

MINUTES

**SCHEDULED COUNCIL MEETING
WARRNAMBOOL CITY COUNCIL
5:45 PM - MONDAY 4 JULY 2022**



VENUE:

**Lighthouse Theatre Studio
Lighthouse Theatre
Timor Street
Warrnambool**

COUNCILLORS

Cr. Vicki Jellie AM (Mayor)
Cr. Otha Akoch
Cr. Debbie Arnott
Cr. Ben Blain
Cr. Angie Paspaliaris
Cr. Max Taylor
Cr. Richard Ziegeler

Copies of the Warrnambool City Council's Agendas & Minutes
can be obtained online at www.warrnambool.vic.gov.au

**Peter Schneider
CHIEF EXECUTIVE OFFICER**

AUDIO RECORDING OF COUNCIL MEETINGS

All Open and Special Council Meetings will be audio recorded, with the exception of matters identified as confidential items in the agenda. This includes public participation sections of the meeting. Audio recordings of meetings will be made available for download on the internet via the Council's website by noon the day following the meeting and will be retained and publicly available on the website for 12 months following the meeting date. The recordings will be retained for the term of the current Council, after which time the recordings will be archived and destroyed in accordance with applicable public record standards. By participating in Open and Special Council meetings, individuals consent to the use and disclosure of the information that they share at the meeting (including any personal/sensitive information), for the purposes of Council carrying out its functions.

BEHAVIOUR AT COUNCIL MEETINGS

Thank you all for coming – we really appreciate you being here. These meetings are the place where, we as Councillors, make decisions on a broad range of matters. These can vary greatly in subject, significance and the level of interest or involvement the community has. As part of making these decisions, we are presented with comprehensive information that helps us to form our position – you will find this in the agenda. It should also be remembered that the Council meeting is a “meeting of the Council that is open to the public”, not a “public meeting with the Council.” Each Council is required to have Governance Rules that pertains to meeting procedures. Warrnambool City Council has followed best practice in this regard and its Governance Rules provides regulations and procedures for the governing and conduct of Council meetings. Copies of the Conduct and Behaviour excerpt from Warrnambool City Council's Governance Rules can be obtained online at www.warrnambool.vic.gov.au. We thank you in anticipation of your co-operation in this matter.

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**MINUTES OF THE ORDINARY MEETING OF THE WARRNAMBOOL CITY COUNCIL HELD IN
THE LIGHTHOUSE THEATRE STUDIO, LIGHTHOUSE THEATRE, TIMOR STREET,
WARRNAMBOOL ON MONDAY 4 JULY 2022 COMMENCING AT 5:45 PM**

PRESENT: Cr. Vicki Jellie AM, Mayor/Chairman
Cr. Otha Akoch
Cr. Debbie Arnott
Cr. Ben Blain
Cr. Angie Paspaliaris
Cr. Max Taylor
Cr. Richard Ziegeler

IN ATTENDANCE: Mr Peter Schneider, Chief Executive Officer
Mr Peter Utri, Director Corporate Strategies - Virtual
Mr David Leahy, Director City Infrastructure
Mr Luke Coughlan, Acting Director City Growth
Ms. Alison Kemp, Acting Director Community Development
Ms Julie Anderson, Manager Governance Property & Projects
Ms. Wendy Clark, Executive Assistant

1. OPENING PRAYER & ORIGINAL CUSTODIANS STATEMENT

Almighty God
Grant to this Council
Wisdom, understanding and Sincerity of purpose
For the Good Governance of this City
Amen.

ORIGINAL CUSTODIANS STATEMENT

I wish to acknowledge the traditional owners of the land on which we stand and pay my respects to their Elders past and present.

2. APOLOGIES

Nil.

3. CONFIRMATION OF MINUTES

MOVED: CR BEN BLAIN
SECONDED: CR RICHARD ZIEGELER

That the Minutes of the Scheduled Meeting of Council held on 6 June 2022 and the Minutes of the Additional Council Meeting held on 27 June 2022, be confirmed.

