current budget restricted environment.

Increasing the reseal and major patch program will reduce some of the backlog pressures, and the modelling work undertaken assists in targeting actions towards critical assets with the funding available.

The current roads renewal budget assumes continued access to the Roads to Recovery program. Any risk of this program being discontinued will be closely monitored alongside the availability of further grant funding.

The recommendation is considered financially responsible and achievable, the modelling has also highlighted the importance of consistent funding levels with little benefits gained from a "peak and trough" budget approach.

8.2 Recommended Maintenance Funding

The suitability of Council's current maintenance budget will be monitored year to year. As data confidence improves, maintenance requirements will be better understood.



Current network growth is not expected to result in tangible increases to required maintenance expenditure over the next ten years.

Council will continue to monitor the suitability of its maintenance budget and make adjustments when necessary.

8.3 Recommended Capital Upgrade/New Funding

Under the current Financial Plan, the average forecast upgrade/new budget is approximately \$1M per year. The modelling has shown, over the long-term it is more financially viable to undertake renewal works than creating new assets and increasing the future renewal backlog.

It is recommended to reduce expenditure on upgrade and new road works into the renewal of Councils sealed and unsealed road network.

8.4 Recommended Disposal Funding

Road assets are very rarely disposed due to the regulatory requirements relating to public roads. Any disposal activities will be carefully considered on a case by case basis.



9 Improvement Plan

Council will continue to seek improvement in the management of its road assets. A five-year improvement plan is detailed below in Table 17.

Action ID	Description	Responsibility	Action Year(s)
1	Review unsealed road maintenance grading operations including grader frequency, grader configuration, and resourcing.	Works Coordinator	3-5
2	Include kerb and channel assessment in the scope of future road condition audits.	Asset Management and Systems Coordinator	4
3	Develop frameworks for the assessment of road capacity and functionality to better identify when upgrades and expansions are required.	Asset Management and Systems Coordinator	2-3
4	Review the levels of service adopted in this AMP in accordance with the Community Engagement Policy.	Asset Management and Systems Coordinator	3-5
5	Refine the inspection and maintenance levels of service being delivered in alignment with the current RMP 2021.	Asset Management and Systems Coordinator	1
6	Implement the Road AMP levels of service and address current data gaps.	Asset Management and Systems Coordinator	2-3
7	Review asset hierarchies taking into account capacity data and functional requirements.	Asset Management and Systems Coordinator	2-3
8	Implement Asset modelling capabilities into Council's asset management system to enable improved development of multi year periodic maintenance and renewal plans.	Manager Engineering	1-2
9	Look at additional road infrastructure capture during road condition audits.	Asset Management and Systems Coordinator	2-3
10	Update the Financial Plan to specify allocations to renewal, upgrade and new road works under the Capital Works line item.	Manager Engineering Executive Manager Corporate Services	1

Table 17 – Improvement Plan

Attachment 12.2.2.2

Orightly

Mount Alexander Shire Council

Sealed Roads

Life Cycle Modelling: Basis of Design

Version 1.3 June 2023

Document Control

Version	Date	Changes	Issuer	Approved
1.0	16/11/2022	Creation of document	Jack Cao	
1.1	01/02/2023	Updated based on model updates	Jack Cao	
1.2	03/05/2023	Updated based on the final model	Jack Cao	
1.3	24/05/2023	Reviewed and updated	Jack Cao	

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Introduction

Background

Mount Alexander Shire Council (MASC) engaged Brightly to assist with predictive life cycle modelling of the Sealed Roads asset portfolio, utilising currently available asset and condition/performance data as of January 2023.

Purpose

Predictive modelling is used to analyse and present the impact on future asset condition/performance and life cycle costs resulting from a number of alternative asset investment and service level options. Further, it provides a list of proposed candidate treatments for the development of the capital works program.

MASC currently does not have an established methodology they would like to configure into Predictor, hence the standard Sealed Roads model, also referred to as the "benchmark model", was configured during this engagement. This is believed to be the most suitable approach for MASC at the moment, and similar approaches are adopted by several other councils including Mansfield Shire Council, Moorabool Shire Council, Upper Lachlan Shire Council, and Campbelltown City Council.

Document Structure

This Basis of Design (BoD) provides an initial overview of the model simulations generated, as well as any underlying assumptions and associated points to note. The following sections then outline in more detail the key model configuration elements that underpin the simulations.

Methodology

The following sections outline the methodology used in building, configuring, and running the predictive model for the Sealed Roads portfolio.

Data

The Brightly Predictor data file was created by extracting raw data from the dataset provided by IMG and MASC. There are 1,754 sealed road segments in the dataset provided, with a total network measure (area) of 3,211,370.00sq.m. The current estimated total replacement value (utilising unit rates used in the model and detailed in the Treatment Unit Cost section later in this report) for this asset portfolio is ~\$462.4M as of January 2023.

These key figures are highlighted in the following table.

Table 1. Portfolio Overview Based on Source Data

Asset Group	Number of Segments	Total Network Measure	Total Replacement Value
Sealed Roads	1,754	3,211,370.00sq.m	\$462.4M

The following is a summary of key items noted in relation to the dataset (not intended to be an exhaustive list).

- 17 assets have no condition rating date.
- 26 assets have no condition data.

Copies of both the prepared data import file and Predictor transformed data are attached below.





Data Import File - Transformed Data Sealed Roads 2022.> File - Sealed Roads 2

Service Criteria

Service Criteria are indicators/parameters that define the health/serviceability of an asset and are used within treatment criteria to determine if certain treatments are required for an asset.

The Default Life is the life of an asset where one was not explicitly provided within the data. For modelling purposes, a default life is applied to each surface and pavement-related service criteria, which is then adjusted via life-cycle variations based on the asset type to derive the corresponding useful life. More details on this can be found in the section Life Cycle.

The degradation profile defines the statistical relationship between the percentage of Remaining Useful Life and Service State. Each service criterion is assigned a corresponding degradation profile that best represents the degradation behaviour of MASC's sealed roads.

The Degradation Strategy defines the probabilistic distribution of time taken for service criteria to move between each service state on the degradation profile. A higher variance reflects a wider distribution around the central tendency and therefore greater variation in the actual service life of assets and forecasted treatments.

This is used to simulate the real-world behaviour of assets where the deterioration rates can vary between individuals. A Fixed degradation Strategy is applied to all surface-related service criteria due to the short lifespan of road surfaces, and a Low Variance strategy is applied to all pavement-related service criteria.

Degradation	Rem	aining	g Life	% by	Servic	ce Sto	ite	Life evelo Chart		Default Degradation	
Profile	0		2	3	4	5	6	Life-cycle Chan	Life	Strategy	
Flushing	100	88	72	55	32	12	0		35	Fixed	
Ravelling	100	92	68	44	28	12	0		35	Fixed	
Linear Cracking	100	88	72	55	28	8	0		35	Fixed	
Stripping	100	92	68	44	28	12	0		35	Fixed	
Pavement Defects	100	95	74	55	34	12	0		80	Low Variance	
Roughness	100	87	70	46	20	8	0		80	Low Variance	
Rutting	100	88	72	55	28	8	0		80	Low Variance	
Croc Cracking	100	87	70	46	20	8	0		80	Low Variance	

Table 2. Service Criteria, Degradation Profile and Degradation Strategy

Degradation	Rem	emaining Life % by Service State				ce Sto	ite	Life cycle Chart	Degradation	
Profile	0		2	3	4	5	6		Life	Strategy
Surface Defects	100	93	65	48	35	10	0		35	Fixed
Rigid Condition	100	75	58	43	30	15	0		60	Low Variance

Service Indices

A Service Index is a defined combination of specific Service Criteria and associated weightings to calculate an aggregate metric reflecting some aspect of the asset's health and serviceability. It is used as a reportable metric only to compare against other assets and is not utilised within the Treatment Criteria.

Three aggregated Service Indices were created in this model: SCI, PCI and OSI.

SCI (Surface Condition Index) is an aggregated value derived from six surface-related service criteria, when available, to represent the overall surface condition of sealed roads. This value is derived using the worst value of Linear Cracking, Surface Defects, Ravelling, Croc Cracking, Flushing, and Stripping, each with an equal weighting of 100%. This Service Index is similar to the Observable SCI provided by IMG.

PCI (Pavement Condition Index) is an aggregated value derived from five pavement-related service criteria, when available, to represent the overall pavement condition of sealed roads. This value is derived using the worst value of Croc Cracking, Pavement Defects, Roughness, Rutting and Rigid Condition, each with an equal weighting of 100%. For non-concrete roads, since Rigid Condition is not available, it will be ignored during the calculation. Similarly for concrete roads, Croc Cracking and Pavement Defects will be ignored. This Service Index is similar to the Observable PCI provided by IMG.

OSI (Overall Service Index) is the default Service Index in all Brightly life cycle models and is used to represent the overall serviceability of assets. This value is calculated as the weighted average of all Service Criteria, with a 70% weighting on pavement-related values and a 30% weighting on surface-related values. As this value is on the 0-6 scale, it is not comparable to the Overall Condition Index by IMG, which uses the 1-10 scale.

Service Index	Method	Service Criteria	Weighting %
		Linear Cracking	100
SCI	Worst Value	Surface Defects	100
		Ravelling	100

Table 3. Service Indices

Service Index	Method	Service Criteria	Weighting %
		Croc Cracking	100
		Flushing	100
		Stripping	100
		Croc Cracking	100
		Pavement Defects	100
PCI	Worst Value	Roughness	100
		Rutting	100
		Rigid Condition	100
		Flushing	30
	Weighted Average	Stripping	30
		Ravelling	30
		Linear Cracking	30
20		Croc Cracking	70
USI	Weighted Avelage	Surface Defects	30
		Pavement Defects	70
		Roughness	70
		Rutting	70
		Rigid Condition	70

Life Cycle

The table below outlines the useful life for the surface and pavement of each type of road.

Table 4. Useful Life for each Road Type

Road Type	Surface Useful Life	Pavement Useful Life
Spray Seal	15	80
Asphalt	35	80
Concrete	N/A	60

Life-cycle variations are used to adjust the default life applied in each service criterion based on the asset type. According to Table 3, For all surface-related service criteria, a default life of 35 years applies, which is derived from the surface useful life of asphalt roads. Due to spray seal roads having a surface useful life of 15 years, a 57% reduction is applied to all spray seal roads to adjust their surface default life to 15. This figure is rounded by Predictor and in certain cases, it appears as 56%. As spray seal and asphalt roads both have the same pavement life of 80 years, no variations were configured for pavement-related service criteria. The table below lists the lifecycle variations applied in this model.

Table 5. Life-cycle Variations

Service Criteria	Variation Name	Variance %
Flushing	Spray Seal	-57
Linear Cracking	Spray Seal	-57
Ravelling	Spray Seal	-56
Stripping	Spray Seal	-57
Surface Defects	Spray Seal	-57

Treatments

Treatments are works performed upon an asset to improve its serviceability/health and affect the life-cycle path. Below are the defined treatments as applied within this model and the corresponding treatment types.

Table 6. Treatments and Treatment Types

Treatment	Treatment Type
Spray Seal	Renewal
Spray Seal w/ Major Patching	Renewal
AC Overlay	Renewal
AC Overlay w/ Major Patching	Renewal
Rehabilitation - Spray Seal	Renewal
Rehabilitation - Asphalt	Renewal
Concrete Rehabilitation	Renewal
Crack Seal	Other

Treatment Filters

Treatment Filters are attributes of an asset that would affect their candidacy for Treatment to determine what work is carried out of which asset. Treatment Filters can also be used for configuring benefit variation for Predictor to prioritise high-criticality asset groups. Each Treatment Filter can have up to eight categories (including N/A) where the asset attribute can be grouped.

In MASC's sealed roads model, four treatment filters are configured. The table below indicates the defined category names for each Treatment Filter as applied in this model.

Name	Labels								
Nume	N/A	1	2	3	4	5	6	7	
Route Use	N/A	Public Transport	School Bus	Heavy Vehicle					
Road Hierarchy	N/A	Link	Collector	Local	Minor				
Surface Material	N/A	Asphalt	Spray Seal	Concrete	Unsealed				
Classification	N/A	Urban	Rural						

Table 7. Treatment Filters

Treatment Situations

For each treatment, there may be various situations in which a treatment is triggered for an asset, which are referred to as Treatment Situations. Each Treatment Situation defines a range of values for each Service Criteria and selected Treatment Filter values that would indicate a Treatment should be applied.

MASC asset managers worked closely with Brightly during the development of the treatment logic of this model. After the standard model (named "2023 Sealed Road - Milestone Model") was issued, MASC configured two additional models "2023 Sealed Road - Early Intervention Model", which simulates the scenario of intervening at an earlier Service State level, and "2023 Sealed Road - Failure Intervention Model", which simulates intervening at a later Service State level, usually at the end-of-life stage of an asset.

An additional Crack Seal Model (named "Crack Seal Model 2023") is provided to assist MASC in identifying potential crack-sealing candidates. The model is separated from the main model since this treatment is not considered part of the capital works program at MASC.

Model	Treatment	Situation
2023 Sealed Road - Milestone Model	Spray Seal	Minor Rd - Cracking >=5, Pavement Good Condition<3
2023 Sealed Road - Milestone Model	Spray Seal	Major Rd - Cracking >=4, Pavement Good Condition<3
2023 Sealed Road - Milestone Model	Spray Seal	Surface Defect >=5, Pavement Good Condition<3
2023 Sealed Road - Milestone Model	Spray Seal	Ravelling >=5, Pavement Good Condition<3
2023 Sealed Road - Milestone Model	Spray Seal	Flushing >=5, Pavement Good Condition<3
2023 Sealed Road - Milestone Model	Spray Seal	Stripping >=5, Pavement Good Condition<3
2023 Sealed Road - Milestone Model	Spray Seal w/ Major Patching	Ravelling >=4, 3= <rutting<5< td=""></rutting<5<>
2023 Sealed Road - Milestone Model	Spray Seal w/ Major Patching	Stripping >=4, 3= <rutting<5< td=""></rutting<5<>
2023 Sealed Road - Milestone Model	Spray Seal w/ Major Patching	Surface Defect >=4, 3= <rutting<5< td=""></rutting<5<>
2023 Sealed Road - Milestone Model	Spray Seal w/ Major Patching	Cracking >=3, 3= <croc crack<5<="" td=""></croc>
2023 Sealed Road - Milestone Model	Spray Seal w/ Major Patching	Surface Defect >=4, 3= <croc crack<5<="" td=""></croc>
2023 Sealed Road - Milestone Model	Spray Seal w/ Major Patching	Ravelling >=4, 3= <croc crack<5<="" td=""></croc>

Table 8. Treatment Situations

Model	Treatment	Situation
2023 Sealed Road - Milestone Model	Spray Seal w/ Major Patching	Cracking >=3, 3= <pavement defect<5<="" td=""></pavement>
2023 Sealed Road - Milestone Model	Spray Seal w/ Major Patching	Surface Defect >=4, 3= <pavement defect<5<="" td=""></pavement>
2023 Sealed Road - Milestone Model	Spray Seal w/ Major Patching	Ravelling >=4, 3= <pavement defect<5<="" td=""></pavement>
2023 Sealed Road - Milestone Model	Spray Seal w/ Major Patching	Flushing >=4, 3= <croc crack<5<="" td=""></croc>
2023 Sealed Road - Milestone Model	Spray Seal w/ Major Patching	Stripping >=4, 3= <croc crack<5<="" td=""></croc>
2023 Sealed Road - Milestone Model	Spray Seal w/ Major Patching	Flushing >=4, 3= <pavement defect<5<="" td=""></pavement>
2023 Sealed Road - Milestone Model	Spray Seal w/ Major Patching	Stripping >=4, 3= <pavement defect<5<="" td=""></pavement>
2023 Sealed Road - Milestone Model	Spray Seal w/ Major Patching	Flushing >=4, 3= <roughness<5< td=""></roughness<5<>
2023 Sealed Road - Milestone Model	Spray Seal w/ Major Patching	Cracking >=3, 3= <roughness<5< td=""></roughness<5<>
2023 Sealed Road - Milestone Model	Spray Seal w/ Major Patching	Ravelling >=4, 3= <roughness<5< td=""></roughness<5<>
2023 Sealed Road - Milestone Model	Spray Seal w/ Major Patching	Stripping >=4, 3= <roughness<5< td=""></roughness<5<>
2023 Sealed Road - Milestone Model	Spray Seal w/ Major Patching	Surface Defect >=4, 3= <roughness<5< td=""></roughness<5<>
2023 Sealed Road - Milestone Model	Spray Seal w/ Major Patching	Flushing >=4, 3= <rutting<5< td=""></rutting<5<>
2023 Sealed Road - Milestone Model	Spray Seal w/ Major Patching	Cracking >=3, 3= <rutting<5< td=""></rutting<5<>
2023 Sealed Road - Milestone Model	AC Overlay	Flushing >=5, Pavement Good Condition<3
2023 Sealed Road - Milestone Model	AC Overlay	Stripping >=5, Pavement Good Condition<3
2023 Sealed Road - Milestone Model	AC Overlay	Minor Rd - Cracking >=5, Pavement Good Condition<3
2023 Sealed Road - Milestone Model	AC Overlay	Major Rd - Cracking >=4, Pavement Good Condition<3
2023 Sealed Road - Milestone Model	AC Overlay	Surface Defect >=5, Pavement Good Condition<3
2023 Sealed Road - Milestone Model	AC Overlay	Ravelling >=5, Pavement Good Condition<3
2023 Sealed Road - Milestone Model	AC Overlay w/ Major Patching	Cracking >=3, 3= <croc crack<5<="" td=""></croc>

Model	Treatment	Situation
2023 Sealed Road - Milestone Model	AC Overlay w/ Major Patching	Surface Defect >=4, 3= <croc crack<5<="" td=""></croc>
2023 Sealed Road - Milestone Model	AC Overlay w/ Major Patching	Ravelling >=4, 3= <croc crack<5<="" td=""></croc>
2023 Sealed Road - Milestone Model	AC Overlay w/ Major Patching	Cracking >=3, 3= <pavement defect<5<="" td=""></pavement>
2023 Sealed Road - Milestone Model	AC Overlay w/ Major Patching	Surface Defect >=4, 3= <pavement defect<5<="" td=""></pavement>
2023 Sealed Road - Milestone Model	AC Overlay w/ Major Patching	Ravelling >=4, 3= <pavement defect<5<="" td=""></pavement>
2023 Sealed Road - Milestone Model	AC Overlay w/ Major Patching	Flushing >=4, 3= <croc crack<5<="" td=""></croc>
2023 Sealed Road - Milestone Model	AC Overlay w/ Major Patching	Stripping >=4, 3= <croc crack<5<="" td=""></croc>
2023 Sealed Road - Milestone Model	AC Overlay w/ Major Patching	Flushing >=4, 3= <pavement defect<5<="" td=""></pavement>
2023 Sealed Road - Milestone Model	AC Overlay w/ Major Patching	Stripping >=4, 3= <pavement defect<5<="" td=""></pavement>
2023 Sealed Road - Milestone Model	AC Overlay w/ Major Patching	Flushing >=4, 3= <roughness<5< td=""></roughness<5<>
2023 Sealed Road - Milestone Model	AC Overlay w/ Major Patching	Cracking >=3, 3= <roughness<5< td=""></roughness<5<>
2023 Sealed Road - Milestone Model	AC Overlay w/ Major Patching	Ravelling >=4, 3= <roughness<5< td=""></roughness<5<>
2023 Sealed Road - Milestone Model	AC Overlay w/ Major Patching	Stripping >=4, 3= <roughness<5< td=""></roughness<5<>
2023 Sealed Road - Milestone Model	AC Overlay w/ Major Patching	Surface Defect >=4, 3= <roughness<5< td=""></roughness<5<>
2023 Sealed Road - Milestone Model	AC Overlay w/ Major Patching	Flushing >=4, 3= <rutting<5< td=""></rutting<5<>
2023 Sealed Road - Milestone Model	AC Overlay w/ Major Patching	Cracking >=3, 3= <rutting<5< td=""></rutting<5<>
2023 Sealed Road - Milestone Model	AC Overlay w/ Major Patching	Ravelling >=4, 3= <rutting<5< td=""></rutting<5<>
2023 Sealed Road - Milestone Model	AC Overlay w/ Major Patching	Stripping >=4, 3= <rutting<5< td=""></rutting<5<>
2023 Sealed Road - Milestone Model	AC Overlay w/ Major Patching	Surface Defect >=4, 3= <rutting<5< td=""></rutting<5<>
2023 Sealed Road - Milestone Model	Rehabilitation - Spray Seal	Croc Crack >=5
2023 Sealed Road - Milestone Model	Rehabilitation - Spray Seal	Pavement Defects >=5

Model	Treatment	Situation
2023 Sealed Road - Milestone Model	Rehabilitation - Spray Seal	Roughness >=5
2023 Sealed Road - Milestone Model	Rehabilitation - Spray Seal	Rutting >= 5
2023 Sealed Road - Milestone Model	Rehabilitation - Asphalt	Croc Crack >=5
2023 Sealed Road - Milestone Model	Rehabilitation - Asphalt	Pavement Defects >=5
2023 Sealed Road - Milestone Model	Rehabilitation - Asphalt	Roughness >=5
2023 Sealed Road - Milestone Model	Rehabilitation - Asphalt	Rutting >=5
2023 Sealed Road - Milestone Model	Concrete Rehabilitation	Minor Road - Rigid Condition >=5
2023 Sealed Road - Milestone Model	Concrete Rehabilitation	Major Road - Rigid Condition >=4
2023 Sealed Road - Milestone Model	Concrete Rehabilitation	Major Road - Cracking >=4
2023 Sealed Road - Milestone Model	Concrete Rehabilitation	Minor Road - Cracking >=5
2023 Sealed Road - Early Intervention Model	Spray Seal	Minor Rd - Cracking >=4, Pavement Good Condition<2
2023 Sealed Road - Early Intervention Model	Spray Seal	Major Rd - Cracking >=3, Pavement Good Condition<2
2023 Sealed Road - Early Intervention Model	Spray Seal	Surface Defect >=4, Pavement Good Condition<2
2023 Sealed Road - Early Intervention Model	Spray Seal	Ravelling >=4, Pavement Good Condition<2
2023 Sealed Road - Early Intervention Model	Spray Seal	Flushing >=4, Pavement Good Condition<2
2023 Sealed Road - Early Intervention Model	Spray Seal	Stripping >=4, Pavement Good Condition<2
2023 Sealed Road - Early Intervention Model	Spray Seal w/ Major Patching	Flushing >=3, 2= <roughness<4< td=""></roughness<4<>
2023 Sealed Road - Early Intervention Model	Spray Seal w/ Major Patching	Cracking >=2, 2= <roughness<4< td=""></roughness<4<>
2023 Sealed Road - Early Intervention Model	Spray Seal w/ Major Patching	Ravelling >=3, 2= <roughness<4< td=""></roughness<4<>
2023 Sealed Road - Early Intervention Model	Spray Seal w/ Major Patching	Stripping >=3, 2= <roughness<4< td=""></roughness<4<>
2023 Sealed Road - Early Intervention Model	Spray Seal w/ Major Patching	Surface Defect >=3, 2= <roughness<4< td=""></roughness<4<>

Model	Treatment	Situation
2023 Sealed Road - Early Intervention Model	Spray Seal w/ Major Patching	Flushing >=3, 2= <rutting<4< td=""></rutting<4<>
2023 Sealed Road - Early Intervention Model	Spray Seal w/ Major Patching	Cracking >=2, 2= <rutting<4< td=""></rutting<4<>
2023 Sealed Road - Early Intervention Model	Spray Seal w/ Major Patching	Ravelling >=3, 2= <rutting<4< td=""></rutting<4<>
2023 Sealed Road - Early Intervention Model	Spray Seal w/ Major Patching	Stripping >=3, 2= <rutting<4< td=""></rutting<4<>
2023 Sealed Road - Early Intervention Model	Spray Seal w/ Major Patching	Surface Defect >=3, 2= <rutting<4< td=""></rutting<4<>
2023 Sealed Road - Early Intervention Model	Spray Seal w/ Major Patching	Cracking >=2, 2= <croc crack<4<="" td=""></croc>
2023 Sealed Road - Early Intervention Model	Spray Seal w/ Major Patching	Surface Defect >=3, 2= <croc crack<4<="" td=""></croc>
2023 Sealed Road - Early Intervention Model	Spray Seal w/ Major Patching	Ravelling >=3, 2= <croc crack<4<="" td=""></croc>
2023 Sealed Road - Early Intervention Model	Spray Seal w/ Major Patching	Cracking >=2, 2= <pavement defect<4<="" td=""></pavement>
2023 Sealed Road - Early Intervention Model	Spray Seal w/ Major Patching	Surface Defect >=3, 2= <pavement defect<4<="" td=""></pavement>
2023 Sealed Road - Early Intervention Model	Spray Seal w/ Major Patching	Ravelling >=3, 2= <pavement defect<4<="" td=""></pavement>
2023 Sealed Road - Early Intervention Model	Spray Seal w/ Major Patching	Flushing >=3, 2= <croc crack<4<="" td=""></croc>
2023 Sealed Road - Early Intervention Model	Spray Seal w/ Major Patching	Stripping >=3, 2= <croc crack<4<="" td=""></croc>
2023 Sealed Road - Early Intervention Model	Spray Seal w/ Major Patching	Flushing >=3, 2= <pavement defect<4<="" td=""></pavement>
2023 Sealed Road - Early Intervention Model	Spray Seal w/ Major Patching	Stripping >=3, 2= <pavement defect<4<="" td=""></pavement>
2023 Sealed Road - Early Intervention Model	AC Overlay	Flushing >=4, Pavement Good Condition<2
2023 Sealed Road - Early Intervention Model	AC Overlay	Stripping >=4, Pavement Good Condition<2
2023 Sealed Road - Early Intervention Model	AC Overlay	Minor Rd - Cracking >=4, Pavement Good Condition<2
2023 Sealed Road - Early Intervention Model	AC Overlay	Major Rd - Cracking >=3, Pavement Good Condition<2
2023 Sealed Road - Early Intervention Model	AC Overlay	Surface Defect >=4, Pavement Good Condition<2
2023 Sealed Road - Early Intervention Model	AC Overlay	Ravelling >=4, Pavement Good Condition<2

Model	Treatment	Situation
2023 Sealed Road - Early Intervention Model	AC Overlay w/ Major Patching	Cracking >=2, 2= <croc crack<4<="" td=""></croc>
2023 Sealed Road - Early Intervention Model	AC Overlay w/ Major Patching	Surface Defect >=3, 2= <croc crack<4<="" td=""></croc>
2023 Sealed Road - Early Intervention Model	AC Overlay w/ Major Patching	Ravelling >=3, 2= <croc crack<4<="" td=""></croc>
2023 Sealed Road - Early Intervention Model	AC Overlay w/ Major Patching	Cracking >=2, 2= <pavement defect<4<="" td=""></pavement>
2023 Sealed Road - Early Intervention Model	AC Overlay w/ Major Patching	Surface Defect >=3, 2= <pavement defect<4<="" td=""></pavement>
2023 Sealed Road - Early Intervention Model	AC Overlay w/ Major Patching	Ravelling >=3, 2= <pavement defect<4<="" td=""></pavement>
2023 Sealed Road - Early Intervention Model	AC Overlay w/ Major Patching	Flushing >=3, 2= <croc crack<4<="" td=""></croc>
2023 Sealed Road - Early Intervention Model	AC Overlay w/ Major Patching	Stripping >=3, 2= <croc crack<4<="" td=""></croc>
2023 Sealed Road - Early Intervention Model	AC Overlay w/ Major Patching	Flushing >=3, 2= <pavement defect<4<="" td=""></pavement>
2023 Sealed Road - Early Intervention Model	AC Overlay w/ Major Patching	Stripping >=3, 2= <pavement defect<4<="" td=""></pavement>
2023 Sealed Road - Early Intervention Model	AC Overlay w/ Major Patching	Flushing >=3, 2= <roughness<4< td=""></roughness<4<>
2023 Sealed Road - Early Intervention Model	AC Overlay w/ Major Patching	Cracking >=2, 2= <roughness<4< td=""></roughness<4<>
2023 Sealed Road - Early Intervention Model	AC Overlay w/ Major Patching	Ravelling >=3, 2= <roughness<4< td=""></roughness<4<>
2023 Sealed Road - Early Intervention Model	AC Overlay w/ Major Patching	Stripping >=3, 2= <roughness<4< td=""></roughness<4<>
2023 Sealed Road - Early Intervention Model	AC Overlay w/ Major Patching	Surface Defect >=3, 2= <roughness<4< td=""></roughness<4<>
2023 Sealed Road - Early Intervention Model	AC Overlay w/ Major Patching	Flushing >=3, 2= <rutting<4< td=""></rutting<4<>
2023 Sealed Road - Early Intervention Model	AC Overlay w/ Major Patching	Cracking >=2, 2= <rutting<4< td=""></rutting<4<>
2023 Sealed Road - Early Intervention Model	AC Overlay w/ Major Patching	Ravelling >=3, 2= <rutting<4< td=""></rutting<4<>
2023 Sealed Road - Early Intervention Model	AC Overlay w/ Major Patching	Stripping >=3, 2= <rutting<4< td=""></rutting<4<>
2023 Sealed Road - Early Intervention Model	AC Overlay w/ Major Patching	Surface Defect >=3, 2= <rutting<4< td=""></rutting<4<>
2023 Sealed Road - Early Intervention Model	Rehabilitation - Spray Seal	Croc Crack >=4
Model	Treatment	Situation
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2023 Sealed Road - Early Intervention Model	Rehabilitation - Spray Seal	Pavement Defects >=4
2023 Sealed Road - Early Intervention Model	Rehabilitation - Spray Seal	Roughness >=4
2023 Sealed Road - Early Intervention Model	Rehabilitation - Spray Seal	Rutting >= 4
2023 Sealed Road - Early Intervention Model	Rehabilitation - Asphalt	Croc Crack >=4
2023 Sealed Road - Early Intervention Model	Rehabilitation - Asphalt	Pavement Defects >=4
2023 Sealed Road - Early Intervention Model	Rehabilitation - Asphalt	Roughness >=4
2023 Sealed Road - Early Intervention Model	Rehabilitation - Asphalt	Rutting >=4
2023 Sealed Road - Early Intervention Model	Concrete Rehabilitation	Minor Road - Rigid Condition >=4
2023 Sealed Road - Early Intervention Model	Concrete Rehabilitation	Major Road - Rigid Condition >=3
2023 Sealed Road - Early Intervention Model	Concrete Rehabilitation	Major Road - Cracking >=3
2023 Sealed Road - Early Intervention Model	Concrete Rehabilitation	Minor Road - Cracking >=4
2023 Sealed Road - Failure Intervention Model	Spray Seal	Minor Rd - Cracking >=5, Pavement Good Condition<4
2023 Sealed Road - Failure Intervention Model	Spray Seal	Major Rd - Cracking >=5, Pavement Good Condition<4
2023 Sealed Road - Failure Intervention Model	Spray Seal	Surface Defect >=5, Pavement Good Condition<4
2023 Sealed Road - Failure Intervention Model	Spray Seal	Ravelling >=5, Pavement Good Condition<4
2023 Sealed Road - Failure Intervention Model	Spray Seal	Flushing >=5, Pavement Good Condition<4
2023 Sealed Road - Failure Intervention Model	Spray Seal	Stripping >=5, Pavement Good Condition<4
2023 Sealed Road - Failure Intervention Model	Spray Seal w/ Major Patching	Flushing >=5, 4= <roughness<6< td=""></roughness<6<>
2023 Sealed Road - Failure Intervention Model	Spray Seal w/ Major Patching	Cracking >=5, 4= <roughness<6< td=""></roughness<6<>
2023 Sealed Road - Failure Intervention Model	Spray Seal w/ Major Patching	Ravelling >=5, 4= <roughness<6< td=""></roughness<6<>
2023 Sealed Road - Failure Intervention Model	Spray Seal w/ Major Patching	Stripping >=5, 4= <roughness<6< td=""></roughness<6<>

Model	Treatment	Situation
2023 Sealed Road - Failure Intervention Model	Spray Seal w/ Major Patching	Surface Defect >=5, 4= <roughness<6< td=""></roughness<6<>
2023 Sealed Road - Failure Intervention Model	Spray Seal w/ Major Patching	Flushing >=5, 4= <rutting<6< td=""></rutting<6<>
2023 Sealed Road - Failure Intervention Model	Spray Seal w/ Major Patching	Cracking >=5, 4= <rutting<6< td=""></rutting<6<>
2023 Sealed Road - Failure Intervention Model	Spray Seal w/ Major Patching	Ravelling >=5, 4= <rutting<6< td=""></rutting<6<>
2023 Sealed Road - Failure Intervention Model	Spray Seal w/ Major Patching	Stripping >=5, 4= <rutting<6< td=""></rutting<6<>
2023 Sealed Road - Failure Intervention Model	Spray Seal w/ Major Patching	Surface Defect >=5, 4= <rutting<6< td=""></rutting<6<>
2023 Sealed Road - Failure Intervention Model	Spray Seal w/ Major Patching	Cracking >=5, 4= <croc crack<6<="" td=""></croc>
2023 Sealed Road - Failure Intervention Model	Spray Seal w/ Major Patching	Surface Defect >=5, 4= <croc crack<6<="" td=""></croc>
2023 Sealed Road - Failure Intervention Model	Spray Seal w/ Major Patching	Ravelling >=5, 4= <croc crack<6<="" td=""></croc>
2023 Sealed Road - Failure Intervention Model	Spray Seal w/ Major Patching	Cracking >=5, 4= <pavement defect<6<="" td=""></pavement>
2023 Sealed Road - Failure Intervention Model	Spray Seal w/ Major Patching	Surface Defect >=5, 4= <pavement defect<6<="" td=""></pavement>
2023 Sealed Road - Failure Intervention Model	Spray Seal w/ Major Patching	Ravelling >=5, 4= <pavement defect<6<="" td=""></pavement>
2023 Sealed Road - Failure Intervention Model	Spray Seal w/ Major Patching	Flushing >=5, 4= <croc crack<6<="" td=""></croc>
2023 Sealed Road - Failure Intervention Model	Spray Seal w/ Major Patching	Stripping >=5, 4= <croc crack<6<="" td=""></croc>
2023 Sealed Road - Failure Intervention Model	Spray Seal w/ Major Patching	Flushing >=5, 4= <pavement defect<6<="" td=""></pavement>
2023 Sealed Road - Failure Intervention Model	Spray Seal w/ Major Patching	Stripping >=5, 4= <pavement defect<6<="" td=""></pavement>
2023 Sealed Road - Failure Intervention Model	AC Overlay	Flushing >=5, Pavement Good Condition<4
2023 Sealed Road - Failure Intervention Model	AC Overlay	Stripping >=5, Pavement Good Condition<4
2023 Sealed Road - Failure Intervention Model	AC Overlay	Minor Rd - Cracking >=5, Pavement Good Condition<4
2023 Sealed Road - Failure Intervention Model	AC Overlay	Surface Defect >=5, Pavement Good Condition<4
2023 Sealed Road - Failure Intervention Model	AC Overlay	Ravelling >=5, Pavement Good Condition<4

Model	Treatment	Situation
2023 Sealed Road - Failure Intervention Model	AC Overlay	Major Rd - Cracking >=5, Pavement Good Condition<4
2023 Sealed Road - Failure Intervention Model	AC Overlay w/ Major Patching	Cracking >=5, 4= <croc crack<6<="" td=""></croc>
2023 Sealed Road - Failure Intervention Model	AC Overlay w/ Major Patching	Surface Defect >=5, 4= <croc crack<6<="" td=""></croc>
2023 Sealed Road - Failure Intervention Model	AC Overlay w/ Major Patching	Ravelling >=5, 4= <croc crack<6<="" td=""></croc>
2023 Sealed Road - Failure Intervention Model	AC Overlay w/ Major Patching	Cracking >=5, 4= <pavement defect<6<="" td=""></pavement>
2023 Sealed Road - Failure Intervention Model	AC Overlay w/ Major Patching	Surface Defect >=5, 4= <pavement defect<6<="" td=""></pavement>
2023 Sealed Road - Failure Intervention Model	AC Overlay w/ Major Patching	Ravelling >=5, 4= <pavement defect<6<="" td=""></pavement>
2023 Sealed Road - Failure Intervention Model	AC Overlay w/ Major Patching	Flushing >=5, 4= <croc crack<6<="" td=""></croc>
2023 Sealed Road - Failure Intervention Model	AC Overlay w/ Major Patching	Stripping >=5, 4= <croc crack<6<="" td=""></croc>
2023 Sealed Road - Failure Intervention Model	AC Overlay w/ Major Patching	Flushing >=5, 4= <pavement defect<6<="" td=""></pavement>
2023 Sealed Road - Failure Intervention Model	AC Overlay w/ Major Patching	Stripping >=5, 4= <pavement defect<6<="" td=""></pavement>
2023 Sealed Road - Failure Intervention Model	AC Overlay w/ Major Patching	Flushing >=5, 4= <roughness<6< td=""></roughness<6<>
2023 Sealed Road - Failure Intervention Model	AC Overlay w/ Major Patching	Cracking >=5, 4= <roughness<6< td=""></roughness<6<>
2023 Sealed Road - Failure Intervention Model	AC Overlay w/ Major Patching	Ravelling >=5, 4= <roughness<6< td=""></roughness<6<>
2023 Sealed Road - Failure Intervention Model	AC Overlay w/ Major Patching	Stripping >=5, 4= <roughness<6< td=""></roughness<6<>
2023 Sealed Road - Failure Intervention Model	AC Overlay w/ Major Patching	Surface Defect >=5, 4= <roughness<6< td=""></roughness<6<>
2023 Sealed Road - Failure Intervention Model	AC Overlay w/ Major Patching	Flushing >=5, 4= <rutting<6< td=""></rutting<6<>
2023 Sealed Road - Failure Intervention Model	AC Overlay w/ Major Patching	Cracking >=5, 4= <rutting<6< td=""></rutting<6<>
2023 Sealed Road - Failure Intervention Model	AC Overlay w/ Major Patching	Ravelling >=5, 4= <rutting<6< td=""></rutting<6<>
2023 Sealed Road - Failure Intervention Model	AC Overlay w/ Major Patching	Stripping >=5, 4= <rutting<6< td=""></rutting<6<>
2023 Sealed Road - Failure Intervention Model	AC Overlay w/ Major Patching	Surface Defect >=5, 4= <rutting<6< td=""></rutting<6<>

Model	Treatment	Situation
2023 Sealed Road - Failure Intervention Model	Rehabilitation - Spray Seal	Croc Crack =6
2023 Sealed Road - Failure Intervention Model	Rehabilitation - Spray Seal	Pavement Defects =6
2023 Sealed Road - Failure Intervention Model	Rehabilitation - Spray Seal	Roughness =6
2023 Sealed Road - Failure Intervention Model	Rehabilitation - Spray Seal	Rutting =6
2023 Sealed Road - Failure Intervention Model	Rehabilitation - Asphalt	Croc Crack =6
2023 Sealed Road - Failure Intervention Model	Rehabilitation - Asphalt	Pavement Defects =6
2023 Sealed Road - Failure Intervention Model	Rehabilitation - Asphalt	Roughness =6
2023 Sealed Road - Failure Intervention Model	Rehabilitation - Asphalt	Rutting =6
2023 Sealed Road - Failure Intervention Model	Concrete Rehabilitation	Minor Road - Rigid Condition =6
2023 Sealed Road - Failure Intervention Model	Concrete Rehabilitation	Major Road - Rigid Condition =6
2023 Sealed Road - Failure Intervention Model	Concrete Rehabilitation	Major Road - Cracking >=5
2023 Sealed Road - Failure Intervention Model	Concrete Rehabilitation	Minor Road - Cracking >=5
Crack Seal Model 2023	Crack Seal	Cracking = 2, 3 or 4 (narrow cracking only)

Treatment Effects

Treatment effects define how an asset changes regarding its Service Criteria after a particular treatment is applied.



Figure 1. The effect of a treatment when applied to an asset is defined through its Gain and Threshold.

Threshold is the service state (or condition) value that is the best that an asset can attain when the defined treatment is applied due to reaching the defined intervention point. Gain is the number of states or condition values, the asset improves from the applied treatment. **Error! Reference source not found.** defines the relationship between the changes to service states and the remaining useful life of the asset.

Treatmen t	Rigid Conditi on	Pavem ent Defects	Rutting	Roughn ess	Ravelli ng	Linear Cracki ng	Strippi ng	Surfac e Defect s	Croc Cracki ng	Flushin g
AC Overlay	Threshol d: 0 Gain: 0	Threshol d: 1 Gain: 2	Thresho Id: 1 Gain: 2	Threshol d: 0 Gain: 6	Thresho Id: 1 Gain: 4	Threshol d: 0 Gain: 6	Thresho Id: 0 Gain: 6	Thresho Id: 1 Gain: 5	Threshol d: 1 Gain: 2	Thresho Id: 0 Gain: 6
AC Overlay w/ Major Patching	Threshol d: 0 Gain: 6	Threshol d:0 Gain: 4	Thresho Id: 0 Gain: 4	Threshol d: 0 Gain: 6	Thresho Id: 0 Gain: 6	Threshol d: 0 Gain: 6	Thresho Id: 0 Gain: 6	Thresho Id: 0 Gain: 6	Threshol d: 0 Gain: 4	Thresho Id: 0 Gain: 6
Concrete	Threshol	Threshol	Thresho	Threshol	Thresho	Threshol	Thresho	Thresho	Threshol	Thresho
Rehabilitat	d: 0	d:0	Id: 0	d: 0	Id: 0	d: 0	Id: 0	Id: 0	d: 0	Id: 0
ion	Gain: 6	Gain:6	Gain: 6							
Rehabilitat	Threshol	Threshol	Thresho	Threshol	Thresho	Threshol	Thresho	Thresho	Threshol	Thresho
ion -	d: 0	d:0	Id: 0	d: 0	Id: 0	d: 0	Id: 0	Id: 0	d: 0	Id: 0
Asphalt	Gain: 6	Gain:6	Gain: 6							
Rehabilitat	Threshol	Threshol	Thresho	Threshol	Thresho	Threshol	Thresho	Thresho	Threshol	Thresho
ion - Spray	d: 0	d:0	Id: 0	d: 0	Id: 0	d: 0	Id: 0	Id: 0	d: 0	Id: 0
Seal	Gain: 6	Gain:6	Gain: 6							
Spray Seal	Threshol	Threshol	Thresho	Threshol	Thresho	Threshol	Thresho	Thresho	Threshol	Thresho
	d: 0	d: 1	Id: 1	d: 1	Id: 0	d: 1	Id: 0	Id: 0	d: 1	Id: 0
	Gain: 0	Gain: 1	Gain: 1	Gain: 3	Gain: 6	Gain: 5	Gain: 6	Gain: 6	Gain: 1	Gain: 6

Treatmen t	Rigid Conditi on	Pavem ent Defects	Rutting	Roughn ess	Ravelli ng	Linear Cracki ng	Strippi ng	Surfac e Defect s	Croc Cracki ng	Flushin g
Spray Seal w/ Major Patching	Threshol d: 0 Gain: 0	Threshol d: 1 Gain: 3	Thresho Id: 1 Gain: 3	Threshol d: 1 Gain: 4	Thresho Id: 0 Gain: 6	Threshol d: 0 Gain: 6	Thresho Id: 0 Gain: 6	Thresho Id: 0 Gain: 6	Threshol d: 1 Gain: 3	Thresho Id: 0 Gain: 6
Crack Seal	Threshol d: 0 Gain: 0	Threshol d:0 Gain:0	Thresho Id: 0 Gain: 0	Threshol d: 0 Gain: 0	Thresho Id: 0 Gain: 0	Threshol d: 1 Gain: 2	Thresho Id: 0 Gain: 0	Thresho Id: 0 Gain: 0	Threshol d: 0 Gain: 0	Thresho Id: 0 Gain: 0

Benefit Variations

Benefit variations are applied to put an extra weighting on high-criticality assets so that when funding is not sufficient to treat all assets due for treatment, the model would prioritise treating high-criticality assets.

The benefit variations applied in this model are shown in the table below. Higher variations are applied to assets that could cause a greater impact on the community and the reputation of the organisation should a failure occur.

Treatment Filter	Labels	N/A	1	2	3	4	5	6	7
Route Use	Label Name	N/A	Public Transport	School Bus	Heavy Vehicle				
	Variation	100%	300%	400%	200%				
Poad Hiorarchy	Label Name	N/A	Link	Collector	Local	Minor			
Rodd Hieldreny	Variation	100%	400%	300%	200%	100%			

Table 10. Benefit Variations

Treatment Unit Costs

Unit Costs determine the total treatment cost when multiplied by the network measure of the asset. Where the Gross Asset Cost is used as the network measure in the model, a treatment unit rate of '\$1' is used to enable the treatment cost calculation in Predictor.

For sealed roads, the unit rate is the dollar cost of applying treatment for each square metre of road. The table below details the treatment unit rates applied in the model.

A nominal unit cost of 0.01 is applied to Crack Seal treatment since the actual cost depends on the linear length of cracks and cannot be estimated by the model. The Crack Seal model is a model designed only for MASC to identify potential crack-sealing candidates and is separated from the main model as such works are not considered part of the capital works program.

Table 11. Treatment Unit Costs

Treatment	Unit Cost				
Spray Seal	6				

Treatment	Unit Cost
Spray Seal w/ Major Patching	38
AC Overlay	30
AC Overlay w/ Major Patching	55
Rehabilitation - Spray Seal	73
Rehabilitation - Asphalt	98
Concrete Rehabilitation	144
Crack Seal	0.01

Budgets

The following table depicts each funding strategy considered in the simulations and shows the available funding for each year of that strategy. Each column is linked to the strategy column in the Simulations table at the beginning of this document.

MASC's current Long Term Financial Plan states their capital funding for the next 10 years for all roads in their asset portfolio. As sealed roads and unsealed roads are modelled separately, this funding is split based on the total replacement value ratio of 73/27 between sealed roads and unsealed roads. For year 11 onwards, the funding value for year 10 is used as an estimate.

The annual depreciation for all sealed roads is calculated based on the evaluated daily depreciation of each road segment and is used to simulate the scenario where annual capital spending is equal to the annual depreciation of the asset portfolio.

Zero funding scenario is used to simulate the worst-case scenario when no funding is available while the unbounded funding scenario is used to simulate the best-case scenario when no funding constraint exists, and assets are treated immediately when their service state reaches the intervention level.

MASC asset managers also created additional funding scenarios based on their expertise to discover the most suitable funding level for their organisation. Due to the relatively long lifespan of road pavements, in addition to the standard 25-year simulation horizons, 80-year simulations were created to demonstrate the long-term effect on the overall asset performance of each intervention and funding scenario.