CARRIED - 7:0

**4. DECLARATION BY COUNCILLORS AND OFFICERS OF ANY CONFLICT OF INTEREST
IN ANY ITEM ON THE AGENDA**

Section 130 of the Local Government Act 2020 (Vic) (**the Act**) provides that a relevant person must disclose a conflict of interest in respect of a matter and exclude themselves from the decision making process in relation to that matter including any discussion or vote on the matter at any Council meeting or delegated committee meeting and any action in relation to that matter.

Section 126(2) of the Act sets out that a relevant person (Councillor, member of a delegated Committee or member of Council staff) has a conflict of interest if the relevant person has a **general conflict of interest** within the meaning of section 127 of the Act or a **material conflict of interest** within the meaning of section 128 of the Act.

A relevant person has a **general conflict of interest** in a matter if an impartial, fair minded person would consider that the person's private interests could result in that person acting in a manner that is contrary to their public duty.

A relevant person has a **material conflict of interest** in a matter if an affected person would gain a benefit or suffer a loss depending on the outcome of the matter.

A Councillor who has declared a conflict of interest, must leave the meeting and remain outside the room while the matter is being considered, or any vote is taken. Councillors are also encouraged to declare circumstances where there may be a perceived conflict of interest.

- Cr. Angie Paspaliaris declared a conflict of interest for Item 7.5 - Planning Permit PP2021-0356 - 1-5 Cooper Street.

5. MAYORAL PRESENTATION

Naidoc Week celebrations are held across Australia in the first week of July to celebrate and recognise the history, the culture and achievements of Aboriginal and Torres Strait Islander peoples. To celebrate the start of Naidoc Week, with this year's theme being *Get Up, Stand Up and Show Up*, the children's and family services kindergartens in conjunction with our kindergarten indigenous language teacher Mel Steffensen, volunteers of course and our wonderful, enthusiastic and talented kindergarten children have put together the art and language exhibition right here in the atrium in the Lighthouse Theatre. Now anyone that came up the main stairs of the building tonight will have walked through there; it's fabulous on your way out please have another look, they've done great work putting that together, it's the second year in a row. They've been working for a whole term to bring this together and it's three and four year olds that have done it so it's a pretty hard task by the teachers and the helpers at the kinders; it's a great demonstration of how profound the impact of education is especially on young people through the kinder language programs. This exhibition we're building a great foundation for our young people to learn about our indigenous culture from the very get-go, not how we were brought up but from the get-go; they know how to say welcome to country and all those things so as a City and a community we're really fortunate and grateful to our local aboriginal leaders who have given many years of gracious time and knowledge to build cultural awareness for our community so I would encourage everyone to walk through there, it's open until August 1st, you can come in when the Lighthouse Theatre is open and ask others to come in as well so it's a really great exhibition; a great start to a week of celebration.

The second thing that has been announced today, which is really exciting is the announcement of the AFLW football game at the Reid Oval on Saturday October 9th; that was announced today Essendon Vs Geelong and what a great coup for the City, for the Reid Oval and for the region and great credit goes to our sport and rec staff who have obviously been working behind the scenes on this for a while helping pull this together with AFLW, the ground staff and everyone up there so it's great to have a match of this caliber come here to Warrnambool so soon after we have really just opened the facility and it's great that it can be either gender but it's great that it's a women's game and that facility was definitely built with gender equity in mind so it's really good and it'll I'm sure inspire any aspiring footballers male or female, young women, women that are playing for our local football teams now to attend that and encourage them to participate and that's what we want, that was the aim of the Reid Oval is to encourage all people to participate in sports so it's great, October 9th I think at 1.15pm and I think it will be televised on Channel 7 so how good is that, that was a really good piece of information today.

6. PUBLIC QUESTION TIME

Nil.

7. REPORTS

7.1. COMMUNITY SATISFACTION SURVEY - 2022 RESULTS

DIRECTORATE : Corporate Strategies

PURPOSE:

To present the 2022 results of the Community Satisfaction Survey.

EXECUTIVE SUMMARY

Each year Local Government Victoria conducts surveys across local councils which measure community perceptions of how Council has performed across a range of service areas.

The survey assesses 28 areas of which seven are considered core measures. These core measures are: overall performance, consultation and engagement, community decisions, sealed local roads, waste management, customer service and overall council direction.

This year perceptions of Council's performance continued to build on the strong gains made in 2021.

Council increased its scores across all core measures with overall council direction scoring a record high 63, above the State average of 50 and the regional centre average of 52.

The overall performance of Council increased from 55 in 2021 to 62 this year, also above the State and regional average of 59.

Council's best performing area is the appearance of public areas which received a score of 76, maintaining the five-point gain made in 2021.

Council's customer service rating increased to 73, up from 71 and above the State-wide average of 68 and above the regional centre average of 69.

This is the second consecutive year that there have been increases in all core measures.

The surveys also assess perceptions of performance across a number of other areas including value for money, recreational facilities and appearance of public areas.

Perceptions among residents aged 65 years and over improved significantly (up 15 points on 2021) and this group has provided Council with its highest overall performance rating.

The full report will be made available for the community to read on Council's website.

In 2022, 67 of Victoria's 79 Councils took part in the survey.

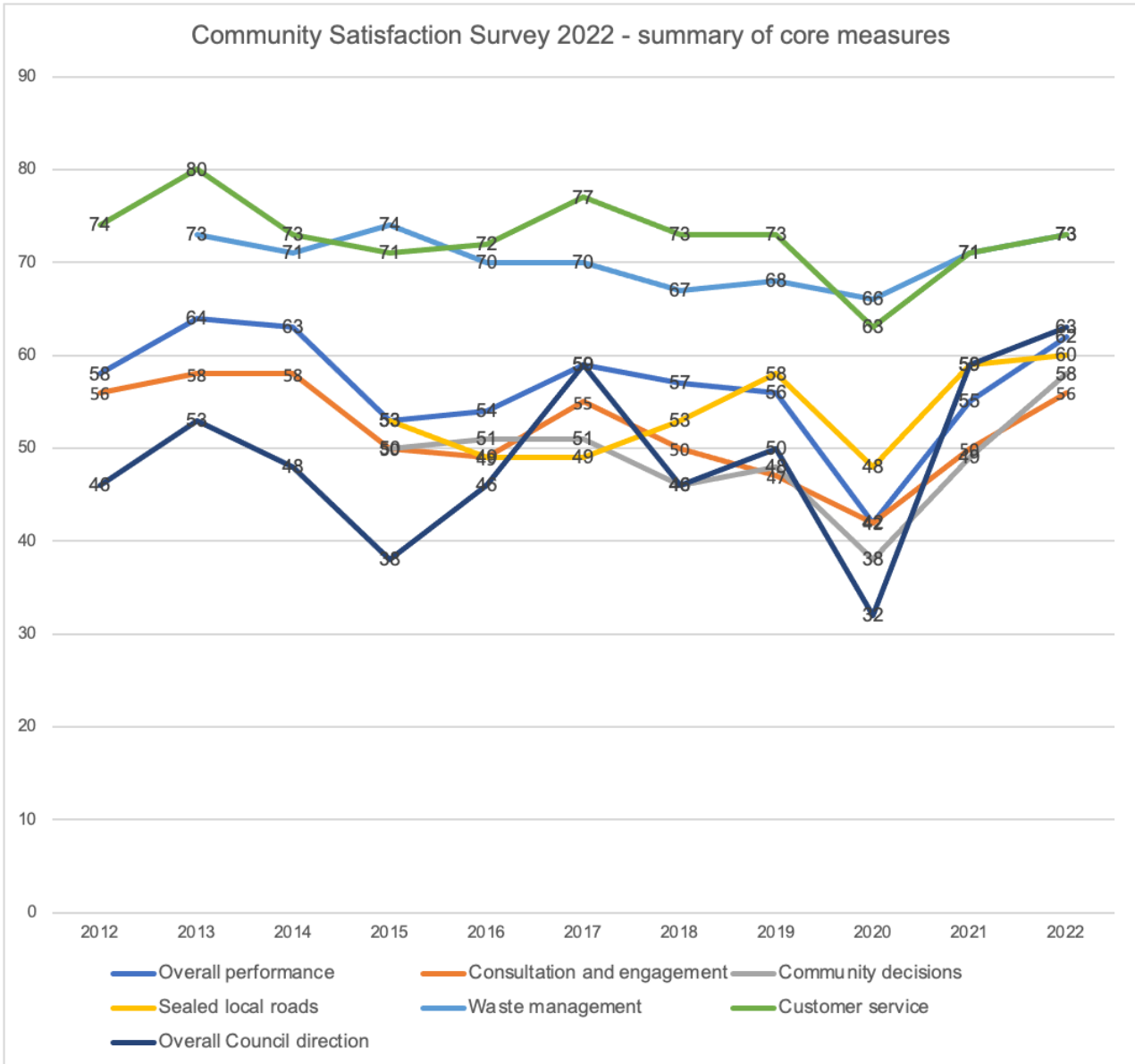
MOVED: CR DEBBIE ARNOTT
SECONDED: CR MAX TAYLOR

That Council notes the results of the 2022 Community Satisfaction Survey conducted by Local Government Victoria.

CARRIED - 7:0

BACKGROUND

The annual Local Government Community Satisfaction Surveys began in 2012. Since then additional core measures have been added which assess perceptions about sealed local roads, waste management and community decisions. There are now eight consecutive years of data for the core measures.



The core measures form part of the local government reporting framework and are included in annual reports and on the website knowyourcouncil.vic.gov.au

All scores are compared to a State-wide average and a regional centre average. The regional centres average is based on the results from the municipalities of Ballarat, Greater Bendigo, Greater Geelong, Horsham, Latrobe, Mildura, Wangaratta, Warrnambool and Wodonga.

Council has performed well compared to other municipalities and in 24 of the 28 areas assessed Council recorded higher scores than the state and regional centre averages.

Services	Warrnambool 2022 (arrow indicates trend)	Warrnambool 2021	Regional centres 2022	State-wide 2022