	LTFP	LTFP	Annual	Annual	Optimise	Optimise	Predicte	Unbounde	Zero
	Budget	Budget	Deprecia	Deprecia	d	d	d	d Budget	Fundi
Ye	(73%	(73%	tion	tion	Funding	Funding	Budget	80 Years	ng -
ar	Sealed	Sealed	(\$3.17M	(\$3.17M	- 80	- 25	80 Years		80
	Road) -	Road) -	pa) - 80	pa) - 25	Years	Years	- Trial &		Years
	80 Years	25 Years	Years	Years			Error		
1	\$1,777,51	\$1,777,51	\$3,173,114.	\$3,173,114.	\$3,431,00	\$3,431,00	\$3,431,00	\$462,437,26	\$0.00
	3.12	3.12	02	02	0.00	0.00	0.00	2.62	
2	\$1,880,69	\$1,880,69	\$3,173,114.	\$3,173,114.	\$3,435,46	\$3,435,46	\$3,435,46	\$462,437,26	\$0.00
2	9.99	9.99	02	02	0.30	0.30	0.30	2.62	

Table 12. Budget Distribution

	LTFP	LTFP	Annual	Annual	Optimise	Optimise	Predicte	Unbounde	Zero
	Budget	Budget	Deprecia	Deprecia	d F "	d	d	d Budget	Fundi
Ye	(73% Socied	(/3%			Funding	Funding	Budget	80 Years	ng -
ar	Road) -	Road) -	(40.171%) na) - 80	(93.1710)	- ou Years	- 20 Years	- Trial &		Years
	80 Years	25 Years	Years	Years	roars	roars	Error		TOOLD
	\$1.843.29	\$1.843.29	\$3,173,114.	\$3,173,114.	\$3.439.92	\$3.439.92	\$3,439,92	\$462.437.26	\$0.00
3	5.07	5.07	02	02	6.40	6.40	6.40	2.62	ŶŨĨŨŨ
4	\$1,574,87 8.40	\$1,574,87 8.40	\$3,173,114. 02	\$3,173,114. 02	\$3,444,39 8.30	\$3,444,39 8.30	\$3,444,39 8.30	\$462,437,26 2.62	\$0.00
5	\$1,487,51 0.58	\$1,487,51 0.58	\$3,173,114. 02	\$3,173,114. 02	\$3,448,87 6.02	\$3,448,87 6.02	\$3,448,87 6.02	\$462,437,26 2.62	\$0.00
6	\$1,584,27 8.74	\$1,584,27 8.74	\$3,173,114. 02	\$3,173,114. 02	\$3,453,35 9.56	\$3,453,35 9.56	\$3,453,35 9.56	\$462,437,26 2.62	\$0.00
7	\$1,870,71 3.08	\$1,870,71 3.08	\$3,173,114. 02	\$3,173,114. 02	\$3,457,84 8.93	\$3,457,84 8.93	\$3,457,84 8.93	\$462,437,26 2.62	\$0.00
8	\$1,886,60 3.73	\$1,886,60 3.73	\$3,173,114. 02	\$3,173,114. 02	\$3,462,34 4.13	\$3,462,34 4.13	\$3,462,34 4.13	\$462,437,26 2.62	\$0.00
9	\$1,949,05 9.69	\$1,949,05 9.69	\$3,173,114. 02	\$3,173,114. 02	\$3,466,84 5.18	\$3,466,84 5.18	\$3,466,84 5.18	\$462,437,26 2.62	\$0.00
10	\$1,979,39 6.75	\$1,979,39 6.75	\$3,173,114. 02	\$3,173,114. 02	\$3,471,35 2.08	\$3,471,35 2.08	\$3,471,35 2.08	\$462,437,26 2.62	\$0.00
11	\$1,979,39 6.75	\$1,979,39 6.75	\$3,173,114. 02	\$3,173,114. 02	\$3,475,86 4.84	\$3,475,86 4.84	\$3,475,86 4.84	\$462,437,26 2.62	\$0.00
12	\$1,979,39 6.75	\$1,979,39 6.75	\$3,173,114. 02	\$3,173,114. 02	\$3,480,38 3.46	\$3,480,38 3.46	\$3,480,38 3.46	\$462,437,26 2.62	\$0.00
13	\$1,979,39 6.75	\$1,979,39 6.75	\$3,173,114. 02	\$3,173,114. 02	\$3,484,90 7.96	\$3,484,90 7.96	\$3,484,90 7.96	\$462,437,26 2.62	\$0.00
14	\$1,979,39 6.75	\$1,979,39 6.75	\$3,173,114. 02	\$3,173,114. 02	\$3,489,43 8.34	\$3,489,43 8.34	\$3,489,43 8.34	\$462,437,26 2.62	\$0.00
15	\$1,979,39 6.75	\$1,979,39 6.75	\$3,173,114. 02	\$3,173,114. 02	\$3,493,97 4.61	\$3,493,97 4.61	\$3,493,97 4.61	\$462,437,26 2.62	\$0.00
16	\$1,979,39 6.75	\$1,979,39 6.75	\$3,173,114. 02	\$3,173,114. 02	\$3,498,51 6.78	\$3,498,51 6.78	\$3,498,51 6.78	\$462,437,26 2.62	\$0.00
17	\$1,979,39 6.75	\$1,979,39 6.75	\$3,173,114. 02	\$3,173,114. 02	\$3,503,06 4.85	\$3,503,06 4.85	\$3,503,06 4.85	\$462,437,26 2.62	\$0.00
18	\$1,979,39 6.75	\$1,979,39 6.75	\$3,173,114. 02	\$3,173,114. 02	\$3,507,61 8.83	\$3,507,61 8.83	\$3,507,61 8.83	\$462,437,26 2.62	\$0.00
19	\$1,979,39 6.75	\$1,979,39 6.75	\$3,173,114. 02	\$3,173,114. 02	\$3,512,17 8.73	\$3,512,17 8.73	\$3,512,17 8.73	\$462,437,26 2.62	\$0.00
20	\$1,979,39 6.75	\$1,979,39 6.75	\$3,173,114. 02	\$3,173,114. 02	\$3,516,74 4.56	\$3,516,74 4.56	\$3,516,74 4.56	\$462,437,26 2.62	\$0.00
21	\$1,979,39 6.75	\$1,979,39 6.75	\$3,173,114. 02	\$3,173,114. 02	\$3,521,31 6.33	\$3,521,31 6.33	\$3,521,31 6.33	\$462,437,26 2.62	\$0.00

	LTFP	LTFP	Annual	Annual	Optimise	Optimise	Predicte	Unbounde	Zero
	Budget	Budget	Deprecia	Deprecia	d	d	d	d Budget	Fundi
Ye	(73%	(73%	tion	tion	Funding	Funding	Budget	80 Years	ng -
ar	Sealed	Sealed	(\$3.17M	(\$3.1/M	- 80 Vogra	- 25 Volara	80 Years		80 Vo gra
	RODD) -	RODA) -	pa) - 80 Vears	pd) - 25 Vegrs	rears	rears	- Iriai &		rears
	00 16013	20 Teurs	rears	rears			LITUI		
22	\$1,979,39 6.75	\$1,979,39 6.75	\$3,173,114. 02	\$3,173,114. 02	\$3,525,89 4.04	\$3,525,89 4.04	\$3,525,89 4.04	\$462,437,26 2.62	\$0.00
23	\$1,979,39 6.75	\$1,979,39 6.75	\$3,173,114. 02	\$3,173,114. 02	\$3,530,47 7.70	\$3,530,47 7.70	\$3,530,47 7.70	\$462,437,26 2.62	\$0.00
24	\$1,979,39 6.75	\$1,979,39 6.75	\$3,173,114. 02	\$3,173,114. 02	\$3,535,06 7.32	\$3,535,06 7.32	\$3,535,06 7.32	\$462,437,26 2.62	\$0.00
25	\$1,979,39 6.75	\$1,979,39 6.75	\$3,173,114. 02	\$3,173,114. 02	\$3,539,66 2.91	\$3,539,66 2.91	\$3,539,66 2.91	\$462,437,26 2.62	\$0.00
26	\$1,979,39 6.75		\$3,173,114. 02		\$3,544,26 4.47		\$3,544,26 4.47	\$462,437,26 2.62	\$0.00
27	\$1,979,39 6.75		\$3,173,114. 02		\$3,548,87 2.01		\$3,548,87 2.01	\$462,437,26 2.62	\$0.00
28	\$1,979,39 6.75		\$3,173,114. 02		\$3,553,48 5.54		\$3,553,48 5.54	\$462,437,26 2.62	\$0.00
29	\$1,979,39 6.75		\$3,173,114. 02		\$3,558,10 5.07		\$3,558,10 5.07	\$462,437,26 2.62	\$0.00
30	\$1,979,39 6.75		\$3,173,114. 02		\$3,562,73 0.61		\$3,562,73 0.61	\$462,437,26 2.62	\$0.00
31	\$1,979,39 6.75		\$3,173,114. 02		\$3,567,36 2.16		\$3,567,36 2.16	\$462,437,26 2.62	\$0.00
32	\$1,979,39 6.75		\$3,173,114. 02		\$3,571,99 9.73		\$3,571,99 9.73	\$462,437,26 2.62	\$0.00
33	\$1,979,39 6.75		\$3,173,114. 02		\$3,576,64 3.33		\$3,576,64 3.33	\$462,437,26 2.62	\$0.00
34	\$1,979,39 6.75		\$3,173,114. 02		\$3,581,29 2.97		\$3,581,29 2.97	\$462,437,26 2.62	\$0.00
35	\$1,979,39 6.75		\$3,173,114. 02		\$3,585,94 8.65		\$3,585,94 8.65	\$462,437,26 2.62	\$0.00
36	\$1,979,39 6.75		\$3,173,114. 02		\$3,590,61 0.38		\$3,590,61 0.38	\$462,437,26 2.62	\$0.00
37	\$1,979,39 6.75		\$3,173,114. 02		\$3,595,27 8.17		\$3,595,27 8.17	\$462,437,26 2.62	\$0.00
38	\$1,979,39 6.75		\$3,173,114. 02		\$3,599,95 2.03		\$3,599,95 2.03	\$462,437,26 2.62	\$0.00
39	\$1,979,39 6.75		\$3,173,114. 02		\$3,604,63 1.97		\$3,604,63 1.97	\$462,437,26 2.62	\$0.00
40	\$1,979,39 6.75		\$3,173,114. 02		\$3,609,31 7.99		\$3,609,31 7.99	\$462,437,26 2.62	\$0.00

	LTFP	LTFP	Annual	Annual	Optimise	Optimise	Predicte	Unbounde	Zero
	Budget	Budget	Deprecia	Deprecia	d Formalistati	d Formalist at	d	d Budget	Fundi
re	(73% Sealed	(73% Sealed	TION (\$3.1764	TION (\$3.17M	Funding	Funding	80 Years	80 rears	ng - 80
G	Road) -	Road) -	(40.1714) pa) - 80	pa) - 25	Years	Years	- Trial &		Years
	80 Years	25 Years	Years	Years			Error		
41	\$1,979,39		\$3,173,114.		\$3,614,01		\$3,614,01	\$462,437,26	\$0.00
	0./5		02		0.10		0.10	2.02	\$0.00
42	\$1,979,39 6.75		\$3,173,114. 02		\$3,818,70 8.31		\$3,818,70 8.31	\$462,437,26 2.62	ŞU.UU
43	\$1,979,39 6.75		\$3,173,114. 02		\$3,623,41 2.63		\$3,623,41 2.63	\$462,437,26 2.62	\$0.00
44	\$1,979,39 6.75		\$3,173,114. 02		\$3,628,12 3.07		\$3,628,12 3.07	\$462,437,26 2.62	\$0.00
45	\$1,979,39 6.75		\$3,173,114. 02		\$3,632,83 9.63		\$3,632,83 9.63	\$462,437,26 2.62	\$0.00
46	\$1,979,39 6.75		\$3,173,114. 02		\$3,637,56 2.32		\$3,637,56 2.32	\$462,437,26 2.62	\$0.00
47	\$1,979,39 6.75		\$3,173,114. 02		\$3,6 42,29 1.15		\$3,642,29 1.15	\$462,437,26 2.62	\$0.00
48	\$1,979,39 6.75		\$3,173,114. 02		\$3,647,02 6.13		\$3,647,02 6.13	\$462,437,26 2.62	\$0.00
49	\$1,979,39 6.75		\$3,173,114. 02		\$3,651,76 7.26		\$3,651,76 7.26	\$462,437,26 2.62	\$0.00
50	\$1,979,39 6.75		\$3,173,114. 02		\$3,656,51 4.56		\$3,656,51 4. 56	\$462,437,26 2.62	\$0.00
51	\$1,979,39 6.75		\$3,173,114. 02		\$3,661,26 8.03		\$3,661,26 8.03	\$462,437,26 2.62	\$0.00
52	\$1,979,39 6.75		\$3,173,114. 02		\$3,666,02 7.68		\$3,666,02 7.68	\$462,437,26 2.62	\$0.00
53	\$1,979,39 6.75		\$3,173,114. 02		\$3,670,79 3.52		\$3,670,79 3.52	\$462,437,26 2.62	\$0.00
54	\$1,979,39 6.75		\$3,173,114. 02		\$3,675,56 5.55		\$3,675,56 5.55	\$462,437,26 2.62	\$0.00
55	\$1,979,39 6.75		\$3,173,114. 02		\$3,680,34 3.79		\$3,680,34 3.79	\$462,437,26 2.62	\$0.00
56	\$1,979,39 6.75		\$3,173,114. 02		\$3,685,12 8.24		\$3,685,12 8.24	\$462,437,26 2.62	\$0.00
57	\$1,979,39 6.75		\$3,173,114. 02		\$3,689,91 8.91		\$3,689,91 8.91	\$462,437,26 2.62	\$0.00
58	\$1,979,39 6.75		\$3,173,114. 02		\$3,694,71 5.80		\$3,694,71 5.80	\$462,437,26 2.62	\$0.00
59	\$1,979,39 6.75		\$3,173,114. 02		\$3,699,51 8.93		\$3,699,51 8.93	\$462,437,26 2.62	\$0.00

	LTFP	LTFP	Annual	Annual	Optimise	Optimise	Predicte	Unbounde	Zero
Ve	Budget	Budget	Deprecia	Deprecia	d	d	d	d Budget	Fundi
ar	Sealed	Sealed	(\$3.17M	(\$3.17M	- 80	- 25	80 Years	ou rears	ng - 80
C.I.	Road) -	Road) -	pa) - 80	pa) - 25	Years	Years	- Trial &		Years
	80 Years	, 25 Years	Years	Years			Error		
60	\$1,979,39		\$3,173,114.		\$3,704,32		\$3,704,32	\$462,437,26	\$0.00
	0.75		02		0.30		0.30	2.02	¢0.00
61	\$1,979,39 6.75		\$3,173,114. 02		\$3,709,14 3.93		\$3,709,14 3.93	\$462,437,26 2.62	ŞU.UU
62	\$1,979,39 6.75		\$3,173,114. 02		\$3,713,96 5.82		\$3,713,96 5.82	\$462,437,26 2.62	\$0.00
63	\$1,979,39 6.75		\$3,173,114. 02		\$3,718,79 3.98		\$3,718,79 3.98	\$462,437,26 2.62	\$0.00
64	\$1,979,39 6 75		\$3,173,114. 02		\$3,723,62 8 41		\$3,723,62 8 41	\$462,437,26 2.62	\$0.00
	\$1 070 30		\$2 172 114		\$3 729 44		\$2 729 44	\$442 427 24	\$0.00
65	6.75		, 93, 173, 114. 02		9.13		9.13	\$462,437,28 2.62	ŞU.UU
66	\$1,979,39 6.75		\$3,173,114. 02		\$3,733,31 6.14		\$3,733,31 6.14	\$462,437,26 2.62	\$0.00
67	\$1,979,39 6.75		\$3,173,114. 02		\$3,738,16 9.45		\$3,738,16 9.45	\$462,437,26 2.62	\$0.00
68	\$1,979,39 6.75		\$3,173,114. 02		\$3,743,02 9.07		\$3,743,02 9.07	\$462,437,26 2.62	\$0.00
69	\$1,979,39 6.75		\$3,173,114. 02		\$3,747,89 5.01		\$3,747,89 5.01	\$462,437,26 2.62	\$0.00
70	\$1,979,39 6.75		\$3,173,114. 02		\$3,752,76 7.27		\$3,752,76 7.27	\$462,437,26 2.62	\$0.00
71	\$1,979,39 6.75		\$3,173,114. 02		\$3,757,64 5.87		\$3,757,64 5.87	\$462,437,26 2.62	\$0.00
72	\$1,979,39 6.75		\$3,173,114. 02		\$3,762,53 0.81		\$3,762,53 0.81	\$462,437,26 2.62	\$0.00
73	\$1,979,39 6.75		\$3,173,114. 02		\$3,767,42 2.10		\$3,767,42 2.10	\$462,437,26 2.62	\$0.00
74	\$1,979,39 6.75		\$3,173,114. 02		\$3,772,31 9.75		\$3,772,31 9.75	\$462,437,26 2.62	\$0.00
75	\$1,979,39 6.75		\$3,173,114. 02		\$3,777,22 3.77		\$3,777,22 3.77	\$462,437,26 2.62	\$0.00
76	\$1,979,39 6.75		\$3,173,114. 02		\$3,782,13 4.16		\$3,782,13 4.16	\$462,437,26 2.62	\$0.00
77	\$1,979,39 6.75		\$3,173,114. 02		\$3,787,05 0.93		\$3,787,05 0.93	\$462,437,26 2.62	\$0.00
78	\$1,979,39 6.75		\$3,173,114. 02		\$3,791,97 4.10		\$3,791,97 4.10	\$462,437,26 2.62	\$0.00

Ye ar	LTFP Budget (73% Sealed Road) - 80 Years	LTFP Budget (73% Sealed Road) - 25 Years	Annual Deprecia tion (\$3.17M pa) - 80 Years	Annual Deprecia tion (\$3.17M pa) - 25 Years	Optimise d Funding - 80 Years	Optimise d Funding - 25 Years	Predicte d Budget 80 Years - Trial & Error	Unbounde d Budget 80 Years	Zero Fundi ng - 80 Years
79	\$1,979,39 6.75		\$3,173,114. 02		\$3,796,90 3.67		\$3,796,90 3.67	\$462,437,26 2.62	\$0.00
80	\$1,979,39 6.75		\$3,173,114. 02		\$3,801,83 9.64		\$3,801,83 9.64	\$462,437,26 2.62	\$0.00

Results

Simulations

Simulations combine asset data, model (life cycle and decision logic) and strategy (treatment unit costs and available budget) to predict network performance and associated costs over a defined forecast period. Multiple simulations can be compared in a 'what if' style analysis to aid informed decision-making. MASC asset managers took an active part in the development of the models and have created a number of simulations based on their expertise in their asset portfolio. These simulations are shown in the table below.

Simulation	Years	Data	Model	Strategy	NM Unit	Reference Date
Op 1 = MS Model + LTFP + 80 Years	80	Sealed Roads Data 2023	2023 Sealed Road - Milestone Model	LTFP Budget (73% Sealed Road) - 80 Years	Square Metres	1/07/2022
Op 2 = MS Model + LTFP + 25 Years	25	Sealed Roads Data 2023	2023 Sealed Road - Milestone Model	LTFP Budget (73% Sealed Road) - 25 Years	Square Metres	1/07/2022
Op 3 = MS Model + Annual Depreciation + 80 Years	80	Sealed Roads Data 2023	2023 Sealed Road - Milestone Model	Annual Depreciation (\$3.17M pa) - 80 Years	Square Metres	1/07/2022
Op 4 = MS Model + Annual Depreciation + 25 Years	25	Sealed Roads Data 2023	2023 Sealed Road - Milestone Model	Annual Depreciation (\$3.17M pa) - 25 Years	Square Metres	1/07/2022
Op 5 = MS Model + Optimised Funding + 80 Years	80	Sealed Roads Data 2023	2023 Sealed Road - Milestone Model	Optimised Funding - 80 Years	Square Metres	1/07/2022
Op 6 = MS Model + Optimised Funding + 25 Years	25	Sealed Roads Data 2023	2023 Sealed Road - Milestone Model	Optimised Funding - 25 Years	Square Metres	1/07/2022

Table 13. List of simulations and their high-level components.

Predictor Web App

Simulation results of the predictive life cycle modelling are published to and available within the Mount Alexander Shire Council Predictor Web App portfolio workspace at the link below (accessible to invited members).

Mount Alexander Shire Council – Sealed Roads Workspace

Improvement Plan

A number of opportunities have been identified as possible next steps in the maturity of the life cycle models. An outline of the key opportunities is provided in the following table and should be considered for the next model iteration updates, noting it is not intended to be an exhaustive list.

Section	Improvement Item	Improvement Opportunity
Data	Overall data quality is excellent despite a small number of assets missing condition score and rating date data.	There is an opportunity to review the existing data and further improve the data quality.
Treatment Costs	The unit rate of treatment from the previous version of the model is kept during this model update.	There is an opportunity to review asset replacement costs to ensure unit costs used in the forecasts are up to date.
Maintenance Costs	No maintenance cost calibration was applied to each service state.	There is an opportunity to include nominal maintenance cost rates by service state to support the prediction of required maintenance cost forecasts across each simulation.
Asset Criticality	No criticality rankings were applied to the data.	Allocation of criticality rankings to all assets would support enhanced optimisation of treatment candidates within constrained funding scenarios by weighting benefit calculations relative to an asset's criticality.
Risk	No consequence of failure (CoF) score was applied to the data.	Assignment of CoF scores to assets would support the use of risk profile analysis in the forecasts.

Table 14. Improvement Plan.

Attachment 12.2.2.3

Orightly

Mount Alexander Shire Council

Unsealed Roads

Life Cycle Modelling: Basis of Design

Version 1.3 June 2023

Document Control

Version	Date	Changes	Issuer	Approved
1.0	16/11/2022	Creation of document	Jack Cao	
1.1	01/02/2023	Updated based on model updates	Jack Cao	
1.2	03/05/2023	Updated based on the final model	Jack Cao	
1.3	12/06/2023	Reviewed and updated	Jack Cao	

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Introduction

Background

Mount Alexander Shire Council (MASC) engaged Brightly to assist with predictive life cycle modelling of the Unsealed Roads asset portfolio, utilising currently available asset and condition/performance data as of January 2023.

Purpose

Predictive modelling is used to analyse and present the impact on future asset condition/performance and life cycle costs resulting from a number of alternative asset investment and service level options. Further, it provides a list of proposed candidate treatments for the development of the capital works program.

Document Structure

This Basis of Design (BoD) provides an initial overview of the model simulations generated, as well as any underlying assumptions and associated points to note. The following sections then outline in more detail the key model configuration elements that underpin the simulations.

Methodology

The following sections outline the methodology used in building, configuring, and running the predictive model for the Unsealed Roads portfolio.

Data

The Brightly Predictor data file was created by extracting raw data from the dataset provided by IMG and MASC. There are 1,377 unsealed road segments in the dataset provided, with a total network measure (area) of 3,569,593.10sq.m. The current estimated total replacement value (utilising unit rates used in the model and detailed in the Treatment Unit Cost section later in this report) for this asset portfolio is ~\$26.8M as of January 2023.

These key figures are highlighted in the following table.

Table 1. Portfolio Overview Based on Source Data

Asset Group	Number of Segments	Total Network Measure	Total Replacement Value	
Unsealed Roads	1,377	3,569,593.10sq.m	\$26.8M	

The following is a summary of key items noted in relation to the dataset (not intended to be an exhaustive list).

- 5 assets have a width of 0, resulting in a Network Measure of 0sq.m.
- 16 assets have no condition rating date.
- 4 assets have no condition data.

Copies of both the prepared data import file and Predictor transformed data are attached below.





Data Import File - Transformed Data Unsealed Roads 202 File - Unsealed Road

Service Criteria

Service Criteria are indicators/parameters that define the health/serviceability of an asset and are used within treatment criteria to determine if certain treatments are required for an asset.

The Default Life is the life of an asset where one was not explicitly provided within the data. According to MASC's data, all unsealed roads have a useful life of 20 years, hence a default life of 20 is applied across the board.

The degradation profile defines the statistical relationship between the percentage of Remaining Useful Life and Service State. The standard degradation profile for unsealed roads is applied in this model to best represent the degradation behaviour of MASC's unsealed road assets.

The Degradation Strategy defines the probabilistic distribution of time taken for service criteria to move between each service state on the degradation profile. A higher variance reflects a wider distribution around the central tendency and therefore greater variation in the actual service life of assets and forecasted treatments.

This is used to simulate the real-world behaviour of assets where the deterioration rates can vary between individuals. Low variance is used in this case, due to the relatively short lifespan of unsealed roads.

Service Criteria	Rem	ainin	g Life	» % bγ	/ Serv	ice St	ate	life-cycle Chart	Default	Degradation
Service Ciliend	0	1	2	3	4	5	6		Life	Strategy
Unsealed Condition	100	91	73	50	27	14	0		20	Low Variance

Table 2. Service Criteria, Degradation Profile and Degradation Strategy

Service Indices

A Service Index is a defined combination of specific Service Criteria and associated weightings to calculate an aggregate metric reflecting some aspect of the asset's health and serviceability. It is used as a reportable metric only to compare against other assets and is not utilised within the Treatment Criteria.

OSI (Overall Service Index) is the default Service Index in the life cycle model. No additional Service Indices were created in this instance. Unsealed Condition is the only Service Criteria available and therefore contributes 100% to the calculation of the OSI.

Table 3. Service Indices

Service Index	Method	Service Criteria	Weighting %
OSI	Weighted Average	Unsealed Condition	100

Life-cycle Variations

The table below outlines the useful life of each type of road.

Table 4. Useful Life for each Road Type

Road Type	Useful Life
Local	24
Minor	24
Link	17
Collector	17
Other	20

Life-cycle variations are used to adjust the default life of assets based on their hierarchy. All unsealed roads have a useful life of 20 years according to MASC's asset data. In this model, a 20% increase in useful life applies to local or minor roads due to them having relatively lower traffic and thus less wear and tear. A 15% reduction applies to link and collector roads due to the relatively higher duty they are subject to. These figures were configured in the previous iterations of the model and are left unchanged during this model update.