*Overall performance	62 ↑	55	59	59
Value for money	55 ↑	54	53	53
*Overall Council direction	63 ↑	59	52	50
*Customer service	73 ↑	71	69	68
Appearance of public areas	76 ↔	76	73	71
*Waste management	73 ↑	71	68	68
Recreational facilities	71 ↔	71	72	69
Emergency and disaster management	71 ↑	70	67	66
Art centres and libraries	70 ↑	68	76	73
Elderly support services	69 ↑	67	65	67
Family support services	68 ↔	68	67	65
Enforcement of local laws	67 ↓	69	66	63
Community and cultural	66 ↑	64	65	65
Environmental sustainability	66 ↑	62	62	61
Business/community development/tourism	64 ↑	61	62	60
Disadvantaged support services	63 ↓	64	62	62
Business and community development	62 ↑	60	58	58
Local streets and footpaths	62 ↓	64	59	57
*Sealed local roads	60 ↑	59	54	53
Informing the community	60 ↑	52	58	59
Population growth	59 ↓	60	58	52
Lobbying	58 ↑	53	55	53
*Community decisions	58 ↑	49	54	54
Town planning policy	57 ↑	55	55	54
*Consultation and engagement	56 ↑	50	54	54
Parking facilities	56 ↑	51	56	57
Planning and building permits	56 ↓	59	54	50
Traffic management	55 ↓	59	57	58

*core measure

The survey also asks respondents to rank each service area in importance.

The top five services ranked in importance are:

- i. elderly support services (index score of 81),
- ii. community decisions (81),
- iii. waste management (80),
- iv. informing the community (79) and
- v. sealed local roads (79).

The survey asks residents about their preferred means of communication with Council. Overall, the most popular format is a newsletter received in the mail. An age breakdown reveals that those aged under 50 prefer to receive information via social media followed by an emailed newsletter while for those over 50 a newsletter in the mail is most preferred followed by a newsletter received by email.

ISSUES

Through the comparisons between the scores for importance and performance, the survey identifies the services the community believes Council should improve. The surveys encourage Councils to focus on the areas which have the greatest disparity between the index scores for importance and performance. The report states that "Council should focus on maintaining and further improving performance in the individual service area that most influences perceptions of overall performance, namely community decisions. Other key influences, where Council should work to strengthen performance, include the related areas of community consultation and informing the community, as well as town planning and the condition of sealed roads."

LEGISLATION/POLICY/COUNCIL PLAN CONTEXT

A number of the measures form part of Council's annual reporting requirements.

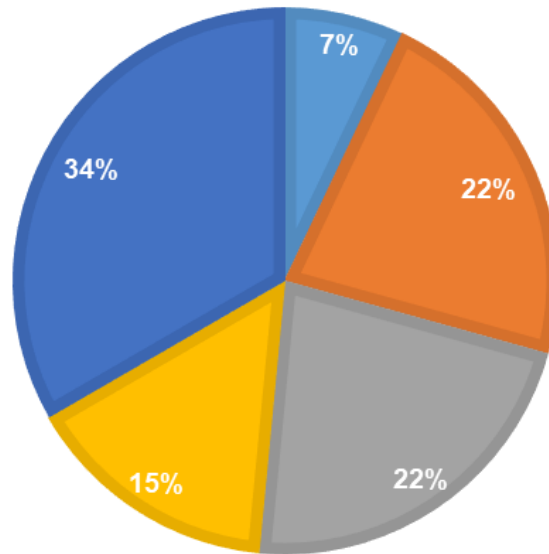
COMMUNITY IMPACT/CONSULTATION

The survey involved 400 respondents from within the Warrnambool municipality. This comprised 199 males and 199 females.

The age distribution of respondents is illustrated below.

Age profile of respondents %

■ 18-24 ■ 25-34 ■ 35-49 ■ 50-64 ■ 65+



The survey results are available to the public in full on Council's website, www.warrnambool.vic.gov.au

LEGAL RISK/IMPACT

Nil.

OFFICERS' DECLARATION OF INTEREST

Nil.

CONCLUSION

For the information of Council and the community.

ATTACHMENTS

1. J 01070 CSS 2022 Warrnambool City Council Report [7.1.1 - 163 pages]

2022 Local Government Community Satisfaction Survey

Warrnambool City Council

Coordinated by the Department of Jobs,
Precincts and Regions on behalf of
Victorian councils





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<u>Lobbying on behalf of the community</u>	<u>56</u>	<u>Environmental sustainability</u>	<u>130</u>
<u>Decisions made in the interest of the community</u>	<u>60</u>	<u>Emergency and disaster management</u>	<u>134</u>
<u>Condition of sealed local roads</u>	<u>64</u>	<u>Planning for population growth</u>	<u>138</u>
<u>Informing the community</u>	<u>68</u>	<u>Business and community development</u>	<u>142</u>
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<u>Family support services</u>	<u>88</u>		
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Background and objectives

The Victorian Community Satisfaction Survey (CSS) creates a vital interface between the council and their community.

Held annually, the CSS asks the opinions of local people about the place they live, work and play and provides confidence for councils in their efforts and abilities.

Now in its twenty-third year, this survey provides insight into the community's views on:

- councils' overall performance, with benchmarking against State-wide and council group results
- value for money in services and infrastructure
- community consultation and engagement
- decisions made in the interest of the community
- customer service, local infrastructure, facilities, services and
- overall council direction.

When coupled with previous data, the survey provides a reliable historical source of the community's views since 1998. A selection of results from the last ten years shows that councils in Victoria continue to provide services that meet the public's expectations.

Serving Victoria for 23 years

Each year the CSS data is used to develop this State-wide report which contains all of the aggregated results, analysis and data. Moreover, with 23 years of results, the CSS offers councils a consistent, long-term measure of how they are performing – essential for councils that work over the long term to provide valuable services and infrastructure to their communities.

Participation in the State-wide Local Government Community Satisfaction Survey is optional. Participating councils have various choices as to the content of the questionnaire and the sample size to be surveyed, depending on their individual strategic, financial and other considerations.

Key findings and recommendations



Warrnambool City Council – at a glance

Overall council performance

Results shown are index scores out of 100.