Service Criteria	Variation Name	Variance %
Unsealed Condition	Local or Minor	20
Unsealed Condition	-15	

Treatments

Treatments are works performed upon an asset to improve its serviceability/health and affect the life-cycle path. Below are the defined treatments as applied within this model and the corresponding treatment types.

Table 6. Treatments and Treatment Types

Treatment	Treatment Type
Unsealed Resheet	Renewal

Treatment Filters

Treatment Filters are attributes of an asset that would affect their candidacy for Treatment to determine what work is carried out of which asset. Treatment Filters can also be used for configuring benefit variation for Predictor to prioritise high-criticality asset groups. Each Treatment Filter can have up to eight categories (including N/A) where the asset attribute can be grouped.

In MASC's unsealed roads model, three treatment filters are configured. The table below indicates the defined category names for each Treatment Filter as applied in this model.

Table 7. Treatment Filters

Name	Labels								
Name	N/A	1	2	3	4	5	6	7	
Route Use	N/A	Public Transport	School Bus	Heavy Vehicle					
Road Hierarchy	N/A	Link	Collector	Local	Minor				
Classification		Urban	Rural						

Treatment Situations

For each treatment, there may be various situations in which a treatment is triggered for an asset, which are referred to as Treatment Situations. Each Treatment Situation defines a range of values for each Service Criteria and selected Treatment Filter values that would indicate a Treatment should be applied.

MASC asset managers worked closely with Brightly during the development of the treatment logic of this model. After the standard model (referred to as "Unsealed Milestone Model 2023") was issued, MASC configured two additional models "Unsealed Early Intervention Model 2023", which represents the scenario of intervening at an earlier Service State level, and "Unsealed Failure Intervention Model 2023", which represents intervening at a later Service State level, usually at the end-of-life stage of an asset.

Below is a written representation of the logic applied in the model, where minor roads refer to roads with a Road Hierarchy of "Local", "Minor", or "N/A", and major roads refer to the roads with a Road Hierarchy of "Link" or "Collector".

Table 8. Treatment Situations

Model Treatment		Road Hierarchy	Intervention Level
Unsequed Milestone Model 2023	Unsequed Respect	Local, Minor, N/A	>=5
onsedied Milesione Model 2025		Link, Collector	>=4
Unsequed Early Intervention Model 2023	Unrealed Perheet	Local, Minor, N/A	>=4
Unsealed Early Intervention Model 2023	Unsedied Kesheel	Link, Collector	>=3
Unsequed Equivre Intervention Model 2023	Unrealed Perheet	Local, Minor, N/A	=6
	Unscaled Kesheer	Link, Collector	>=5

Treatment Effects

Treatment effects define how an asset changes regarding its Service Criteria after a particular treatment is applied.



Figure 1. The effect of a treatment when applied to an asset is defined through its Gain and Threshold.

Threshold is the service state (or condition) value that is the best that an asset can attain when the defined treatment is applied due to reaching the defined intervention point. Gain is the number of states or condition values, the asset improves from the applied treatment. **Error! Reference source not found.** defines the relationship between the changes to service states and the remaining useful life of the asset.

In this model, a gain of 6 and a threshold of 0 is applied, meaning through the treatment "Unsealed Resheet", the service state of an asset is improved to 0 (brand new).

Table 9. Treatment Effects

Model	Treatment	Gain	Threshold
Unsealed Milestone Model 2023	Unsealed Resheet	6	0
Unsealed Early Intervention Model 2023	Unsealed Resheet	6	0

Model	Treatment	Gain	Threshold
Unsealed Failure Intervention Model 2023	Unsealed Resheet	6	0

Benefit Variations

Benefit variations are applied to put an extra weighting on high-criticality assets so that when funding is not sufficient to treat all assets due for treatment, the model would prioritise treating high-criticality assets.

The benefit variations applied in this model are shown in the table below. Higher variations are applied to assets that could cause a greater impact on the community and the reputation of the organisation should a failure occur.

Treatment Filter	Labels	N/A	1	2	3	4	5	6	7
Routellse	Label Name	N/A	Public Transport	School Bus	Heavy Vehicle				
KOOIE USE	Variation	100%	300%	400%	200%				
Poad Hierarchy	Label Name	N/A	Link	Collector	Local	Minor			
Road Hierarchy	Variation	100%	400%	300%	200%	100%			

Table 10. Benefit Variations

Treatment Unit Costs

Unit Costs determine the total treatment cost when multiplied by the network measure of the asset. Where the Gross Asset Cost is used as the network measure in the model, a treatment unit rate of '\$1' is used to enable the treatment cost calculation in Predictor.

For unsealed roads, the unit rate is the dollar cost of applying treatment for each square metre of road. The table below details the treatment unit rate applied in the model.

Table 11. Treatment Unit Costs

Treatment	Unit Cost
Unsealed Resheet	7.5

Budgets

The following table depicts each funding strategy considered in the simulations and shows the available funding for each year of that strategy. Each column is linked to the strategy column in the Simulations table at the beginning of this document.

MASC's current Long Term Financial Plan states their capital funding for the next 10 years for all roads in their asset portfolio. As sealed roads and unsealed roads are modelled separately, this funding is split based on the total replacement value ratio of 73/27 between sealed roads and unsealed roads.

The annual depreciation for all unsealed roads is calculated based on the evaluated daily depreciation of each road segment and is used to simulate the scenario where annual capital spending is equal to the annual depreciation of the asset portfolio.

Zero funding scenario is used to simulate the worst-case scenario when no funding is available while the unbounded funding scenario is used to simulate the best-case scenario when no funding constraint exists, and assets are treated immediately when their service state reaches the intervention level.

MASC asset managers also created additional funding scenarios based on their expertise to discover the most suitable funding level for their organisation.

Year	LTFP Budget (27% for Unsealed Road)	Annual Depreciation (\$1.09M pa)	Optimised Funding - 25 Years	Unbound Funding Scenario	Zero Funding Scenario	Trial & Error - Predicted Feasible LTFP Budget
1	\$1,972,309.08	\$1,078,239.38	\$1,670,000.00	\$26,771,948.25	\$0.00	\$1,670,000.00
2	\$2,086,804.11	\$1,078,239.38	\$1,695,050.00	\$26,771,948.25	\$0.00	\$1,695,050.00
3	\$2,045,300.01	\$1,078,239.38	\$1,720,475.75	\$26,771,948.25	\$0.00	\$1,720,475.75
4	\$1,747,467.81	\$1,078,239.38	\$1,746,282.89	\$26,771,948.25	\$0.00	\$1,746,282.89
5	\$1,650,525.45	\$1,078,239.38	\$1,772,477.13	\$26,771,948.25	\$0.00	\$1,772,477.13
6	\$1,757,898.33	\$1,078,239.38	\$1,799,064.29	\$26,771,948.25	\$0.00	\$1,799,064.29
7	\$2,075,722.74	\$1,078,239.38	\$1,826,050.25	\$26,771,948.25	\$0.00	\$1,826,050.25
8	\$2,093,354.82	\$1,078,239.38	\$1,853,441.00	\$26,771,948.25	\$0.00	\$1,853,441.00
9	\$2,162,655.27	\$1,078,239.38	\$1,881,242.61	\$26,771,948.25	\$0.00	\$1,881,242.61
10	\$2,162,655.27	\$1,078,239.38	\$1,909,461.25	\$26,771,948.25	\$0.00	\$1,909,461.25
11	\$2,162,655.27	\$1,078,239.38	\$1,938,103.17	\$26,771,948.25	\$0.00	\$1,938,103.17
12	\$2,162,655.27	\$1,078,239.38	\$1,967,174.72	\$26,771,948.25	\$0.00	\$1,967,174.72
13	\$2,162,655.27	\$1,078,239.38	\$1,996,682.34	\$26,771,948.25	\$0.00	\$1,996,682.34
14	\$2,162,655.27	\$1,078,239.38	\$2,026,632.58	\$26,771,948.25	\$0.00	\$2,026,632.58
15	\$2,162,655.27	\$1,078,239.38	\$2,057,032.07	\$26,771,948.25	\$0.00	\$2,057,032.07
16	\$2,162,655.27	\$1,078,239.38	\$2,087,887.55	\$26,771,948.25	\$0.00	\$2,087,887.55
17	\$2,162,655.27	\$1,078,239.38	\$2,119,205.86	\$26,771,948.25	\$0.00	\$2,119,205.86
18	\$2,162,655.27	\$1,078,239.38	\$2,150,993.95	\$26,771,948.25	\$0.00	\$2,150,993.95
19	\$2,162,655.27	\$1,078,239.38	\$2,183,258.86	\$26,771,948.25	\$0.00	\$2,183,258.86
20	\$2,162,655.27	\$1,078,239.38	\$2,216,007.74	\$26,771,948.25	\$0.00	\$2,216,007.74
21	\$2,162,655.27	\$1,078,239.38	\$2,249,247.86	\$26,771,948.25	\$0.00	\$2,249,247.86
22	\$2,162,655.27	\$1,078,239.38	\$2,282,986.58	\$26,771,948.25	\$0.00	\$2,282,986.58
23	\$2,162,655.27	\$1,078,239.38	\$2,317,231.38	\$26,771,948.25	\$0.00	\$2,317,231.38
24	\$2,162,655.27	\$1,078,239.38	\$2,351,989.85	\$26,771,948.25	\$0.00	\$2,351,989.85

Table 12. Budget Distribution

Year	LTFP Budget (27% for Unsealed Road)	Annual Depreciation (\$1.09M pa)	Optimised Funding - 25 Years	Unbound Funding Scenario	Zero Funding Scenario	Trial & Error - Predicted Feasible LTFP Budget
25	\$2,162,655.27	\$1,078,239.38	\$2,387,269.70	\$26,771,948.25	\$0.00	\$2,387,269.70

Result

Simulations

Simulations combine asset data, model (life cycle and decision logic) and strategy (treatment unit costs and available budget) to predict network performance and associated costs over a defined forecast period. Multiple simulations can be compared in a 'what if' style analysis to aid informed decision-making. MASC asset managers took an active part in the development of the models and have created a number of simulations based on their expertise in their asset portfolio. These simulations are shown in the table below.

Simulation	Years	Data	Model	Strategy	NM Unit	Reference Date
Option 1 - US Milestone Model with LTFP (27% for unsealed)	25	Unsealed Roads Data 2023	LTFP Budget (27% for Unsealed Road)	Unsealed Milestone Model 2023	Square Metres	1/07/2022
Option 2 - US Early Intervention Model with LTFP(27% for unsealed Road)	25	Unsealed Roads Data 2023	LTFP Budget (27% for Unsealed Road)	Unsealed Early Intervention Model 2023	Square Metres	1/07/2022
Option 3 - US Failure Intervention Model with LTFP(27% for unsealed Road)	25	Unsealed Roads Data 2023	LTFP Budget (27% for Unsealed Road)	Unsealed Failure Intervention Model 2023	Square Metres	1/07/2022
Option 4 - US Milestone Model with \$1.09 M Annual Depreciation	25	Unsealed Roads Data 2023	Annual Depreciation (\$1.09M pa)	Unsealed Milestone Model 2023	Square Metres	1/07/2022
Option 5 - US Milestone Model with Optimised Funding 25 years	25	Unsealed Roads Data 2023	Optimised Funding - 25 Years	Unsealed Milestone Model 2023	Square Metres	1/07/2022
Option 6 - US Milestone Model with Unbound Budget	25	Unsealed Roads Data 2023	Unbound Funding Scenario	Unsealed Milestone Model 2023	Square Metres	1/07/2022
Option 7 - US Milestone Model with \$0 Funding	25	Unsealed Roads Data 2023	Zero Funding Scenario	Unsealed Milestone Model 2023	Square Metres	1/07/2022
Trial & Error - US Mildstone Model with Predicted Feasible Budget	25	Unsealed Roads Data 2023	Trial & Error - Predicted Feasible LTFP Budget	Unsealed Milestone Model 2023	Square Metres	1/07/2022

Table 13. List of simulations and their high-level components.

Predictor Web App

Simulation results of the predictive life cycle modelling are published to and available within the Mount Alexander Shire Council Predictor Web App portfolio workspace at the link below (accessible to invited members).

Mount Alexander Shire Council – Unsealed Roads Workspace

Improvement Plan

A number of opportunities have been identified as possible next steps in the maturity of the life cycle models. An outline of the key opportunities is provided in the following table and should be considered for the next model iteration updates, noting it is not intended to be an exhaustive list.

Section	Improvement Item	Improvement Opportunity
Data	Overall data quality is excellent despite a small number of assets missing condition score and rating date data.	There is an opportunity to review the existing data and further improve the data quality.
Treatment Costs	The unit rate of treatment from the previous version of the model is kept during this model update.	There is an opportunity to review asset replacement costs to ensure unit costs used in the forecasts are up to date.
Maintenance Costs	No maintenance cost calibration was applied to each service state.	There is an opportunity to include nominal maintenance cost rates by service state to support the prediction of required maintenance cost forecasts across each simulation.
Asset Criticality	No criticality rankings were applied to the data.	Allocation of criticality rankings to all assets would support enhanced optimisation of treatment candidates within constrained funding scenarios by weighting benefit calculations relative to an asset's criticality.
Risk	No consequence of failure (CoF) score was applied to the data.	Assignment of CoF scores to assets would support the use of risk profile analysis in the forecasts.

Table 14. Improvement Plan.



Infrastructure Asset Management Plan

Part D – Drainage

August 2023

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A thriving community working together to create a sustainable and vibrant future



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1 Overview

The Asset Management Plan (AMP) encompasses all the assets under Council's control and connects the investment of community wealth with service outcomes. The Drainage Asset Management Plan aims to enable the provision of agreed levels of service throughout the entire drainage asset lifecycle within financial, resource and risk constraints.

The AMP should not be confused with the Road Management Plan (RMP) which is a statutory plan under the Road Management Act 2004 that sets out inspection and hazard maintenance regimes for assets within public road reserves.

1.1 Alignment with Council Plan

The development of AMPs incorporating service level assessments for all asset classes is a key strategic direction in the Council Plan 2021-25. Table 1 below outlines the organisational objectives and strategies directly addressed by this AMP.

Pillar	Objective	Strategies	
1 – A healthy, connected and inclusive community	Services in our community are accessible and coordinated	Enhance Council's services to be more coordinated and collaborative	
	Our community is supported to be physically and mentally healthy	Build resilience to the impacts of climate change.	
2 - A flourishing environment.	Our Community is growing in harmony with nature.	Review, maintain, renew and expand sustainable assets of our community.	
	Our Community is growing in harmony with nature.	Promote sustainable use of water.	

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Table I - Alignment with Obunen I lan	1 mai 3,	objectives and offategies

1.2 Council Policy, Strategies and Plans

Council policies, strategies and plans considered in the development of this AMP include:

- Asset Management Policy 2022
- Council Plan 2021 2025
- Asset Plan 2022
- Castlemaine, Campbells Creek and Chewton Flood Management Plan 2015
- Draft Castlemaine Integrated Water Management Plan 2020
- Financial Plan 2023/24 to 2032/33
- Financial Sustainability Strategy 2020 2030
- Community Engagement Policy 2021
- Customer Service Charter 2019

In addition the AMP has also been informed by the Drainage hotspot Study 2011.

1.3 Relevant Legislation

Key requirements relating to the management of drainage assets considered in the development of this AMP can be found in the following legislation and regulatory frameworks:



- Catchment and Land Protection Act 1994
- Disability Discrimination Act (DDA) 1992
- Local Government Act 1989
- Local Government Act 2020
- Local Government Finance and reporting Regulations 2004
- National Asset Management Framework Legislation 2010
- Native Title Act 1993
- Occupational Health and Safety Act 2004
- Occupational Health and Safety Regulations 2007
- Planning and Environment Act 1987
- Road Management Act 2004
- Water Act 2019.

2 Review Date

The AMP will be reviewed and updated periodically (minimum 4 yearly) taking into account changes with the Council Plan and budget.

Review date 30 June 2027.

3 Stakeholders

Council Stakeholders in the lifecycle management of drainage assets are detailed in Table 2 below.

Owner	Director Infrastructure and Development
Client	Manager Engineering
Planning Renewal	Asset Management and Systems Coordinator
Design	Manager Engineering
Construction	Manager Engineering
Operation	Works Coordinator
Maintenance	Works Coordinator
Asset Accounting	Asset Management Coordinator
Acquisition Disposal	Director Infrastructure and Development

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Asset planning 4

4.1 Asset Composition

The composition of drainage assets within Council's asset register (as of June 2022) is summarised in Table 3 and Table 4.

Table 3 – Drainage Asset Network Distributions by Type			
Asset Type	Measure		
Culvert	4.56 km		
Pipe	65.59 km		
Rock Beaching	10 m		
Spoon Drain	0.39 km		
Stone Drain	10.26 km		
Table Drain	1.83 km		
Lined Open Drain	7.92 km		
Unlined Open Drain	56.15 km		
Pits	2,473 Nos		
End walls	1,052 Nos		
Total	146.71 km & 3,525 Nos		

Table 4 – Pipes and Op	en Drains by Material
Pipe & Open Drain Material	Length (km)
Bitumen	0.58 km
Brick	0.86 km
Concrete	58.8 km
Earthen	56.15 km
Rock	0.07 km
Stone	0.20 km
Cast Iron	0.26 km
Clay	0.36 km
Plastic	13.02 km
Stone	11.33 km
Others	5.08 km
Total	146.71 Km
	Pipe & Open Drain Material Bitumen Brick Concrete Earthen Rock Stone Clay Plastic Stone Others

4.2 Asset Value and Useful Lives

Drainage assets are revalue on a four year cycle, this will be done in conjunction with the asset condition review, most recently in 2018/19. Table 5 below contains a snapshot of Council's drainage asset valuation as of July 2022.



Each year all asset classes including drainage undergo a desktop unit rate cost assessment to determine if there has been a material change in the unit rate cost of the asset over the last 12 months.

If this assessment highlights likely material change (typically greater than 10% increase) a full condition audit and revaluation is undertaken in the following financial year. This may mean some revaluations are brought forward of their scheduled date. If the unit rate change is not consider material no change is made to the revaluation schedule.

The next condition audit and revaluation is scheduled for 2023/24.

Asset Type	*Node Type	Replacement Value (as of 2022)	Written Down Value (as of 2022)	Annual Depreciation (as of 2022)
End Wall	Pit	\$1,247,468	\$1,128,140	\$12,534
Pit	Pit	\$5,952,849	\$5,143,215	\$60,477
Wingwall	Pit	\$33,953	\$32,728	\$340
Culvert	Pipe	\$6,262,246	\$4,790,888	\$54,010
Pipe	Pipe	\$23,899,799	\$19,324,731	\$239,710
Spoon Drain	Pipe	\$66,531	\$64,108	\$1,849
Stone Drain	Pipe	\$14,804,955	\$9,738,203	\$98,700
Table Drain	Pipe	\$107,083	\$95,662	\$1,539
Open Drain	Pipe	\$1,955,560	\$772,044	\$30,468
Buried Junction or major Connection	Pipe	\$9,540	\$8,398	\$95
Ghost Structure	Pipe	\$206,225	\$196,728	\$2,062
Kerb	Pipe	\$3,273	\$3,037	\$65
Rock beaching	Pipe	\$72,360	\$67,392	\$1,452
Submerged	Pipe	\$72,595	\$64,920	\$726
Trench Grate	Pipe	\$4,514	\$3,024	\$45
Others	Pipe	\$789,148	\$623,236	\$9,093
Total		\$55,488,100	\$42,056,455	\$513,166

Table 5 Duain National Val

* Note that "Node Type" represents how the asset is treated in the asset modelling.

Council's standard useful lives for drainage assets are shown below in Table 6.



Asset Type	Material	Useful Life
Pipo	Plastic	80
гре	Concrete and Other	100
Circular Culvert	All	100
Box Culvert	All	120
Stone Drain	Stone	150
Pits, Wingwalls and End Walls	All	100
	Bitumen	50
Lined Open Drains	Brick	70
	Concrete	80
Unlined Open Drains	Earthen	50

Table 6 – Drainage Useful Lives

4.3 **Condition**

Council undertakes partial condition assessments of its drainage assets to evaluate network performance and inform future investment decisions at minimum four-yearly intervals. Assets are selected for these assessments based on risk.

Asset condition is assessed following Water Services Association of Australia standards and Institute of Public Works Engineering Australasia guidelines where applicable. Council's drainage asset condition rating definitions are provided in Table 7 below.

Score	Condition	Description
0	New	Asset is newly constructed. Schedule routine maintenance is required.
1	Excellent	Asset is 'as new' condition with no defects or signs of use. Scheduled routine maintenance is required.
2	Good	Asset is in sound condition with occasional defects and minor signs of use. Scheduled routine maintenance is required. Occasional unplanned maintenance is required.
3	Fair	Asset is in acceptable condition with obvious signs of use and defects occurring regularly. Scheduled routine maintenance is required. Unplanned maintenance is required.
4	Poor	Asset is in a degraded condition which is reducing the level of service it is providing. Increased scheduled routine maintenance is required. High levels of unplanned maintenance are required. Early asset renewal may be warranted for the highest priority assets.
5	Very Poor	Asset is in a severely degraded condition which is limiting the level of service it is able to provide. Increased scheduled routine maintenance is required. High levels of unplanned maintenance are needed. Planned asset renewal is required for all assets.
6	End of Life	Asset is no longer providing service and may be unsafe. Scheduled routine maintenance is no longer required as it provides no benefit. Unplanned maintenance is required to manage risk exposure. Asset should be closed and or demolished.

Table 7 - General Definitions of Condition Ratings



Section 7.3 Financial Forecasting details the intervention criteria used in relation to asset condition and funding scenarios.

Council historically undertakes partial drainage network condition audits. Most recently 10 percent of the network was audited in 2018. The results of this audit are then extrapolated across the whole drainage network based on network age and historical condition data.

The estimated condition distribution for all drainage assets is shown below in Figure 1, it is represented by the overall network value. Note that all drainage assets depending on their function are represented as either a "Pipe" or "Pit" node (further details are provided in Table 5) in asset modelling used in this report. These have been split out in Figure 1 for clarity.



Levels of service for drainage asset condition and funding scenarios are discussed further in Sections 5 and 7.3 respectively.

4.4 Serviceability

Serviceability for drainage assets generally refers to maintenance issues in pipes such as root intrusions or the build-up of debris. Serviceability is assessed during CCTV inspections using Water Services Association of Australasia standards. The estimated distribution of pipe asset serviceability based on 2018 data is depicted below in Table 8.



Serviceability Rating	Estimated % of Pipe Network
1 – Excellent	38.59%
2 – Good	6.57%
3 – Fair	12.78%
4 – Poor	7.77%
5 – Very Poor	34.29%

Table 8 – Estimated Distribution of Pipe Serviceability

Details regarding pipes with poor serviceability are provided to Council's maintenance team to be incorporated into annual maintenance programs.

The above distribution may not be representative of the entire drainage network as pipes surveyed in 2018 were selected from high risk areas. Future CCTV inspections will improve Council's understanding of network serviceability.

4.5 Capacity

Asset capacity relates to the ability of physical infrastructure to meet service delivery and community needs. Capacity data inform demand management, upgrade, expansion and renewal and/or disposal strategies.

Council currently has limited data around the capacity of existing drainage assets other than from customer requests and local knowledge during storm events.

From the improvement plan in Section 8, it is recommend to complete network catchment modelling for drainage assets that can be used to highlight capacity issues. This can then also provide guidance into future capital works programs.

4.6 **Prioritisation Principles**

Council resources are limited, and works must therefore be prioritised. This occurs through consideration of:

- Council Strategies and Plans
- Condition assessments
- Maintainability
- Customer requests
- A combination of asset classification, physical location, which provide a risk profile for the asset.

A risk-based drainage asset hierarchy will be developed to facilitate the most effective use of resources. Once implemented the hierarchy will be a key factor in the prioritisation of works.

5 Levels of service

Levels of service are the link between organisational strategies and asset management objectives as well as detailed operational objectives. In effect, they define the target performance standards for assets of a given type.

The development and implementation of levels of service require ongoing continuous improvement. Council does not currently possess the information required to assess its


current performance for some indicators. Improvement plan actions in Section 8 have been created to address these gaps in knowledge.

5.1 **Community Levels of Service**

Community levels of service focus on measuring how the customer receives the service offered by assets. They are primarily measured through community feedback and requests logged in Council's customer request management system.

The recommended Community levels of service are detailed below in Table 9. As part of the improvement plan in Section 8, additional community consultation should be undertaken to further refine these levels of service.

Service Attribute	Objective	Target Performance	Current Performance
Quality / Function / Capacity	Drainage assets meet community expectations.	Annual reduction in the number of customer service requests relating to existing drainage assets.	Reduction from 358 in 2019-20 to 315 in 2020-21.
Function	Complaints and requests are handled in a timely manner.	95% of customer service requests logged, investigated and customer notified within 5 days.	Customer requests in calendar year 2020/21 35% compliance achieved in 5 days or less.
Safety / Function	Council's drainage assets are kept safe and pose a low risk to the community.	Zero annual successful claims relating to drainage assets.	No successful claims in 2020-21.
Function	Council is available to respond to drainage issues and localised flooding events.	Council officer on call after hours.	Council officer on call after hours.

Table 9 - Community Levels of Service for Drainage Assets

Community levels of service are also aligned with Council's Customer Service Charter 2019.



5.2 **Technical Levels of Service**

Technical levels of service are based on specific measurable criteria that demonstrate network performance.

Technical levels of service for drainage assets are detailed below in Table 10.

Service Attribute	Objective	Target Performance	Current Performance
Capacity	New and renewed drainage assets offer a suitable capacity.	New and renewed drainage assets meet Infrastructure Design Manual (IDM).	All new and renewed drainage assets meet IDM guidelines.
Function	Serviceability issues are actioned as identified.	Pipes identified through CCTV inspections as serviceability 4 or greater are programmed for maintenance.	Performance data for this attribute is currently not available. Capturing this data has been added to the improvement plan.
Capacity	Drainage capacity issues are identified and rectified.	Flood hotspots identified and one hotspot is treated each year.	First hotspot study was undertaken in 2011 and identified 10 locations. One hotspot has been rectified annually since that time. A new study is now required.
Quality	Council can make informed evidence- based decisions about its drainage assets.	Partial drainage network condition assessments are undertaken at least every four years using a risk-based selection process.	Most recent drainage condition assessment was undertaken in 2018 covering 10% of the network. Assets were selected from critical areas. The next condition assessment is scheduled for 2023.
Quality	Drainage asset conditions are maintained to agreed targets.	95% of drainage assets in condition state 4 or better.	98% of drainage assets estimated in condition state 4 or better.
Safety	Council's drainage assets are kept safe for users in accordance with legislative requirements.	100% of RMP inspections undertaken on time and 100% of RMP hazards made safe within the required timeframes.	100% of RMP inspections undertaken on time and 100% of RMP hazards made safe within the required timeframes.

Table 10 – Technical Levels of Service for Drainage Assets

5.3 **Operational Levels of Service**

There are currently no standards set for Operational Levels of Service, this needs further development and is part of the Improvement Plan in Section 8.



6 Future Demand

6.1 **Demand Forecasts**

Network demand can be influenced by factors such as population change, changes in demographics, technological changes, environmental awareness and new assets.

Demand factor trends and impacts on service delivery are summarised in Table 11 below.

Demand factor	Present position	Projection	Impact on services
Population	20,253 in 2021	Projected population in 2031 is 22,151 an increase of 0.9% per year.	Increase in impervious area resulting in increased flow through downstream assets and into receiving waterbodies.
Network Growth	Total network replacement cost of \$48.9M.	Network increase of 0.85% each year ¹ .	Increased maintenance requirements, capacity requirements for downstream assets, long-term increases in renewal liability.
Community Expectations	The Communities expectation of drainage service levels is higher than current network capacity.	Council will be pressured to lift capacity and service standards for parts of the network.	There will be increasing budget pressure for drainage improvements across the network.
Legislation	Drainage Asset Manageme nt Plan to be finalised & adopted by Council.	Improved modelling data required to inform future financial projections and to develop a 10-year renewal program.	Local Government Act 2020 mandates that Council prepare and maintain as a minimum 10-year asset plans for all major asset classes.
Engineering Standards	Using IDM standards for suitable renewal & upgrading / expansion projects.	Gradually Increasing the usage of modern design standards to capital work projects.	Introduction of new design standards over time means older assets generally do not meet modern service standards.
Climate Change	Drainage capacity issues are identified and rectified through Flood Hotspot study.	Frequency of high intensity rainfall events increase	Extreme weather to gradually become more frequent and intense. Increased probability of localised flooding.

Table 11 - Demand Forecasts and Impact on Services

¹ Based on average network growth over the past four calendar years



6.2 **Demand Management Plan**

Opportunities identified to date for demand management, including opportunities for expansion, upgrade, disposal and decommissioning, are shown in Table 12.

	Table 12 – Demand Management Opportunities				
Service Activity	Demand Management Plan				
Drainage Network Growth	Increasing population results in new drainage assets being handed over to Council and increased capacity requirements in activity centres. New drainage assets to be monitored through entry into Council's asset register and inclusion in regular condition audits. These drains will increase Council's maintenance and renewal burden as they age in the longer term.				
Capital/Maintenance Expenditure	Ageing assets, community expectations relating to the quality of drainage network increases pressure for asset upgrades. Council will monitor community expectations and communicate service levels and financial capacity with the community. Condition monitoring using risk- based selection criteria will assist Council to identify pipes for renewal before collapse, thereby mitigating impacts on the community and potential for flood damage.				
Land Development	Additional infrastructure required due to development will require continuous monitoring and management of development controls, flood management, and infrastructure planning. Council has controls in place including the requirement for all developments to have on-site detention to mitigate downstream capacity issues.				
Capital Works Planning	Long-term capital works plan to be scheduled in accordance with regulatory requirements. Utilise the Capital Works Procedure for assessing and prioritising upgrades and new capital works.				
Decommissioning and Disposal	Typically, drainage assets will only be disposed of where they have been decommissioned as a result of changes to the drainage network, and/ or are replaced with new assets.				
Climate Change	It is expected that the effects of climate change will intensify in the medium to long term future resulting in an increase of extreme weather events. Council is involved in the IDM which sets out capacity requirements for asset design. These requirements have been developed in the pursuit of best practice, and are expected to be resilient to satisfy drainage network needs in the long-term. The effects of climate change will be considered in hot-spot studies and flood management plans. Council will monitor and adopt to any changes in drainage asset management practice due to climate change.				



7 Financial Sustainability Strategy

Council's Financial Plan 2023/24 to 2032/33 holds planned allocations for budget towards maintenance, capital upgrade / new, and renewal of drainage assets. This section will evaluate ten-year funding scenarios and their impact on levels of service. The adopted financial plan is informed by these forecasts in accordance with the legislative requirement for 10-year asset plans.

7.1 Maintenance

Council has an operating budget to maintain its drainage network of approximately \$400,000 annually.

It is primarily used for activities such as:

- Asset cleaning
- Maintenance of rural open drains
- Lid replacements
- Minor maintenance
- Reactive works as required.

7.2 Capital Renewal, Upgrades and New Assets

Council's Financial Plan 2023/24 to 2032/33 provides a forecast of anticipated budget levels for drainage renewal, upgrade and new assets for the next 10 years, these forecast figures are provided in Table 13 below.

Table 13 – Forecast Capital Experioruluie	Table	13 -Forecast	Capital Exp	penditure
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				F	inancial	Year (,00)0)			
Item	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33
Drainage	\$910	\$796	\$818	\$800	\$877	\$992	\$1,038	\$945	\$930	\$930

Currently within the forecast funding levels shown in Table 13, there is no direct allocation towards renewal of drainage assets. There is no proactive renewal program, drainage assets are typically only renewed reactively when the asset has failed.

Under the Section 8 Improvement Plan, a key recommendation is for the forecast capital drainage budget to be refined to show individual allocations for renewal, upgrades and new assets. Importantly the Financial Plan should allocate a minimum budget for a yearly renewal program to allow some proactive works to take place.

As part of the modelling process, simulations were undertaken for several funding scenarios associated with renewal works. These scenarios are detailed in Section 7.3 and provide guidance on recommended future renewal budgets.

7.3 Financial Forecasting

Council forecasts the financial requirements of its infrastructure assets using Assetic myPredictor. The software enables Council to evaluate the long-term impact of any funding scenario on its infrastructure.



As part of the development of this AMP, four 25-year funding scenarios were investigated for Council's Drainage assets:

- Scenario 1: Funding based on \$50,000 per year plus 4% CPI each year.
- Scenario 2: Funding based on \$100,000 per year plus 4% CPI each year.
- Scenario 3: Unbound Funding to achieve condition service level objectives.
- Scenario 4: Zero funding reactive only (current situation).

The trigger point with the asset plan for when drainage assets are considered candidates for renewal is **condition 5 (refer to Table 7 for details about condition ratings)**. When funding is limited, assets are prioritised for treatment when they are:

- High criticality assets, e.g. diameter >1 meter
- Located in high criticality locations and/or within townships
- Known to be in poor condition from CCTV.

Note that drainage assets typically are not treated until they are at end of life, unless they are in critical locations. Earlier intervention provides limited benefit as the asset will typically function satisfactorily up to end of life.

Scenario 1 – Renewal of \$50,000 Annually plus CPI

This scenario considers \$50,000 per annum with 4 percent CPI increase per year. Figure 2 to 4 depict the scenario funding profile and impact on pipe and pit condition over time respectively.



Figure 2 - Scenario 1 Funding Profile





Figure 3 - Scenario 1 Long Term Pipe Network Condition



Figure 4 – Scenario 1 Long – Term Pit Network Condition

Council's drainage network under this scenario will contain a growing proportion of assets in condition 2 and 3 while those in condition 4 remain relatively static until year 10. This level of funding is not sufficient to prevent pipe assets moving to condition 6 (end of life) past year 10.

Scenario 2 – Renewal of \$100,000 Annually plus CPI (Recommended)

The Recommended Funding scenario is \$100,000 annum with 4 percent CPI increase per year. This aims to create a forecast that can realistically be implemented by Council that will minimise assets moving to condition 6. Figures 5 to 7 depict the scenario funding profile and impact on condition over time respectively.













Figure 7 – Scenario 2 Long-Term Pit Network Condition

Council's drainage network under this scenario will contain a growing proportion of assets in condition 2 and 3 similar to Funding Scenario 1, while those in condition 4 remain relatively static until year 15. This level of funding is sufficient to hold assets below condition 6 (end of life) out to year 20.



It is apparent comparing funding scenarios one and two, that the end network condition has relatively low sensitivity to increases in renewal funding. This is primarily due to setting the intervention criteria at a high level (condition 5) and the relatively long life of the asset.

Note that the modelled pit condition over 25 years is the same under both funding scenarios due to the long life and minimal deterioration of pit assets.

Scenario 3 – Unbound Funding

The Unbound Funding scenario shows the funding that could be realistically expended in the absence of financial limitations. Figures 8 to 9 depict the scenario funding profile and impact on condition over time respectively.





Figure 8 - Scenario 3 Funding Profile

Figure 9 - Scenario 3 Long-Term Network Condition

While typically you would not recommend the scenario of an Unbound Budget, in the case of drainage assets it does present an opportunity. In the unbound model the Predictor software treats all assets outside of the intervention criteria every year, hence the considerable expenditure in the first year followed by peaks and troughs for the following years.

This scenario presents an overall modelled network similar to scenario 2 with the exception that the condition of the asset never exceeds condition 4 (all assets that reach condition 5 are treated). Again the modelled output for pit condition is unchanged from the previous scenarios and has not been presented again for clarity.



The opportunity to invest more money early provides an overall better network condition at 25 years and allows more work to be done for the same amount of money in the future.

A comparison of the overall cost for the full 25 years for each scenario is presented in Table 14 below:

Scenario	25 Year Total Cost
1 - \$50,000 per annum plus 4% CPI	\$2,082,065
2 - \$100,000 per annum plus 4% CPI	\$4,164,446
3 – Unbounded budget	\$4,803,317

Table 14 - Com	parison of	Overall	Scenario	Costs

While scenario 3 is more expensive overall at around 15 percent more than scenario 2, it maintains the asset below condition 5 for the full 25 year duration. The overall asset condition is better than the other options with the bulk of the expenditure occurring after year 15.

This scenario also greatly reduces the likelihood of unplanned renewal and maintenance.

Scenario 4 – Zero Funding (reactive only)

Under the current renewal process where works are undertaken on a reactive basis (zero annual funding), the resulting forecast asset condition is represented by Figure 10.



Figure 10 – Forecast drainage asset condition based on zero funding allocation (by % of Network)

Note that assets begin to reach condition 6 (or end of life) from year 10 onwards with continual increase out to year 25.

7.4 Improved Use of Predictor

The modelling contained in this section will be improved as Council documents its business processes and gains access to additional knowledge.

In future iterations of this AMP, the use of Predictor could be improved by:

- Obtaining condition data for greater samples of the network.
- Calibrating condition estimations based on sample condition data.
- Incorporating maintenance costs to improve lifecycle modelling.



- Using levels of service to assist in determining when treatments other than like-forlike renewal are appropriate.
- Ensuring asset inventory data is up to date, fields are populated, and formats are consistent.
- Segmenting assets such as stone drains so that conditions of individual sections can be programmed for renewal.
- Further embedding Council's prioritisation principles in the model to improve works programs.

7.5 Renewal Backlog

The renewal backlog demonstrates how much it would cost to renew all assets that exceed the condition service level. It will increase when annual expenditure is insufficient and decrease when annual requirements are exceeded.

Drainage assets in condition 5 and 6 are considered within renewal backlog in accordance with the levels of service established in Section 5. Figure 11 and 12 below depicts a 25-year forecast of renewal backlog under funding scenarios 1 and 2 respectively.



Figure 11 – Renewal Backlog Forecast based on Scenario 1 Funding





Figure 12 – Renewal Backlog Forecast based on Scenario 2 Funding

The backlog for scenario 1 is projected to remain relatively steady for the next decade before rapidly increasing beyond year 14. An increase in near-term funding would improve network conditions, reduce the risk posed by poor condition assets, and mitigate the rapid increase in later years.

For scenario 2 there is a reduction in the backlog out to year 8 with significant jumps in year 15 and 20, the overall backlog is significantly less than for scenario 1.

Council will regularly monitor renewal backlog forecasts which may change through modelling updates and the acquisition of new data.

7.6 **Recommended Funding**

The modelling results presented in this report highlight the relatively low sensitivity of drainage assets to funding levels. The primary factors for this being the relatively long life of the asset, and high intervention condition triggering renewal.

Based on the scenarios presented in this report an annual renewal budget of \$100,000 plus 4 percent CPI (scenario 2) is adequate to generally maintain existing drainage assets below service level targets for the next 25 years. This strategy is also financially sustainable within Council's current budget climate.

It is recommended based on the discussions in Section 7.2 that Council's Financial Plan be updated to provide a specific line item for drainage renewal with funding levels based on the those presented in scenario 2 (\$100,000 per year plus 4 percent CPI).

This strategy however will continue to see a large run down of the asset condition with significant renewal backlog to start occurring from year 20 onwards. It is likely under funding Scenario 1 and 2 there will be increasing likelihood of unplanned renewals and maintenance expenditure from year 20 onwards.

With the renewal strategy, future review of this AMP and condition inspections will inform if there are general improvements or if further investment is required.



7.7 **Recommended Maintenance Funding**

The suitability of Council's current maintenance budget will be monitored year to year. As data confidence improves, maintenance requirements will be better understood.

It is recommended that Council continue to fund drainage maintenance at approximately \$400,000 annually. Current network growth is not expected to result in tangible increases to required maintenance expenditure over the next ten years.

Council will continue to monitor the suitability of its maintenance budget and make adjustments when necessary.

7.8 **Drainage funding summary**

In summary the breakdown funding allocated to unplanned minor works, renewal and upgrade or new drainage assets in line with the 2023/24 -2032/33 financial plans is shown in Table 15.

Financial Year	Unplanned Minor Works	Renewal	Upgrade/ New	Total
23/24	\$400,000	\$100,000	\$410,000	\$910,000
24/25	\$400,000	\$104,000	\$292,000	\$796,000
25/26	\$400,000	\$108,160	\$309,840	\$818,000
26/27	\$400,000	\$112,486	\$287,514	\$800,000
27/28	\$400,000	\$116,986	\$360,014	\$877,000
28/29	\$400,000	\$121,665	\$470,335	\$992,000
29/30	\$400,000	\$126,532	\$511,468	\$1,038,000
30/31	\$400,000	\$131,593	\$413,407	\$945,000
31/32	\$400,000	\$136,857	\$393,143	\$930,000
32/33	\$400,000	\$142,331	\$387,669	\$930,000

Table 15 – 10 Year Forecast Drainage Funding breakdown.

8 Improvement Plan

Council will continue to seek improvement in the management of its drainage assets. A four year improvement plan is detailed below in Table 16.



Table 16 – Improvement Plan Description Responsibility Action Year - 1 Year - 2 Year - 3 Year - 4 ID Continue to review and update drainage asset register data including Asset Management and Х Х Х Х 1 segmentation of stone drain assets and identification of timber drains. Systems Coordinator Carry out investigation to identify drainage hotspots requiring upgrade. Asset Management and Х 2 Х Systems Coordinator / Works Implement levels of service and address current data gaps. Asset Management and Х 3 Х Systems Coordinator / Works Develop a risk-based asset hierarchy for drainage assets. Asset Management and Х 4 Systems Coordinator Update the Financial Plan based on the proposed capital works plan and 5 Finance Х renewal forecasting. Х Х 6 Investigate the implementation of a timber drain replacement program. Works 7 Х Establish a policy position for the handover of stormwater drainage assets Works / Engineering on private land and identify issues where stormwater is being discharged onto private property. Investigate the use of QuickView and pit inspections in future condition Works / Asset Management Х 8 surveys to increase the breadth of data capture and improve network and Systems Coordinator understanding Require developers to provide CCTV proof of condition at the time of asset Х Х 9 Asset Management and Systems Coordinator handover. Undertake network catchment modelling to determine capacity issues and Х Х Х 11 Engineering influence future capital upgrade programs. 12 Develop operational Levels of Service Engineering/Works Х Х 13 Review Community Levels of Service following consultation with the Engineering/Communicatio Х Х

Community and relevant Stakeholders.

Drainage - Asset Management Plan - August 2023 - (DRAFT)

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Musgrave-Evans & Gilbert

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Attachment 12.3.1.2



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Ref: 1538 (Version: 3)

Attachment 12.3.1.3





PLANNING REPORT

Dwelling Excision

Simmons Road, Baringhup

Prepared

for

Mr Gregory Lillie

July 2022

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1.0 Introduction

We are acting on behalf of Mr Gregory Lillie, who is the registered proprietor of the property located at Simmons Road, Baringhup. Mr Lillie seeks a Planning Permit to subdivide the subject land in order to excise the existing dwelling from the balance of the farm. The dwelling is located on a large 183.8 ha parcel of land consisting of two non-separately transferrable parts. The proposed dwelling excision will create a new lot 1.5 ha in area to accommodate the existing dwelling. The balance of the land will continue to be used for farming purposes.

The property is located within the Farming Zone (FZ) and is covered by the Erosion Management Overlay (EMO). The mapped waterway passing through the property is covered by schedule 5 to the Environmental Significance Overlay (ESO5).



Vicmap Property



2.0 Characteristics of the Site/Description of Proposal

Extract of Site Context Plan (refer Appendix 'B')

The subject site is located in Baringhup and straddles Simmons Road. This property constitutes all the land in Certificate of Title - Volume 10929 Folio 242, being all the land in Plan of Consolidation PC369300S. The parcel of land is currently used for farming purposes and consists of two non-separately transferrable parts with the total area of the site being 183.8 hectares. The part on the eastern side of Simmons Road currently accommodates a dwelling and is 80.31 ha in area. A dwelling excision is proposed to create a new lot of 1.5 ha in area to accommodate the existing dwelling while the balance of the land will continue to be used for farming purposes. There are two electricity supply easements registered on the title; however, these cover land on the part of the property on the western side of Simmons Road and have no impact on this proposal. No restrictive covenants are registered on the title.

The existing dwelling is located immediately to the north of the Baringhup Township. Accordingly, the existing dwelling abuts residential land to the south and the proposed dwelling excision is in context with the surrounding land use. Additionally, the dwelling is connected to reticulated power; however, there is no reticulated water or sewer available in the area. In addition to addressing Council Policy 14.01-1L, which iterates the lot area for the dwelling should be limited to two hectares, the rationale for positioning the subdivisional boundary was as follows:

- Where practical, existing fencing has been adopted as the excision boundaries.
- The existing driveway to the dwelling has been retained with the dwelling.
- The existing servicing infrastructure associated with the dwelling, including effluent disposal and electricity supply, have been retained within the proposed excised lot.



Extract of Design Response Plan (refer Appendix 'C')



View north-east from Simmons Road showing location of the existing driveway to be retained with the dwelling.



View south-west along Simmons Road from the existing driveway. Showing proximity of Baringhup Township.



View north-east along Simmons Road from the existing driveway.



View south from Simmons Road towards the residential area of Baringhup which abuts the southern boundary of the subject site.

3.0 Planning Controls

3.1 Local Planning Policies

Clause 14.01-1L – Protection of Agricultural Land

Essentially the basis for this policy is to ensure that "fragmentation of productive agricultural land by inappropriate subdivision is to be avoided to ensure the productive capacity of the land is maintained." Additionally, the policy guidelines argue small lot excisions should be discouraged except where a dwelling exists and inter alia "The new lot has a maximum size of 2 hectares..."

With regard to the above, the proposed dwelling excision creates a new lot of 1.5 hectares to accommodate the dwelling. Additionally, the balance of the farm remains on a very large parcel of 182.3 hectares which does not affect the productive capacity of the land.

Agricultural land quality units and water resources in Mount Alexander Shire

The Agricultural Land Quality Units map in clause 14.01-1L has characterised the agricultural quality of the soil of the subject site as Class 4 (Low). In this regard, the small lot excision proposed is insignificant compared to the balance of the land holding and will have negligible impact on the agricultural productivity of the subject site.



planning-schemes.app.planning.vic.gov.au

3.2 Zoning



www.services.land.vic.gov.au/maps

The primary purpose of the Farming Zone is to:

- To implement the Municipal Planning Strategy and the Planning Policy Framework.
- To encourage the retention of productive agricultural land.
- To ensure that non-agricultural uses, particularly dwellings, do not adversely affect the use of land for agriculture.
- To encourage use and development of land based on comprehensive and sustainable land management practices and infrastructure provision.

Under Clause 35.07-3 of the Farming Zone, a permit is required to subdivide land. Each lot must be at least 40 hectares, if no area is specified in the schedule to this zone. A permit may be granted to create smaller lots if the subdivision is to create a lot for an existing dwelling.

In this regard, this proposal is consistent with Clause 35.07-3 of the Farming Zone. The proposed lot accommodating the existing dwelling is only 1.5ha in area, while the balance of the land is well in excess of 40 hectares in area.

Decision Guidelines:

Under Clause 35.07-6 before deciding on an application the responsible authority must consider, as appropriate:

General Issues

- The Municipal Planning Strategy and the Planning Policy Framework.
- Any Regional Catchment Strategy and associated plan applying to the land.
- The capability of the land to accommodate the proposed use or development including the disposal of effluent.
- How the use or development relates to sustainable land management.
- Whether the site is suitable for the use or development and whether the proposal is compatible with adjoining and nearby land uses.
- How the use and development makes use of existing infrastructure and services.

Agricultural Issues inter alia:

- Whether the use or development will support and enhance agricultural production.
- Whether the use or development will permanently remove land from agricultural production.
- The potential for the use or development to limit the operation and expansion of adjoining and nearby agricultural uses.
- The capacity of the site to sustain the agricultural use.

Environmental Issues inter alia:

- The impact of the proposal on the natural physical features and resources of the area, in particular on soil and water quality.
- The impact of the use and development on the flora and fauna on the site and its surrounds.
- The need to protect and enhance the biodiversity of the area, including the retention of vegetation and faunal habitat and the need to revegetate land including riparian buffers along waterways, gullies, ridgelines, property boundaries and saline discharge and recharge area.

We would argue that this proposal meets the aforementioned decision guidelines and in doing so reiterate the following:

General Issues

- The proposed 1.5 hectare allotment to accommodate the dwelling is in context with nearby allotments as the dwelling is located immediately to the north of the Baringhup township. The balance 182.3 hectare parcel is in context with the surrounding parcels to the north of the subject site.
- There is a mapped water way within the subject site; however, this passes through the property over 700 metres from the existing dwelling. Additionally, the large 182.3 hectare balance allotment can easily accommodate any effluent disposal associated with any future developments. The small 1.5 hectare lot has been positioned to cover the existing effluent disposal infrastructure associated with the existing dwelling.
- The existing infrastructure servicing the dwelling will be retained within the dwelling lot.

Agricultural Issues

- The development will have minimal effect on agricultural production. The proposed balance 182.3 hectare lot retains its productive capacity.
- The surrounding land use adjacent to the dwelling is residential, with the Baringhup township abutting the subject site to the south. Accordingly, this development will not limit the operation and expansion of any nearby agricultural use.
- The proposed lot sizes meet the requirements of clause 35.07-3 of the Farming Zone; being a two-lot subdivision creating a parcel less than 40 hectares to accompany an existing dwelling.

Environmental Issues

- No tree removal is contemplated as part of this application. There is minimal vegetation surrounding the existing dwelling.
- The new boundaries have been positioned to avoid any vegetation and ensure no tree removal is necessary.
- Both lots will utilise the existing access points in Simmons Road.

3.3 Overlays



Erosion Management Overlay (Clause 44.01)

www.services.land.vic.gov.au/maps

The subject site is covered by the Erosion Management Overlay. As well as implementing the Planning Policy Framework; essentially the main purpose of this overlay is to "protect areas prone to erosion, landslip or other land degradation processes, by minimising land disturbance and inappropriate development."

In this regard, we report as follows:

- No native vegetation removal is contemplated as part of this proposal;
- Any drainage works will be constructed to Council's requirements.



Environmental Significance Overlay (Clause 43.01)

www.services.land.vic.gov.au/maps

The subject site is covered by the Environmental Significance Overlay. Together with implementing the Planning Policy Framework; essentially the main purpose of this overlay is to identify areas where the development of land may be affected by environmental constraints.

ESO5 – Watercourse Protection

The water course traversing the subject site is covered by Schedule 5 to the Environmental Significance Overlay. The environmental objective of this schedule is to inter alia: *Maintain the quality and quantity of water within the watercourse.*

In this regard, the proposed dwelling excision will have no impact on this watercourse. The watercourse passes through the balance lot and is over 700 metres from the dwelling.

4.0 Conclusion

In conclusion, the following is considered worthy of re-iteration:

- We are acting on behalf of Mr Gregory Lillie, who is the registered proprietor of the property located at Simmons Road, Baringhup. Mr Lillie seeks a Planning Permit to subdivide the subject land in order to excise the existing dwelling from the balance of the farm. The dwelling is located on a large 183.8 ha parcel of land consisting of two non-separately transferrable parts.
- A dwelling excision is proposed that will create a new lot 1.5 ha in area to accommodate the existing dwelling. The balance of the land will continue to be used for farming purposes.
- The property is located within the Farming Zone (FZ) and is covered by the Erosion Management Overlay (EMO). The mapped waterway passing through the property is covered by schedule 5 to the Environmental Significance Overlay (ESO5).
- The existing dwelling is located immediately to the north of the Baringhup Township. Accordingly, the existing dwelling abuts residential land to the south and the proposed dwelling excision is in context with the surrounding land use.
- In addition to addressing Council Policy 14.01-1L, which iterates the lot area for the dwelling should be limited to two hectares, the proposed subdivision boundary was positioned to retain the existing driveway and servicing infrastructure associated with the dwelling within the excised lot. Where practical existing fencing has been adopted as the excision boundaries.
- Finally, the balance of the farm remains on a very large parcel of 182.3 hectares which does not affect its productive capacity.

APPENDIX "A"

Certificate of Title

APPENDIX "B"

Site Context Plan

APPENDIX "C"

Design Response Plan

Farm Management Plan Hillview Farm

347 Baringhup Road, Baringhup

Authors and Contributors

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1. Executive Summary

This farm management plan and overview has been prepared by ORM Consulting and Rural Financial Counselling Service Victoria West along with farming information provided by the Central Victorian Regional Agronomist and Agronomy Team from Nutrien Ag Solutions.

The plan has been prepared to provide further information and context to support a planning application of a two-hectare excision of the 183.8ha property situated at 347 Baringhup Road, Baringhup.

The land is used as mixed cropping and livestock enterprise and currently has a dwelling used as a holiday rental on the property as an additional income stream. The primary purpose of the dwelling excision is to support the continuation of the farm enterprise.

The intention is to preserve the farm. The property has belonged to the family since 1857 and the next generation, through the planning of succession, can access the farmland and continue the farming operations, while allowing the current owner to have a retirement option that does not require the selling of any farmland. The current owner can retain a very small title with their name as a retirement plan, and have a dwelling to retire upon.

This 2 hectare subdivision is important in providing a retirement pathway and positioning the on-farm debt with the on-farm assets, which in-turn allows off-farm debt to sit with personal assets. The excision also enables proper boundaries to be set between the farmland and the current dwelling. There is current access to Simmons Road, Baringhup directly from the dwelling.

The 2 hectare proposed dwelling excision also conforms with planning guidelines in that;

- it is less than 4 hectares
- it does not fragment the farm (it is on the boundary bordering other residences and a residential zoned area)
- it does not take up any usable farmland

2. Response to Agriculture Victoria

In response to the Agriculture Victoria comments and recommendations in relation to this property, while the vision across Victoria expressed by Agriculture Victoria is understood, in relation to this property, the comments may not clearly be applicable.

The dwelling excision is very small, (2 hectares from a consolidated 184 hectare property) and is on the extreme boundary of the farm, bordering existing dwellings in a residential zoning, in an area that is very rocky with a steep incline. This is a mostly granite/volcanic area that has not been farmed, and isn't usable farmland. The excision therefore does not fragment the farm or farmland, and it does not remove any land that has been or could be used for farming.

The land proposed in the dwelling excision also borders three existing residences, and is on the boundary to residential zoned land. The comments relating to any future owner being impacted by farming works, farm noise or farm products is not clearly applicable, as these hazards would also impact the three existing residences, and this has not eventuated in the 30 plus years since the dwellings have been there.

Farming with the use of machinery, noise, stock handling or crop preparation is carried out on other parts of the farm not in proximity to the excision site, as it is not a suitable area to undertake these activities. New owners would not be impacted by living near a farm any more than the current residences, and as operations are undertaken on other areas of the 184 hectare property, not in any proximity to the dwelling, this does not appear in real terms to be a concern. Paying guests have been staying at the dwelling for more than 12 months with no concerns.

The intention of the dwelling excision is to support the ongoing farm operation, and in practical and financial terms it makes it possible to keep the farm intact and ongoing. There is most definitely no intention to undertake continued new buildings or dwelling excisions, and as the proposed excision supports a retirement and succession plan, it would ensure the continuation of the farm and the property for another generation.
3. Land description, description of the neighbourhood, access

The land, situated at 347 Baringhup Road, Baringhup is 183.8ha and split by Simmons Road, Baringhup. Block A is where the dwelling is located is 80.31ha and borders the town boundary. Access to Block A is via gateways marked on the map below.



4. Description of existing and proposed land uses and subdivision boundaries

Existing land uses are currently a of mixture and sheep farming and hay production as well as a separate income stream from the dwelling through holiday rental activities. The proposed land use is to use existing farm land in exactly the same way, however to subdivide the 2 hectare dwelling area from the farm land.

A current Planning Permit Application PA177/2022 Land is proposed at: 393 Simmons Road, Baringhup Plan of Consolidation 369300S Volume 10929 Folio 242 Proposal: Two lot subdivision (dwelling excision).



5. Site plans including location of all activities to be undertaken as described in the Farm Management Plan

Please refer to:

Site Context Plan as included in the planning application - Planning Report prepared by Musgrave-Evans and Gilbert Consulting Pty Ltd.

To ensure biosecurity, stock fencing is in the process of being erected on the boundary of the subdivision.

6. Description of planning provisions including zones and overlays

We refer to the Planning Report prepared by Musgrave-Evans and Gilbert Consulting Pty Ltd pages 5-10).

Planning provisions, zones and overlays are comprehensively detailed in this planning report.

7. Current land capability class

Consultant/Agronomist (soil) – see previous planning submission for dwelling 347 Baringhup Road, Baringhup (2019).

8. Proposed agricultural enterprises including a business plan

The proposed agricultural enterprises will not change from hay production and sheep farming. Please refer to the Farm Business Plan on page 12.

9. Livestock management

Hillview farm is a sheep farm, predominantly producing wool, with some first cross white suffolk lambs being produced to sell to market.

Stock numbers: 630 Merino ewes 170 White Suffolk lambs 420 Merino lambs 320 Merino Weaners 15 Rams **Total Sheep Numbers 1555** Livestock is managed by free grazing pasture feeding, with supplemental hay feed, and occasional grain feeding as required. Livestock is checked and moved regularly, to ensure all sheep are in good condition and to rotate feeding pastures.

Crutching, drenching and shearing activities are carried out regularly.

10.Pasture management including current pasture species, amount of ground cover, pasture renovation / improvement works

Current pastures varieties include: Italian Rye Grass, Balansia Clover, Tricala Clover, Seaton Park Clover, Crimson Clover as well as a mixture of Lucerne, Tall Feskue, Phalaris and Cocksfoot perennial pasture.

Pasture renovation and improvement is ongoing, and has been part of the farming method for pastures over the last decade.

The use of regenerative agriculture was employed to sow down 100 acres. This crop with a mixture of tubers and other deep rooting varieties opened up and regenerated the soil.

Lime was used over the entire farm in 2018-2019 to restore pastures. The use of Prill as a fertiliser replacement / alternative was employed over 2020-2022 across the entire farm and had significantly positive results in restoring the pastures and subsequent pasture grass production.

The pasture renovation methods employed were informed by the local Nutrien Ag agronomist Hayden Coombes and Nutrien Ag pasture team, and in keeping with information accessed via:

'The Healthy Landscapes: Practical Regenerative Agricultural Communities project aims to raise awareness in the community about sustainable land management practices that improve soil health, reduce exposure to climate risk, enhance biodiversity and increase on-farm productivity.'

NB: Pasture management information and advice was provided by Hayden Coombes, Agronomist for Nutrien Ag Solutions.

11. Cropping activities to be undertaken on site

Regular sowing of hay crops is undertaken to produce hay and stock feed.

The farm plan is to sow down vetch, oats, rye and clover to be cut for hay or to be set for pasture. Crops are sown with organic 'bio char', in order to assist with water retention and to create better microbes in the soil. This practice has been advised by the regional Nutrien Ag Solutions Agronomist and the agronomy team.

Barley and oat crops are planned to be sown in 2023-24.

For further detail please refer to the Business Plan with 10 year plan on pages 12-17.

12. Agroforestry and horticulture

No agroforestry or horticulture activities have been or will be conducted on the farm.

13. Activities to be undertaken on site

Boundary fencing is being erected near the existing house.

Some flood repair works will be needed to restore some fencing that is flood damaged and to repair laneways, crossings and some farm tracks and driveways that have been washed away. There are no further activities to be undertaken on site.

The boundary around the house has been designed so vegetation will NOT be lost.

14. Biodiversity management

The land is actively cared for and planting native vegetation to encourage biodiversity has been undertaken over a long period. The property has some areas of rocky hill tops and dormant water courses so these areas are not part of active production, and are left in a natural state. Re vegetation of native species has been undertaken over the last 20 years and areas bordering dormant water courses and boundaries have been fenced and locked off for regeneration.

15. Soils, including soil test, soil erosion management, salinity

The property soils are granite soils, volcanic soils and clay.

See subdivision plan and application 426 Baringhup Road, Baringhup (2010)

See building plan and application for the current dwelling 347 Baringhup Road, Baringhup (2019)

See Planning Report prepared by Musgrave-Evans and Gilbert Consulting Pty Ltd for the current dwelling excision application (2023).

The farm has been active and productive for 150 years, so progressively over generations there have been steps to manage soil erosion and salinity.

Hillview Farm has worked with Nutrien Ag Solutions Agronomists over the last 20 years to alleviate any salinity issues. Steps have been taken to prevent soil erosion including crop choices, leaving areas fallow and targeted planting of more than 4000 native trees to manage soil erosion. This has especially been undertaken in erosion gullys and areas identified as needing planting to alleviate any potential erosion.

Salinity is not an issue for the property.

NB: Pasture management, soil and salinity management information and advice was provided by Hayden Coombes, Agronomist for Nutrien Ag Solutions.



16. Water supply, waterways and wetlands

Water is supplied via a pipeline, pumped from the Loddon River. Access to water is supplied via a stock and domestic water right.

Dams are located across the property as outlined on the map below.



17.Details of vegetation including native vegetation retention, protection and removal and any revegetation, weeds and weed management

Native vegetation is prominent on the property, whether it is amongst the rocky hill tops or along the water courses. We also utilise native vegetation for shelter belts.

A weed management practice is well established and weed and crop management activities are carried out regularly. Only weeds are removed or managed. Native vegetation is encouraged and protected. Native vegetation is mostly protected by fencing.

NB: Vegetation and weed management information and advice was provided by Hayden Coombes, Agronomist, Nutrien Ag. Mr Coombes assisted in the preparation of this document.

18.Pest animal management

Currently the property does not have any issues with pest animals. In the event of any issues with established invasive animals such as foxes or rabbits the usual practice is to engage with Agriculture Victoria in regards to management, however, this has not been necessary for more than 20 years.

19.Ten year Farm Business Management Plan including actions, standards and timelines

Farm Business Management Plan

Prepared by ORM Consulting

1. Background

Claire McLeod engaged the services of ORM to produce a farm business plan to help with application of a two-hectare excision of the 183.8ha property situated at 347 Baringhup Road, Baringhup. The land is used as mixed cropping and livestock enterprise and currently has a dwelling used as a holiday rental on the property.

Claire has stated that the primary purpose of the excision is to position the on-farm debt with the on-farm assets, which in-turn allows off-farm debt to sit with personal assets. The excision also enables proper boundaries to be set between the farmland and the current dwelling. There is current access to Simmons Road, Baringhup directly from the dwelling.

The property has belonged to the family since 1857 and the client would like the next generation through the planning of succession, to have access to this farmland and continue the farming operations, while allowing the client to have a title with their name as a residence to live in retirement.

2. Livestock enterprise

The livestock on the property are currently the main source of income through the production of fine merino wool and the prime lamb fit for meat purposes. Refer to the tables below in relation to DSE/ha and how the excision of the approx. two-hectares of land does not interrupt these activities.

In winter-dominant rainfall regions, a useful rule of thumb is the French Shultz model which suggests an optimum stocking rate of 4DSE/ha/100mm above 250mm for improved pastures. This model provides a guide for those regions in the range of 400mm and 800mm rainfall.

Statistic	Jan	Feb	Mer	AR	May	Jun	10	Anu	Sep	0st	Nov	Dec	Annual
Mean	33.9	32.8	27.7	32.9	45.9	43.6	46.7	51.8	48.2	51.5	41.1	32.5	495.2
Lowest	0.0	0.0	1.5	2.9	5.4	4.9	11.7	3.4	7.6	1.0	2.6	1.3	200.8
5th fide	2.9	0.7	2.1	5.1	10.9	10.5	18.8	13.7	15.5	6.7	11.7	5.0	310.7
10th %ille	4.6	1.7	4.5	6.0	13.1	14.1	21.5	19.5	18.1	10.0	18.3	10.0	335.8
Median	25.2	19.5	20.4	26.4	41.0	39.7	45.2	51.3	41.2	43.8	35.3	25.0	485.4
90th %ile	67.4	77.6	59.2	69.7	84.4	79.2	72.1	8.08	83.0	0.68	73.4	65.0	645.3
95th %/le	81.6	111.4	78.1	76.8	93.7	91.6	82.0	92.7	104.4	116.5	81.9	83.6	675.2
Highest	201.6	201.9	86.2	102.2	124.3	119.7	97.2	127.4	157.2	175.6	164.8	138.9	961.9

74yr data for Bahringup (Cairn Curran Reservoir) below:

	Without excision	With excision
Average Annual Rainfall	495	495
Max Carrying Capacity (DSE/Ha)	9.81	9.81
Current Carrying Capacity (DSE/Ha)	5.90	5.90
На	184	182
Total DSE	1,086	1,074
Adjusted DSE (Pregnant Ewe)	1.56	1.56
Ewes/Ha	3.78	3.78
Total Ewes	695	688
Total Lambs	799	792

The data above demonstrates the current livestock (sheep) carrying capacity. If the twohectare excision was to take place, the carrying capacity reduces to 1,074/DSE. This is a 0.92% or 8 DSE reduction from the land without the excision. However, the land productivity of the land subject to excision is considerably less than the whole farm average. Therefore, the impact on carrying capacity is likely to be even less than stated above.

3. Gross Margin calculation

The table below is a representation of a livestock enterprise. The figures are in dollars per hectare apart from the stocking rates which are set at a rate of 5.9 DSE/ha. All figures are based on averages. The costs are shearing, crutching, drenches, Dips and Jet and woolpacks. The highest return per hectare is self-replacing merino ewes.

Stocking Rate:	Merino	Ewes	1st X Ewe		
5.9 dse / ha 2.4 dse / ac		Self- Replacing	Prime Lambs	Prime Lambs	
Gross Margin	Sha	588	363	405	
Income sr		697	459	487	
Ewe / Wether Sales		275	69	71	
Lamb Sales		212	344	496	
less Replacements		0	-139	-148	
less Ram Purchases		-27	-23	-20	
Wool Sales-net		236	208	89	
Costs	Sha	109	96	82	
Husbandry		54	48	41	
Fodder		55	49	41	

Gross Margin on a cost per hectare basis

The gross margin difference between livestock enterprises with the two-hectare excision and without is very minimal. The gross margin average of the Merino self-replacing, Merino prime lambs and the first-cross prime lamb enterprises on 184 hectares (without excision) is \$83,157. In comparison the gross margin average of 182 hectares (with excision) is \$82,253. This creates a financial average difference of \$904 or 1.1%. All other factors remain the same as a point of comparison.

		Without Ex	cision (184ha	ı)	With Excision (182ha)				
Stocking Rate:	Merino Ewes		1st X Ewe	Average	Merino Ewes		1st X Ewe	Average	
5.9 dse / ha 2.4 dse / ac	Self- Replacing	Prime Lambs	Prime Lambs		Self- Replacing	Prime Lambs	Prime Lambs		
Gross Margin	108162	66701	74608	83157	106986	65976	73797	82253	
Income	128282	84453	89698	100811	126887	83535	88723	99715	
Ewe / Wether Sales	275	69	71	139	275	69	71	139	
Lamb Sales	212	344	496	351	212	344	496	351	
less Replacements	0	-139	-148	-95	0	-139	-148	-95	
less Ram Purchases	-27	-23	-20	-23	-27	-23	-20	-23	
Wool Sales-net	236	208	89	178	236	208	89	178	
Costs	20120	17753	15090	17654	19901	17560	14926	17462	
Husbandry	54	48	41	48	54	48	41	48	
Fodder	55	49	41	48	55	49	41	48	

4. Profit and Loss Budget

A simple budget, not including any machinery costs or your own labour costs/drawings.

The assumptions are as follows:

 Total Livestock area is reduced by 40 hectares to 144ha without excision and 142ha with excision to accommodate for share-farm cropping opportunities.

Income

- Crop income worked off at 30/70 sharefarm split of 40ha. Yields reached 3t/ha and price reached \$300/tonne.
- Sheep income based off an average income Self-replacing merino enterprise, Merino prime lamb and First cross prime lamb enterprise set at 5.9DSE/ha.
- Rental income worked out of 300 booked nights at \$277/night without excision.
 With excision 325 booked nights at \$277/night.

Expenses

- Livestock input costs 15% of sheep income.
- Pasture/Feed costs 8% of sheep income.
- Rental Cleaning \$34 per night booked.
- Overheads 10% of total income.

	Budget			
Income	Without	Excision (184ha)		With Excision (182ha)
Сгор	\$	10,800	Τ	\$ 10,800
Sheep	\$	78,895		\$ 77,800
Rental	\$	85,000		\$ 90,000
Total Income	\$	174,695		\$ 178,600
less variable costs:-				
Livestock input costs	\$	11,834		\$ 11,670
Pasture/Feed Costs	\$	6,312		\$ 6,224
Rental Cleaning	\$	10,200		\$ 11,050
Total Variable costs	\$	28,346		\$ 28,944
Gross Profit Margin	\$	146,349		\$ 149,656
less fixed costs:-			Τ	
Overheads	\$	17,470		\$ 17,860
Net Profit Before Tax	\$	128,880		\$ 131,796

Explanation:

Net profit before tax is increased with the excision due to a \$5,000 increase on rental income. This is because once the two-hectare excision takes effect, there is the ability to establish a safer boundary appealing to a new client base (Families are more likely to book due to the safer area, can cater for bigger groups to run workshops etc.) and therefore increasing the booking rate by 8.3% and increasing the rental income by 5.9%. While the rental income is increased, sheep income is only reduced by 1.39%, as mentioned similarly in the gross margin calculation. Based off this basic budget the business would increase the net profit by \$2,916 or 2.26% if the excision was able to take place.

5. Succession

Succession is a main driver of the excision. The client has identified the opportunity for a retirement plan involving the two proposed 'parts' of the property and involve the next generation on farm. This being the sixth generation to work the land at Baringhup. Initially the dwelling could be continued as a holiday rental, with the idea that in the next 10 years it would become the client's sole residence. The land would then be passed to the next generation through inheritance, allowing the farm to maintain a level of productivity, how it operates currently. If the next generation were to decide in later years that agriculture is no longer of interest to them, the land could be share farmed or leased. This allows two sources of income to be derived from the land, being the rate received for the lease and the productive income that the leaser receives. All this can take place without the need for negotiating the client's ability to live in the residence or interrupting the agricultural productivity of the land. Please find below a 10-year farm plan for 347-Bahringhup Road, Baringhup.

10-Year Farm Plan

Years 1-4

Years 4-7

- Infrastructure Complete general Maintenance on residence. Start undertaking retreats for corporate businesses, meditation & relaxation. Aim for 8 retreats a year. To be run by Claire McLeod and associates.
- Fencing Ensure fencing around the excision remains at a respectable and safe level to allow the safe use of the residence.
- Soil Continue to ensure soil health remains at a productive level.
- Livestock Ensure mating percentages remain high. Look further into increasing wool production by bettering genetics.
- Feed Monitor overall feed levels. Maintain a level of feed cover and if feed becomes scarce, look towards destocking or utilising both different grazing techniques or the oaten hay that the farm has on hand.
- Pasture regeneration Look to regenerate pasture levels around the property.

- Infrastructure Complete general Maintenance on residence. Start undertaking retreats for corporate businesses, meditation & relaxation. Aim for 12 retreats a year. To be run by Claire McLeod and associates.
- Fencing Ensure fencing around the excision remains at a respectable and safe level to allow the safe use of the residence.
- Cropping Increase share-farming with neighbour to boost production. Will look to increase revenue.
- Soil Continue to ensure soil health remains at a productive level. Look towards soil amelioration works.
- Livestock Ensure mating percentages remain high. Maintain wool level. Increase the Crossbred lamb sales of the business from 300 head to 400 head.
- Feed Monitor overall feed levels. Maintain a level of feed cover and if feed becomes scarce, look towards destocking, utilizing both different grazing techniques, oaten hay that the farm has on hand.

Year 7-10

Pre-Retirement

- Infrastructure: Complete general maintenance on residence. Reduce the amount of retreats undertaken and the overall advertisement of the residence.
- Soil Continue to ensure soil health remains at and look towards soil amelioration works.
- Livestock Ensure mating percentages remain high. Maintain wool level. Maintain Crossbred lamb sales of the business from at 400 head.
- Feed Monitor overall feed levels. Maintain a level of feed cover and if feed becomes scarce, look towards destocking or utilizing different grazing techniques.
- Succession Introduce daughters to farm production to ensure the farmland stays in the family for a sixth generation.

Retirement

- Move into the residence permanently. Maintenance of the residence will continue.
- Daughters have full control of farm production and continue at the level of maintenance as described previously.

Attachment 12.3.1.5



46 Edward Street PO Box 189 Bendigo VIC 3552 T 03 5441 6176 E admin@orm.com.au W **orm**.com.au

30/06/2023

Claire McLeod claire.mcleod2000@gmail.com

Hi Claire,

It was great to speak on the 16/06/2023 and I could hear in your voice how passionate and driven you are to get this excision through to enable a breadth of opportunities for yourself, Greg and the next generation. This ORM report provides a Business Plan for your farm. When assessing you excision application there may be additional analysis required by council. ORM can assist if further reporting is required.

Kind regards

Phil O'Callaghan ORM Senior Business Consultant phil@orm.com.au James Naughton Graduate Agribusiness Analyst james@orm.com.au

ORM Pty. Ltd. ABN 62 100 934 932.

orm.com.au

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Median	25.2	19.5	20.4	26.4	41.0	39.7	46.2	51.3	41.2	43.8	35.3	25.0	486.4
90th %ile	67.4	77.6	59.2	69.7	84.4	79.2	72.1	80.8	83.0	89.6	73.4	65.0	645.3
95th %ile	81.6	111.4	78.1	76.8	93.7	91.6	82.0	92.7	104.4	116.5	81.9	83.6	675.2
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Costs	\$/ha	109	96	82
Husbandry		54	48	41
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Costs	20120	17753	15090	17654	19901	17560	14926	17462	
Husbandry	54	48	41	48	54	48	41	48	
Fodder	55	49	41	48	55	49	41	48	

4. Profit and Loss Budget

A simple budget, not including any machinery costs or your own labour costs/drawings.

The assumptions are as follows:

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	Budge	et		
Income	With	out Excision (184ha)	\	With Excision (182ha)
Сгор	\$	10,800	\$	10,800
Sheep	\$	78,895	\$	77,800
Rental	\$	85,000	\$	90,000
Total Income	\$	174,695	\$	178,600
less variable costs:-				
Livestock input costs	\$	11,834	\$	11,670
Pasture/Feed Costs	\$	6,312	\$	6,224
Rental Cleaning	\$	10,200	\$	11,050
Total Variable costs	\$	28,346	\$	28,944
Gross Profit Margin	\$	146,349	\$	149,656
less fixed costs:-				
Overheads	\$	17,470	\$	17,860
Net Profit Before Tax	\$	128,880	\$	131,796

Explanation:

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10-year Farm Plan	
Years 1-4 Years 4-7	Year 7-10
 Infrastructure – Complete general Maintenance on residence. Start undertaking retreats for corporate businesses, meditation & relaxation. Aim for 8 retreats a year. To be run by Claire McLeod and associates. Fencing – Ensure fencing around the excision remains at a respectable and safe level to allow the safe use of the residence. Soil – Continue to ensure soil health remains at a productive level. Livestock – Ensure mating percentages remain high. Look further into increasing wool production by bettering genetics. Feed – Monitor overall feed levels. Maintain a level of feed cover and if feed becomes scarce, look towards destocking or utilising both different grazing techniques or the oaten hay that the farm has on hand. Pasture regeneration - Look to regenerate pasture levels around the property. 	 Pre-Retirement Infrastructure: Complete general maintenance on residence. Reduce the amount of retreats undertaken and the overall advertisement of the residence. Soil – Continue to ensure soil health remains at and look towards soil amelioration works. Livestock – Ensure mating percentages remain high. Maintain wool level. Maintain Crossbred lamb sales of the business from at 400 head. Feed – Monitor overall feed levels. Maintain a level of feed cover and if feed becomes scarce, look towards destocking or utilizing different grazing techniques. Succession – Introduce daughters to farm production to ensure the farmland stays in the family for a sixth generation. Retirement Move into the residence permanently. Maintenance of the residence will continue. Daughters have full control of farm production and continue at the level of maintenance as described previously.

Our Reference: DOC/23/44423

Application: PA177/2023

Address: 347 Baringhup Road, Baringhup Vic 3463

Proposal: Two-lot subdivision (dwelling excision)

Zone: Farming Zone

Overlays: EMO; ESO5

Date: 25 September 2023

Strategic Planner: Nathan Lord

The Strategic Planning unit understands that the Statutory Planning unit is seeking any strategic planning advice relating to additional documents received in response to Council's latest RFI letter as well as the strategic planning context of the site and surrounds of the subject property.

The Strategic Planning unit has reviewed the recent documents related to PA177/2022, in particular ORM's Ten year Business plan, dated 30/06/2023, and ORM's Farm Management Plan.

It is understood that the proposal seeks a two-hectare excision of the 183.8ha property situated at 347 Baringhup Road, Baringhup.

Strategic Planning Comment: The subject site is located in the Farming Zone. The surrounding area appears to be used primarily for agricultural purposes. However, the site does abut the township zoned land of Baringhup at the south-west corner of the property. As noted within the Shire's Municipal Planning Strategy (MPS), agriculture is the main rural land use by area across most rural areas of the Shire. The dominant agricultural use is broad acre grazing of cattle and sheep. Extensive cereal cropping occurs on large holdings of alluvial land and gently sloping sedimentary land in the north-west of the Shire.

The MPS notes a concern that productive agricultural land is being lost to non-agricultural uses, especially to rural living and low density residential development. Dwellings in rural areas can also lead to amenity conflicts with existing agricultural activities and potentially impede their operation.

Council's strategic directions regarding agriculture are:

- Protecting agricultural land of local and regional strategic significance.
- Promoting agriculture and horticulture as the primary land uses in the Shire.
- Avoiding the fragmentation of productive agricultural land through the development of dwellings and subdivision (including dwelling excisions) to maintain the productive capacity of the land.
- Discouraging the use and development of land that could create conflict with existing agricultural activities.
- Controlling the unplanned loss of agricultural land to rural living and residential uses.
- Protecting the irrigation and groundwater resources that support intensive agriculture and horticulture.
- Restructuring old and inappropriate subdivisions.

• Discouraging new dwellings and subdivisions that excise a dwelling that adversely impact the agricultural activities carried out on the land and neighbouring sites.

In light of the above, particularly 'Avoiding the fragmentation of productive agricultural land through the development of dwellings and subdivision (including dwelling excisions) to maintain the productive capacity of the land,' the proposal appears to run contra to Council's strategic directions regarding agriculture.

Within the Shire's Planning Policy Framework, Clause 14.01-1L applies to subdivision in the Farming Zone. Strategies include:

- Discourage the subdivision of large lots in the Farming Zone on agricultural land identified in the town framework plans at Clauses 02.04 and 11.01-1L as suitable for future low density residential land.
- Discourage boundary re-alignments except if they are minor adjustments to take account of physical, human made or topographical features on the site.
- Discourage subdivision that will lead to a concentration of lots and change the general land use and character of the rural area.
- Discourage subdivision within potable water supply catchment areas in the Farming Zone in order to protect water quantity and quality.
- Discourage the development of dwellings in areas of 'moderate' agricultural land quality unless they are directly linked to and will benefit the agricultural use.

The subject site is located within the Designated Water Supply Catchment of Loddon River (Laanecoorie) and so subdivision should be discouraged, according to the above strategies.

A further note to make here is in reference to this Clause's policy guidelines, where it states:

Consider as relevant:

Discouraging small lot excisions except where a house exists and:

- The new lot has a maximum size of 2 hectares, except as otherwise required by a provision of this planning scheme.
- The remainder of the land can be consolidated with the title of an existing farm.
- The remainder of the land, if less than 40 hectares in size, is subject to a Section 173 Agreement that prohibits a further dwelling.

The proposal meets the above relevant considerations because a house already exists on the land proposed to be excised and the proposal can meet the further considerations regarding lot size and titles.

Conclusion:

The assessment of PA177/2023 against the MPS and PPF of the Mount Alexander Planning Scheme and the land use context of the site and surrounding area has found that, on balance, Council's strategic policy context is not supportive of the proposal.

The Strategic Planning unit considers that diminishing the long-term agricultural productive capacity of the land may have unforeseen, negative impacts upon the surrounding agricultural land use context. There is also the potential for increased land use conflicts in future should a dwelling by constructed on Lot 2 and sold, or if a precedent is set by this application encouraging surrounding lands to attempt similar excisions of viable agricultural land.

The Strategic Planning unit therefore discourages the issuing of any permit for what is being proposed.

OTHER NOTES

Current or Further Strategic Work

The Strategic Planning unit is working on its Settlement Planning Assessment. This assessment has helped to identify key settlement planning projects in the Shire for inclusion in the strategic planning work program for the 2022 to 2026 period. This includes the preparation of housing and neighbourhood character strategies for towns in the Shire, a Shire-wide industrial land use strategy and a rural living assessment, followed by a further review of the Shire-wide settlement directions and municipal land supply and demand.

These projects have been prioritised in a way that considers development pressures and internal resourcing requirements. Community and other key stakeholder engagement is to play a central role in the preparation of these projects.

The population of Mount Alexander is forecast to increase by 5,219 people, from 19,097 in 2016 to 24,316 in 2041. According to the Mount Alexander Planning Scheme, Council must ensure a supply of at least 15 years of residential land is available to cater for population growth. Our recent Land Supply and Demand Assessment (Remplan 2022) shows us that land supply across the Shire is adequate to provide for 15 years of residential land. 'Total' supply of residential land is not exhausted over a 20-year forecast and will potentially provide at least 35 years of land supply based on current demand.

Castlemaine has the highest levels of residential land demand (annual average of 46 lots a year) and the second lowest years of supply (around 25 years). Harcourt is the most constrained township, with 20 years of residential land supply. Larger townships such as Castlemaine and Harcourt (Maldon and Newstead too) are fully serviced with infrastructure including reticulated sewerage and are zoned for residential purposes, making these areas the most appropriate locations to be encouraging housing growth.



Agriculture Victoria

Department of Jobs, Precincts and Regions

08 September 2022

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

Email: planning@mountalexander.vic.gov.au

Dear Anita,

RE:	Planning Permit Application PA177/2022 Two lot subdivision (Dwelling Excision).
Land at:	347 Baringhup Road, BARINGHUP
	PC369300, 2A~10\PP2073, 1\TP322862
Your Ref:	PA177/2022

Thank you for the opportunity to provide comment pursuant to a notice of application under Section 52 of the *Planning and Environment Act, 1987*.

Council has noted that; This application seeks approval for a two lot subdivision (Dwelling Excision). Council would be interested in the opinion of Agricultural Victoria in relation to the potential impact on agricultural land. I note the applicant has identified that the land (soil) in question is of low quality. Council has requested additional information. A copy of the request including Council's concerns has been included in this referral.

Agriculture Victoria notes that the request for further information was dated 25 August 2022.

The advice provided in this letter relates to:

- 1. Planning context.
- 2. Supporting documents
- 3. Strategic objectives and protection of agricultural lands.

1. Planning context.

The subject land is approximately 184.64 hectares in area and zoned Farming Zone (FZ), subject to Clause 35.07 of the Mount Alexander Planning Scheme. The property is affected by;

- Erosion Management Overlay (EMO)
- Environmental Significance Overlay ESO5 Watercourse Protection
- Areas of Aboriginal Cultural Heritage Sensitivity
- Waterways (tributary to Six Mile Creek)
- Designated Water Supply Catchment Loddon River (Laanecoorie)

The application is seeking permission for a two (2) lot subdivision (Dwelling excision). In accordance with the Schedule to Clause 35.07 Farming Zone, of the Mount Alexander Planning Scheme the land is subject to a minimum subdivision area of 40 hectares and a minimum area for which no permit is required to use land for a dwelling of 40 hectares.

Clause 35.07-3 Subdivision states that;

- A permit is required to subdivide land.
- Each lot must be at least the area specified for the land in a schedule to this zone. If no area is specified, each lot must be at least 40 hectares.
- A permit may be granted to create smaller lots if any of the following apply:
 - The subdivision is to create a lot for an existing dwelling. The subdivision must be a two lot subdivision.
 - The subdivision is the re-subdivision of existing lots and the number of lots is not increased.
 - The subdivision is by a public authority or utility service provider to create a lot for a utility installation.

Agriculture Victoria notes that 347 Baringhup Road, BARINGHUP, is associated with three (3) parcels of land totalling approx. 203.01 ha all under Council Property Number 7936 comprising:

- Plan PC369300 (184.64 ha).
- Allot. 2A Sec. 10 PARISH OF BARINGHUP (1.53 ha).
- Lot 1 TP322862 (16.84 ha).

Land in Plan of Consolidation 369300S was created by instrument PC369300S on 28 February 2006. There are no encumbrances, caveats or notices on title to prevent further subdivision and or dwellings.

The proposed subdivision in *Design Response Plan Ref: 1538 (ver. 3) Musgrave-Evans & Gilbert Consulting Pty Ltd* shows the proposed two (2) lots comprising:

- Lot 1 (1.5 ha) including dwelling.
- Lot 2 (182.3 ha).

2. Supporting documents.

Agriculture Victoria has reviewed the application documents and provides a summary of relevant points:

Planning Report

Agriculture Victoria notes that document titled; *Planning Report, Dwelling Excision Simmons Road, Baringhup*, July 2022, states the following:

- We are acting on behalf of Mr Gregory Lillie, who is the registered proprietor of the property located at Simmons Road, Baringhup.
- Mr Lillie seeks a Planning Permit to subdivide the subject land in order to excise the existing dwelling from the balance of the farm. The dwelling is located on a large 183.8 ha parcel of land consisting of two non-separately transferrable parts.
- The proposed dwelling excision will create a new lot 1.5 ha in area to accommodate the existing dwelling. The balance of the land will continue to be used for farming purposes.
- The property is located within the Farming Zone (FZ) and is covered by the Erosion Management Overlay (EMO). The mapped waterway passing through the property is covered by schedule 5 to the Environmental Significance Overlay (ESO5).
- The parcel of land is currently used for farming purposes and consists of two nonseparately transferrable parts with the total area of the site being 183.8 hectares.

- The existing dwelling is located immediately to the north of the Baringhup Township. Accordingly, the existing dwelling abuts residential land to the south and the proposed dwelling excision is in context with the surrounding land use.
- In addition to addressing Council Policy 14.01-1L, which iterates the lot area for the dwelling should be limited to two hectares, the rationale for positioning the subdivisional boundary was as follows:
 - Where practical, existing fencing has been adopted as the excision boundaries.
 - The existing driveway to the dwelling has been retained with the dwelling.
 - The existing servicing infrastructure associated with the dwelling, including effluent disposal and electricity supply, have been retained within the proposed excised lot.
- The Agricultural Land Quality Units map in clause 14.01-1L has characterised the agricultural quality of the soil of the subject site as Class 4 (Low).
- The proposed 1.5 hectare allotment to accommodate the dwelling is in context with nearby allotments as the dwelling is located immediately to the north of the Baringhup township. The balance 182.3 hectare parcel is in context with the surrounding parcels to the north of the subject site.
- There is a mapped water way within the subject site; however, this passes through the property over 700 metres from the existing dwelling. Additionally, the large 182.3 hectare balance allotment can easily accommodate any effluent disposal associated with any future developments. The small 1.5 hectare lot has been positioned to cover the existing effluent disposal infrastructure associated with the existing dwelling.
- The development will have minimal effect on agricultural production. The proposed balance 182.3 hectare lot retains its productive capacity.
- The surrounding land use adjacent to the dwelling is residential, with the Baringhup township abutting the subject site to the south. Accordingly, this development will not limit the operation and expansion of any nearby agricultural use.
- The water course traversing the subject site is covered by Schedule 5 to the Environmental Significance Overlay. The environmental objective of this schedule is to inter alia: Maintain the quality and quantity of water within the watercourse.

Site Plans

The Design Response Plan Ref: 1538 (Ver. 3) and Site Context Plan Ref: 1538 (Ver. 1) by Musgrave-Evans & Gilbert Consulting Pty Ltd show;

- Planned boundary and layout of the proposed Lot 1.
- Representation of existing Dwelling, water tank, existing driveway.

The plans do not show;

• Other existing farm infrastructure or how access will be made.

3. Strategic objectives and protection of agricultural lands.

The following clauses of the Mount Alexander Planning Scheme are relevant to this application;

- Clause 02.03-4 Natural resource management:
 - Agriculture:
 - There is a concern that productive agricultural land is being lost to nonagricultural uses, especially to rural living and low density residential development.
 - Dwellings in rural areas can also lead to amenity conflicts with existing agricultural activities and potentially impede their operation.
 - Councils strategic directions to protect agriculture are:

- Protecting agricultural land of local and regional strategic significance.
- Promoting agriculture and horticulture as the primary land uses in the Shire.
- Avoiding the fragmentation of productive agricultural land through the development of dwellings and subdivision (including dwelling excisions) to maintain the productive capacity of the land.
- Discouraging the use and development of land that could create conflict with existing agricultural activities.
- Controlling the unplanned loss of agricultural land to rural living and residential uses.
- Restructuring old and inappropriate subdivisions.
- Discouraging new dwellings and subdivisions that excise a dwelling that adversely impact the agricultural activities carried out on the land and neighbouring sites.
- Clause 14.01-1S Protection of agricultural land:
 - Objective: To protect the state's agricultural base by preserving productive farmland, and strategies to:
 - Protect productive agricultural land from unplanned loss due to permanent changes in land use.
 - Prevent inappropriately dispersed urban activities in rural areas.
 - Limit new housing development in rural areas by:
 - Discouraging development of isolated small lots in the rural zones from use for dwellings or other incompatible uses.
 - Encouraging consolidation of existing isolated small lots in rural zones.
 - In considering a proposal to use, subdivide or develop agricultural land, consider the:
 - Desirability and impacts of removing the land from primary production, given its agricultural productivity.
 - Impacts on the continuation of primary production on adjacent land, with particular regard to land values and the viability of infrastructure for such production.
 - Compatibility between the proposed or likely development and the existing use of the surrounding land.
 - Avoid the subdivision of productive agricultural land from diminishing the long-term productive capacity of the land.
 - Give priority to the re-structure of inappropriate subdivisions where they exist on productive agricultural land.
- Clause 14.01-1L Protection of agricultural land:
 - Strategies:
 - Encourage the consolidation of existing titles to maintain the viability of farming uses.
 - Discourage small lot excisions that:
 - Restrict agricultural production on adjacent land.
 - Result in a cluster of dwellings that are not directly related to the agricultural use of the land.
 - Discourage the development of dwellings in areas of 'moderate' agricultural land quality unless they are directly linked to and will benefit the agricultural use.
 - Policy to;

- Discouraging small lot excisions except where a house exists and:
 - The new lot has a maximum size of 2 hectares, except as otherwise required by a provision of this planning scheme.
 - The remainder of the land can be consolidated with the title of an existing farm.
 - The remainder of the land, if less than 40 hectares in size, is subject to a Section 173 Agreement that prohibits a further dwelling.
- Clause 14.02-1S Catchment planning and management:
 - Strategies to;
 - Ensure the continued availability of clean, high-quality drinking water by protecting water catchments and water supply facilities.
 - Retain natural drainage corridors with vegetated buffer zones at least 30 metres wide along each side of a waterway to:
 - Maintain the natural drainage function, stream habitat and wildlife corridors and landscape values,
 - Minimise erosion of stream banks and verges, and
 - Reduce polluted surface runoff from adjacent land uses.
- Clause 16.01-3S Rural residential development:
 - Strategies to:
 - Manage development in rural areas to protect agriculture and avoid inappropriate rural residential development.
 - Discourage development of small lots in rural zones for residential use or other incompatible uses.
 - Encourage consolidation of existing isolated small lots in rural zones.
- Clause 16.01-3L Rural residential development:
 - Strategies to:
 - Discourage rural living development within the Farming Zone and outside areas already zoned for rural living.
- Clause 35.07-6 Farming Zone Decision guidelines:
 - General issues:
 - The Municipal Planning Strategy and the Planning Policy Framework.
 - Any Regional Catchment Strategy and associated plan applying to the land.
 - The capability of the land to accommodate the proposed use or development, including the disposal of effluent.
 - How the use or development relates to sustainable land management.
 - Whether the site is suitable for the use or development and whether the proposal is compatible with adjoining and nearby land uses.
 - How the use and development makes use of existing infrastructure and services.
 - Agricultural issues and the impacts from non-agricultural uses:
 - Whether the use or development will support and enhance agricultural production.
 - Whether the use or development will adversely affect soil quality or permanently remove land from agricultural production.
 - The potential for the use or development to limit the operation and expansion of adjoining and nearby agricultural uses.
 - The capacity of the site to sustain the agricultural use.

- The agricultural qualities of the land, such as soil quality, access to water and access to rural infrastructure.
- Any integrated land management plan prepared for the site.
- Whether Rural worker accommodation is necessary having regard to:
 - The nature and scale of the agricultural use.
 - The accessibility to residential areas and existing accommodation, and the remoteness of the location.
- The duration of the use of the land for Rural worker accommodation.
- Accommodation issues:
 - Whether the dwelling will result in the loss or fragmentation of productive agricultural land.
 - Whether the dwelling will be adversely affected by agricultural activities on adjacent and nearby land due to dust, noise, odour, use of chemicals and farm machinery, traffic and hours of operation.
 - Whether the dwelling will adversely affect the operation and expansion of adjoining and nearby agricultural uses.
 - The potential for the proposal to lead to a concentration or proliferation of dwellings in the area and the impact of this on the use of the land for agriculture.

Conclusion:

The Mount Alexander Shire Council as the responsible authority will have to make a determination as to whether the application for a two (2) lot subdivision (Dwelling excision), bordering the Town Zone of Baringhup, and located approximately 8 km from Maldon and 16 km from Carisbrook, is supported or otherwise by the purpose, objectives and strategies of the Mount Alexander Planning Scheme.

The purpose of the Farming Zone includes:

- To provide for the use of the land for agriculture
- To encourage the retention of productive agricultural land.
- To ensure that non-agricultural uses, including dwellings, do not adversely affect the use of land for agriculture.

Caselaw that may be considered includes the Victorian Civil and Administrative Tribunals (VCAT) rulings within *Estate of JE Walker v Wangaratta RCC [2021] VCAT 125*. The case addresses the purpose of the Farming Zone and discussion on what constitutes productive use of agricultural land, subdivision, impacts on agricultural land value, impacts on surrounding land use, and the potential for lifestyle use of the land with the establishment of an 'as of right' presumption for a dwelling.

In Estate of JE Walker v Wangaratta RCC [2021] VCAT 125, the Member Martin discusses the purpose of the Farming Zone including the three (3) points noted above: "The last three purposes are very on point here - a focus on protecting/retaining productive agricultural land and avoiding non-agricultural uses which would undermine such productive agricultural focus" and "the planning policy framework is also promoting the productive agricultural use of land zoned Farming Zone and discouraging subdivision that would compromise same". [41]

The same case finds that being in close proximity to a major town, in that instance Wodonga, may influence potential future land use; "I do see a major prospect that if the three lot subdivision went ahead, the new lots would be attractive to use as lifestyle properties". [46]

Mount Alexander Shire Council cites *Alford v Corangamite SC [2018] VCAT 853 (12 June 2018)* as being relevant to this application. Agriculture Victoria acknowledges that there are similarities with this proposed subdivision in that Member Carew states;

• 23. The proposal will create a small lot within a Broadacre farming area. The larger Lot 2 will comprise the farming activity, while the dwelling is excised. While the land is

north of the area identified in the Shire's framework plan as the most significant agricultural land, the area forms part of the rural assets of the Shire as well as part of the lakes landscape.

- 24. I accept that the land uses that presently exist will not alter on the land because of this subdivision. I also find that the dwelling is habitable, waste water can be managed and the lot is close to the preferred size set out in the local policy. I also accept that the excision will not necessarily lead to a proliferation of dwellings in the area and there is no existing clustering of dwellings, although I note that there is a small title associated with a former school site opposite the review site.
- 25. These positive aspects must be weighed against the overall objectives of policy and the zone to protect agricultural land and to prevent land use conflict. I find that the proposal is not supported by the State and local policy relating to agriculture or the objectives of the Farming Zone as set out below.
- 26.... The excision is not required to support the existing farming operation and merely allows the sale of a separate asset.
- 27....the excision of dwellings can result in land use conflicts. While the present tenant (a rural contractor) may be familiar with the potential land use conflicts, there is no certainty that the purchaser would be the current tenant, or that the land would not be subsequently on-sold in the future to an occupant who was not so familiar with the rural environment.
- 30. The proposal also allows for the construction of a new dwelling on the remnant larger lot, potentially without planning approval. The Section 173 requirement is intended to prevent further dwelling excisions from this larger lot in the future, but the proposal would still allow an increase in the number of dwellings on the land. While the permit applicant indicated that their intention was not to construct a new dwelling but to continue farming as at present, there is nothing to require this.

Agriculture Victoria has considered the local policy provided in Clause 14.01-1L Protection of agricultural land and the Agricultural land quality units map, which appears to classify the subject land as being Class 4 (Low). The upper limit of the scale is Class 3 (Moderate) and the basis for the class determination is not qualified within the clause. It is also noted that the map which is derived from the *Mount Alexander Shire Council Rural Land Study (Jan 2014)* which states that; the map provides a strategic level indicator of agricultural land quality and cannot be used at the individual property level. The quality classes are expressed on a statewide basis, not comparative within the Shire.

Clause 14.01-1S Protection of agricultural land's objective is to protect the state's agricultural base by preserving productive farmland. Agriculture Victoria considers that the land's agricultural productivity is not necessarily limited by soil quality etc. In many cases the main obstacles to land being agriculturally productive are the ability to achieve environmental buffers and amenity separation distances to sensitive uses such as dwellings.

Agriculture Victoria considers that the application;

- Is silent on the other Lots listed under the same Council Property Number: 7936,
- Does not explain or justify why the excision is required and how it will support and enhance agricultural production.
- Does not address protection of waterways.
- If approved would potentially set a precedent for surrounding parcels of land and potentially lead to a further proliferation of dwellings in the Farming Zone.
- The dwelling excision will create a small lot withing the farming area which will not be associated with farming and most likely lead to a lifestyle property. The remaining proposed Lot 2 of 182.3 ha will effectively have an as-of-right for a dwelling under the Schedule to Clause 35.07 FZ, being that the minimum area for which no permit is required to use land for a dwelling is 40 ha.

- There are already numerous small lots with and without dwellings in the FZ, especially East of Baringhup, most of which would not appear to be contributing to productive agriculture.
- The application acknowledges the ESO-5 but does not address *Clause 14.02-1S Catchment planning and management* which has strategies to *Retain natural drainage corridors with vegetated buffer zones at least 30 metres wide along each side of a waterway.*

Recommendations

Agriculture Victoria considers that the proposed two (2) lot subdivision (dwelling excision) will create an as of right for a dwelling on the proposed remaining Lot 2 and potential future subdivisions. This would have the potential to diminish the long-term agricultural productive capacity of the land, may lead to a proliferation of dwellings in the Farming Zone, and impact surrounding agricultural land use.

The refusal of the application appears supported by the VCAT decisions cited above and by State and Local Policies.

If Council were to consider that the proposal meets the purpose of the Farming Zone, and the strategic objectives of the Mount Alexander Planning Scheme and if Council determines a permit was to be granted to allow the two (2) lot subdivision (dwelling excision), Agriculture Victoria makes the following recommendations:

- That conditions be placed on the permit to protect agricultural land through a binding agreement on title which ensures:
 - That any permit issued that allows the use and development of a dwelling in the Farming Zone is in association with agricultural production, protects against the potential for further subdivision of the land and ensures the use does not compromise farming activity in the area.
 - That water quality is protected by 30 m fenced buffers to all waterways (as defined by the Water Act 1989) and shown on any approved plan as part of any permit issued.
 - The existing dwellings and future dwellings must not be subdivided from the lot in the future, and the lots must not be subdivided to increase the number of lots, by excision or otherwise.
 - That the owner acknowledges and accepts the possibility of nuisance from adjoining agricultural operations including animal production, spray drift, agricultural machinery use, pumps and associated hours of operation necessary for agricultural production.

This letter of advice is provided to Council to assist their assessment of the above planning permit application and any requirement in seeking further information from the applicant as part of its assessment process. The information provided should be considered as advisory in nature to inform Council's determination as the Responsible Authority.

Please provide a copy of the outcome for our records.

Please contact me if you require any further clarification.

Regards

Paul Wallace

Agriculture Victoria Planning and Advisory Service Biosecurity and Agriculture Services I Agriculture Victoria **Department of Jobs, Precincts and Regions** 255 Ferguson Road, Tatura, Victoria 3616 **M: 0448 461 178 | E:** paul.wallace@agriculture.vic.gov.au Planning and Environment Act 1987

MOUNT ALEXANDER PLANNING SCHEME

AMENDMENT C99malx

EXPLANATORY REPORT

Overview

This amendment seeks to correct inconsistencies in the Mount Alexander Planning Scheme (the Planning Scheme) associated with the Heritage Overlay and the Operational Provisions which were identified following the implementation of previous Amendment C97malx.

It does this by updating Planning Scheme Maps for places in the Heritage Overlay (see Appendix 1) and amending the Schedule to Clause 74.02 (Further Strategic Work) to remove reference to rezoning completed as part of Amendment C97malx.

Where you may inspect this amendment

The amendment can be inspected free of charge at the Mount Alexander Shire Council website at <u>https://www.mountalexander.vic.gov.au/Home</u>.

And/or

The amendment is available for public inspection, free of charge, during office hours at the following places:

• Mount Alexander Shire Council, Civic Centre, 27 Lyttleton Street, Castlemaine.

The amendment can also be inspected free of charge at the Department of Transport and Planning website at http://www.planning.vic.gov.au/public-inspection or by contacting the office on 1800 789 386 to arrange a time to view the amendment documentation.

Submissions

Include for exhibited amendments and remove at adoption.

Any person may make a submission to the planning authority about the amendment. Submissions about the amendment must be received by [insert submissions due date].

A submission must be sent to: [insert planning authority's address]

Panel hearing dates

Include for exhibited amendments and remove at adoption.

In accordance with clause 4(2) of Ministerial Direction No.15 the following panel hearing dates have been set for this amendment:

- directions hearing: [insert directions hearing date]
- panel hearing: [insert panel hearing date]

Details of the amendment

Who is the planning authority?

This amendment has been prepared by the Mount Alexander Shire Council, which is the planning authority for this amendment.

Land affected by the amendment

The amendment affects ten properties within the Mount Alexander Shire.

A mapping reference table identifying the properties is inserted at Appendix 1 to this Explanatory Report.

What the amendment does

The amendment addresses inconsistencies associated with the Heritage Overlay and operational provisions which were identified following the implementation of Amendment C97malx.

Specifically, the amendment proposes to make the following changes to the Planning Scheme:

- Amends the Schedule to Clause 74.02 (Further Strategic Work) to remove the following wording relating to the rezoning of the Calder Freeway area (this rezoning was completed as part of Amendment C97malx): "Engaging with VicRoads to ensure that the reservation of the Calder Freeway is appropriately zoned."
- Correct Planning Scheme Maps for places in the Heritage Overlay (see Appendix 1).

Strategic assessment of the amendment

Why is the amendment required?

The amendment is required to correct inconsistencies identified after the implementation of Amendment C97malx.

The correction of these inconsistencies will contribute to the more effective operation and administration of the Planning Scheme and will help ensure that the planning scheme is correct, up to date and provides a clear basis for decision-making.

How does the amendment implement the objectives of planning in Victoria?

The amendment ensures that planning scheme provisions are correctly applied.

Specifically, this amendment implements the following objectives of planning in Victoria as outlined in Section 4 (1) of the Planning and Environment Act 1987:

a) To provide for the fair, orderly, economic and sustainable use, and development of Land.

The amendment corrects mapping application of the Heritage Overlay and updates ordinance at Clause 74.02 (Further Strategic Work) to ensure the fair and orderly use and development of the land.

b) To conserve and enhance those buildings, areas or other places which are of scientific, aesthetic, architectural or historical interest, or otherwise of special cultural value.

The amendment ensures the Heritage Overlay is correctly applied and covers heritage places intended to be protected. These corrections provide for the conservation of heritage places.

How does the amendment address any environmental, social and economic effects?

There are no adverse social, economic or environmental effects arising from this amendment, as the

amendment is administrative in nature, correcting and resolving inconsistencies and anomalies. However, it is expected that the amendment will have a positive social and economic effect through the preservation of historically significant places often which reflect social history, for the benefit of current and future generations.

Does the amendment address relevant bushfire risk?

The amendment meets bushfire policy in Clause 13.02 of the Planning Scheme because it is administrative in nature and is not expected to result in any increase to the risk to life, property, community infrastructure and the natural environment from bushfire. The changes are corrections or administrative tidy ups, which are not expected to introduce or intensify development, impact on existing bushfire controls, or increase the net risk to life, property, community infrastructure and the natural environment from bushfire.

The relevant fire authority (Country Fire Authority) was notified of the preparation of Amendment C97malx during the exhibition period, and this amendment seeks to implement corrections arising from Amendment C97malx. A submission was not received from the authority during or after the exhibition period of Amendment C97malx. No further notification to the Country Fire Authority is required to address bushfire risk, however land occupiers and owners of sites affected by this amendment will be notified as part of the amendment process, of which the Country Fire Authority is one.

Does the amendment comply with the requirements of any Minister's Direction applicable to the amendment?

The amendment considers relevant, and complies with, the following Minister's Directions:

• Ministerial Direction: The Form and Content of Planning Schemes

The amendment has been prepared having regard to the *Ministerial Direction – The Form and Content of Planning Schemes* under Section 7(5) of the Act. The ordinance changes reflect the requirements of this Ministerial Direction.

• Ministerial Direction No. 11: Strategic Assessment of Amendments

Ministerial Direction No 11 will help to ensure that a comprehensive strategic evaluation of a planning scheme amendment and the outcomes it produces. A strategic assessment of the amendment has been undertaken in accordance with this Ministerial Direction within this Explanatory Report.

How does the amendment support or implement the Planning Policy Framework and any adopted State policy?

The correction of inconsistencies in the Planning Scheme will improve the implementation of the Planning Policy Framework. Specifically, the amendment is supported by and implements the following clauses of the Planning Policy Framework.

- Clause 15.03-1S (Heritage Conservation): the amendment supports the Planning Policy Framework objective to ensure the conservation of places of heritage significance, by correctly and accurately identifying and mapping heritage places within the planning scheme.
- Clause 15.03-1L (Heritage General): the amendment ensures that the heritage places which are relevant to the provisions contained within this policy are accurately protected and identified.

How does the amendment support or implement the Municipal Planning Strategy?

The amendment implements and supports the Municipal Planning Strategy of the Planning Scheme. The specific Strategic Directions at Clause 2.03 of the Planning Scheme are supported and implemented:

• Clause 2.03-5 (Built Environment and Heritage): Protecting and conserving the historic fabric and maintain the integrity of places of heritage and cultural heritage significance. The

amendment aims to support this Strategic Direction by ensuring places of heritage significance are accurately identified so that they can be protected and conserved to allow their integrity to be maintained.

Does the amendment make proper use of the Victoria Planning Provisions?

This amendment makes proper use of the Victoria Planning Provisions by applying the correct overlay provisions to the affected land. 'A Practitioner's Guide to the Victoria Planning Schemes' has been considered and details of the specific overlay provisions affected by the proposed amendment are listed below:

Heritage Overlay (HO):

The Schedule to the HO is the appropriate Victoria Planning Provision tool for heritage controls to properties identified as being of local heritage significance. This amendment identifies where there are inconsistencies associated with the application of the HO and the schedule to the HO in the Planning Scheme and corrects these.

The amendment is consistent with the following relevant Planning Practice Notes (PPN):

- PPN01: Applying the Heritage Overlay
- The PPN provides guidance about the use of the Heritage Overlay.

Further Strategic Work (Clause 74.02)

The Schedule to Clause 74.02 is updated to ensure that the Planning Scheme correctly reflects the work undertaken as part of Amendment C97malx.

How does the amendment address the views of any relevant agency?

Relevant agencies and authorities – including Heritage Victoria, the Department of Transport and Planning, the Country Fire Authority, Council's Property Portfolio Coordinator and prescribed Ministers, will be notified during the exhibition process. Given the proposed amendment affects land within a Recognition and Settlement Agreement Area, notice will also be given to the Dja Dja Wurrung Clans Aboriginal Corporation.

Does the amendment address relevant requirements of the Transport Integration Act 2010?

The amendment is not considered to have a significant impact on the transport system.

Resource and administrative costs

What impact will the new planning provisions have on the resource and administrative costs of the responsible authority?

The amendment will not result in any significant resource implications or administrative costs to the responsible authority.
APPENDIX 1 - Mapping reference table

Location	Mapping Reference	Info relating to error and proposed correction	Strategic Justification
85 High Street, Maldon	Map No. 16HO	Property missing HO445 application across entire site. Apply HO445 across entire property.	This property is within the 'historic interest zone' surveyed within the Maldon Conservation Study (1977), which now largely forms the boundaries for the 'Historic Central Area' precinct (HO445). Surrounding properties have HO445 applied where an individual HO is not applied.
42 High Street, Maldon	Map No. 16HO	Property missing HO445 across entire site, and HO221 erroneously abuts into site. Apply HO445 uniformly across whole property and remove HO221 from site.	This property is within the 'historic interest zone' surveyed within the Maldon Conservation Study (1977), which largely forms the boundaries for the Historic Central Area precinct (HO445). Surrounding properties have HO445 applied where an individual HO is not applied.
2 Francis Street, Maldon	Map No. 16HO H0319 H0324 H0445 H0445 H0317 H0220	Property missing HO95 application across northern portion of site. Apply HO95 uniformly across whole property.	Refer Background Report Amendment C97malx – number 17 for further information regarding this property.

1 Newstead Road, Maldon	Map No. 16HO	Property missing HO250 application in blank square along north-east of site. Apply HO250 uniformly across whole of property.	Refer Background Report Amendment C97malx – number 74 for further information regarding this property.
2 Castlemaine Road, Maldon	Map No. 16HO	Property missing HO37 application in blank square along south-east of site. Apply HO37 uniformly across whole of property.	Refer Background Report Amendment C97malx – number 58 for further information regarding this property.
(Land outside) 19 Templeton Street, Maldon	Map No. 16HO	Land in front of property missing HO444 application in blank square. Apply HO444 across blank square on land in front of property.	HO444 'Maldon Historic Residential Area' is the accurate precinct Heritage Overlay
19 Templeton Street, Maldon	Map No. 16HO	Property missing HO325 application in northern half of blank square along boundary of site. Apply HO325 uniformly across whole of property.	HO325 is the accurate Heritage Overlay for this property.

21 Templeton Street, Maldon	Map No. 16HO H0327 H0444 H0525	Property missing HO327 application in southern half of blank square along boundary of site. Apply HO327 uniformly across whole of property.	HO327 is the accurate Heritage Overlay for this property.
9 Chapel Street South, Maldon	Map No. 16HO	Property missing HO444 application in north-east corner of site. Apply HO444 uniformly across whole of property.	HO444 'Maldon Historic Residential Area' is the accurate precinct Heritage Overlay. Refer Background Report Amendment C97malx – number 28 for further information.
Fountain Street Area, Maldon	Мар No. 16HO ноз53 но445 но445	Land within road reserve missing HO445 application along street. Apply HO445 to blank area not covered by any HO.	HO445 is applied to the surrounding street areas and is therefore the correct HO for this land.

Planning and Environment Act 1987

MOUNT ALEXANDER PLANNING SCHEME

AMENDMENT C99malx

INSTRUCTION SHEET

The planning authority for this amendment is the Mount Alexander Shire Council.

The Mount Alexander Planning Scheme is amended as follows:

Planning Scheme Maps

The Planning Scheme Maps are amended by a total of 2 attached map sheets.

Overlay Maps

1. Amend Planning Scheme Map No. 16HO in the manner shown on the 2 attached maps marked "Mount Alexander Planning Scheme, Amendment C99malx".

Planning Scheme Ordinance

The Planning Scheme Ordinance is amended as follows:

2. In **Operational Provisions** – Clause 74.02, replace the Schedule with a new Schedule in the form of the attached document

End of document

20/05/2021 SCHEDULE TO CLAUSE 74.02 FURTHER STRATEGIC WORK

1.0 Further strategic work

--/--/ Proposed C99malx

- Investigating the application of the most appropriate residential zone to the urban areas.
- Reviewing and updating findings of the *Mount Alexander Rural Living Strategy*, 2006 as recommended in the *Mount Alexander Rural Land Study*, 2014.
- Introducing a schedule to Clause 53.01 (Public Open Space Contribution and Subdivision).
- Developing criteria and identifying potential areas for the application of the Rural Conservation Zone.
- Updating flooding provisions for Newstead, Harcourt, Sutton Grange, Maldon, Guilford, Taradale and the rural areas between Campbells Creek and Guilford.
- Developing provisions and agreements to assist decision making under the Erosion Management Overlay and Salinity Management Overlay.
- Investigating the application of the Environmental Significance Overlay to the Castlemaine Water Reclamation Plant.
- Developing schedules to the Bushfire Management Overlay to minimise referral requirements.
- Investigating bushfire related issues at a strategic level through a Shire-wide Settlement Strategy.
- Engaging with Goulburn-Murray Water and Coliban Water to investigate extending the Environmental Significance Overlay to include all declared open potable water supply catchments.
- Investigating provisions to identify and protect the Central Victorian Mineral Springs Groundwater Management Area in consultation with Goulburn-Murray Water.
- Updating the Castlemaine Urban Design Framework.
- Preparing a comprehensive heritage conservation strategy including recommendations for planning provisions, conservation management, development guidelines and other actions.
- Undertaking strategic research to improve the understanding of the Shire's future housing needs.
- Preparing an industrial strategy for the Shire, with a focus on Castlemaine.
- Engaging with VicRoads to investigate the need to retain the proposed road bypass route of Maldon and identify potential alternative uses of the land.
- Investigating the use of standard development contribution requirements to apply to new urban growth areas.
- Preparing strategic investigations into wastewater issues for the townships of Taradale, Guildford and Elphinstone.
- Preparing incorporated plans or development plans for proposed new residential areas.
- Updating the Castlemaine Residential Strategy.
- Investigate residential expansion in Castlemaine.
- Preparing a structure plan for Campbell's Creek and its urban expansion area.
- Reviewing existing heritage studies and preparing new heritage studies in accordance with the recommendations of the Thematic History for the Shire.

- Undertake a review of the Happy Valley Strategic Plan, and investigate any recommendations which have not yet been implemented.
- Review the *Urban Living Strategy*, 2004 and the Framework Plans (Castlemaine and Maldon via C061; Elphinstone, Taradale and Newstead via C024; Guildford via NPS1) to investigate recommendations not yet implemented.







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Related strategic documents, policies, or procedures:	Community Engagement Policy 2021 Council Plan 2021-2025 Municipal Public Health and Wellbeing Plan 2021-2025 Outdoor Trading Guidelines Disability Inclusion Action Plan		

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1. Purpose

The Outdoor Trading Policy ('the Policy') establishes Mount Alexander Shire Council's position in relation to the sustainable use and management of our footpath trading areas. The Policy explains when and how to trade on areas that form part of footpaths, laneways, road reserves and roads including car parking spaces.

The policy has been developed to maintain the balance between universal pedestrian access, carparking and trading activities.

Council owns and maintains footpaths and other public areas, and therefore has a legal responsibility for the regulation of any activities undertaken in these spaces.

Council aims to provide a safe environment for people who move through the Shire, and providing a clear unobstructed pathway for the public to use is essential. Council strongly supports the long-term viability and sustainability of retail strips and business precincts and acknowledges the importance of outdoor trading in enhancing the amenity and vibrancy of the Shire's commercial areas.

2. Objectives

The objectives of this Policy are to:

- Facilitate opportunities for outdoor trading on Council owned or managed land, which add to the public's enjoyment and use of public places in the Shire, while not reducing safety or access to public land.
- Provide a safe, clear and unimpeded path of access for pedestrians of all abilities.
- Provide for appropriate outdoor trading activities that contribute to the vibrancy and economic viability of the Shire.
- Ensure high quality design and finish of all outdoor trading activities e.g. outdoor dining furniture, goods display racks and advertising signs in order to reduce negative impacts on the environment and to reduce consumption of non-renewable resources, minimize waste, and contribute to healthy and productive environments.

3. Scope

This policy extends to all individuals and businesses seeking to utilise footpaths, on-street parking bays and Council managed laneways and spaces for commercial or other purposes within Mount Alexander Shire.

This includes the placement of infrastructure such as, but not limited to:

moveable advertising signs

Outdoor Trading Policy



- · temporary street stalls and vans
- moveable tables and chairs
- temporary retractable awning and blinds
- moveable umbrellas
- moveable heaters
- moveable planter boxes
- parklet infrastructure
- permanent and temporary café screens

The policy and guidelines should be read in conjunction with General Local Law 2020 to ensure a complete and thorough understanding of your rights and obligations.

It is noted that any furniture that is fixed to a property/building may require a planning or building permit, please check with council for your specific requirements.

This policy does not apply to any area outside mount alexander Shire Council's authority, for example roads managed by the Department of Transport and Planning.

4. Policy

The Policy will provide the opportunity for areas that form part of footpaths, laneways, road reserves and roads including carparking spaces to be used for trading.

Pedestrian zones along footpaths will be regulated to provide a safe, clear and consistent pathway.

5. Key Principles of the Policy

5.1. Public Safety

Council will: in areas where outdoor trading is occurring on footpaths, laneways, road reserves and roads including carparking spaces, ensure driver and cyclist sightlines are unobstructed, and footpaths provide a safe and unhindered passage for pedestrians of all abilities.

5.2. Responsive to change

Council will: respond to the changing economic landscape by supporting businesses to thrive. Adhering to sustainable design principles will ensure vibrant retail and business strips that meet the changing needs of the community.

Outdoor Trading Policy

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5.3. Attractive streetscapes

Council will: support outdoor trading where it contributes to attractive streetscapes that are clean, enjoyable to spend time in, and where heritage significance is preserved and enhanced.

5.4. Leisure and entertainment opportunities

Council will: support outdoor trading that brings business outdoors to facilitate greater public interaction and create a welcoming outdoor dining and shopping experience.

5.5. Universal and inclusive design

Council will: support and encourage a diverse range of business types to trade outdoors, to ensure a varied streetscape that meets the needs of the diverse community.

Council will: ensure the needs of all in the community and consider 'universal design' principles.

5.6 Clear processes

Council will: provide clear guidelines to businesses looking to apply for Outdoor Trading permits, and be uphold transparency related to fees.

Council will: retain the right to decline permit applications where the guideline purposes are not reflected and pedestrian safety is affected.

6. Definitions of Abbreviations Used

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

Term	Definition
Advertising sign	Any A-frame, board, sign, banner (whether portable, affixed or attached to any land or building) which provides information about the occupier of land, building, or business. Any sign advertising goods, services, events or competitions, or which provides directions to the location of property or land.
Ancillary activity	Includes busking, barbeques, raffles, charity collections, temporary stalls persons campaigning for any Local, State or Federal election or any other activity that may be designated from time to time.
Authorised Officer	A person appointed by Council to be an Authorised Officer under section 224 of the Local Government Act 2020.

Outdoor Trading Policy

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Council	Mount Alexander Shire Council
Footpath trading	The use of footpath for commercial activities.
Kerbside zone	The area between the kerb and the outer edge of the trading zone.
Outdoor dining	Outdoor dining provided on Council owned or managed land.
Outdoor dining	Fixed or movable tables, chairs, benches etc. which are provided for
furniture	the use of patrons of a café, bar or restaurant with outdoor dining.
Parklet	A parklet is a structure placed in a car parking bay. It is usually a small platform or deck that extends from a footpath into a parking space and provides seating and landscaping for public use.
Pedestrian	The area between the property line and the inner edge of the Trading
zone	Zone.
Permit	A permit issued by Mount Alexander Shire Council, authorising outdoor dining, temporary stalls, signage or any other ancillary activity within the trading zone.
Temporary retractable awning	Any horizontal awning that is fixed to a building and projects over a footpath to form a veranda, or a vertical drop-down awning (including partial and full length) that is fixed to veranda's and projects over a footpath.
Temporary stall	Stalls or displays of information or merchandise available for sale.
Trading activity zone	The area between the pedestrian zone and the kerbside zone where trading activities can occur.

7. Roles and responsibilities

This Policy will be administered by the Coordinator Community Safety and Amenity and Council Authorised Officers. Economic Development will provide targeted education to businesses who will be affected by this policy.

8. Human Rights Statement

Human Rights Statement

It is considered that this policy does not impact negatively on any rights identified in the Charter of Human Rights and Responsibilities Act (2006). Mount Alexander Shire Council is committed to consultation and cooperation between management and employees.

Outdoor Trading Policy



Mount Alexander Shire Council will formally involve the Workplace Consultative Committee in any workplace change that may affect employees.

Outdoor Trading Policy Page 6 of 6 This document is uncontrolled when printed or stored in any electronic format other than Council's online library.