Warrnambool 62



State-wide 59



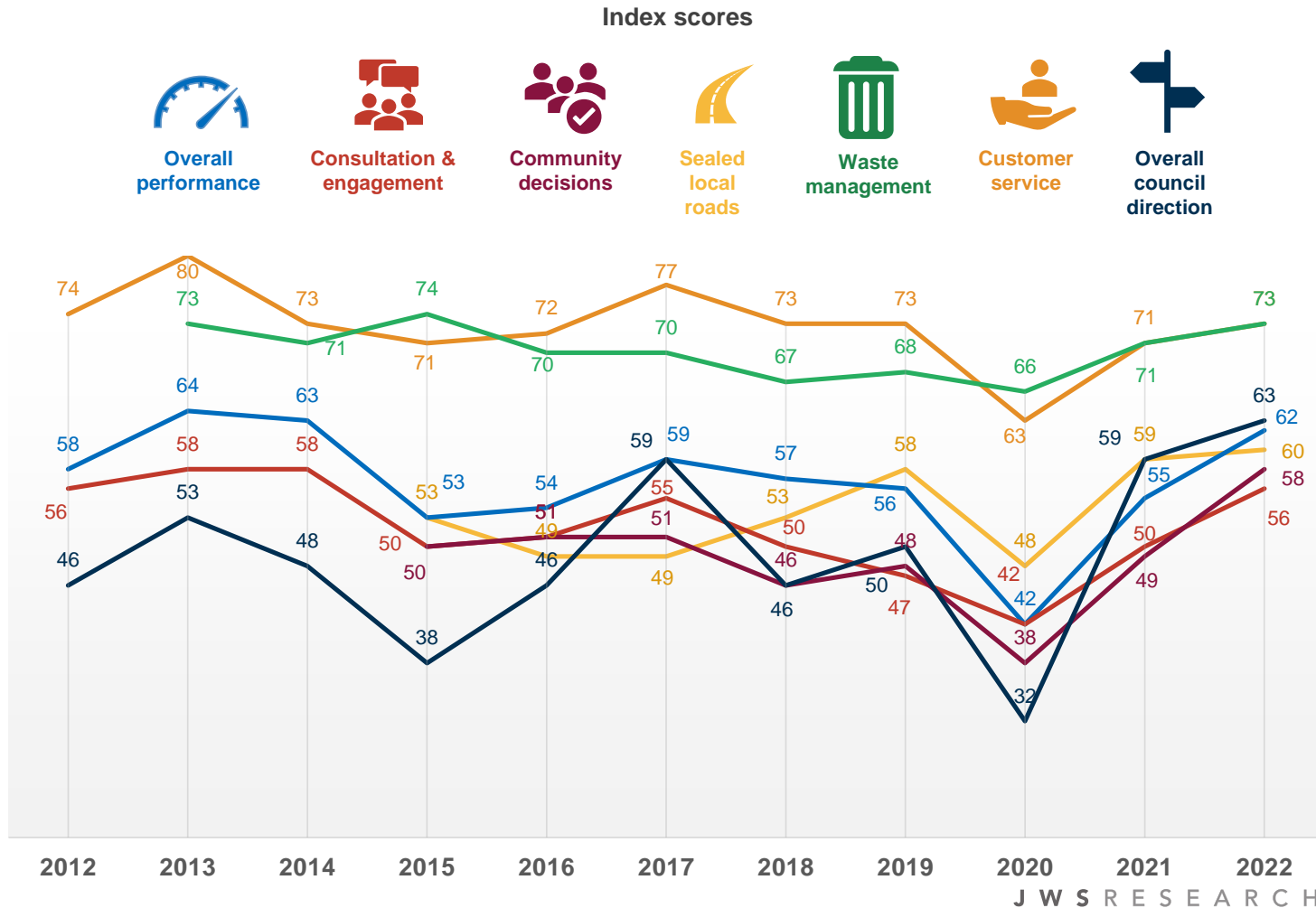
Regional Centres 59

Council performance compared to State-wide and group averages

	The three areas where Council performance is significantly higher by the widest margin	Areas where Council performance is significantly lower
Compared to State-wide average	<ul style="list-style-type: none"> Population growth Sealed local roads Local streets & footpaths 	<ul style="list-style-type: none"> Art centres & libraries Traffic management
Compared to group average	<ul style="list-style-type: none"> Sealed local roads Waste management Business & community dev. 	<ul style="list-style-type: none"> Art centres & libraries



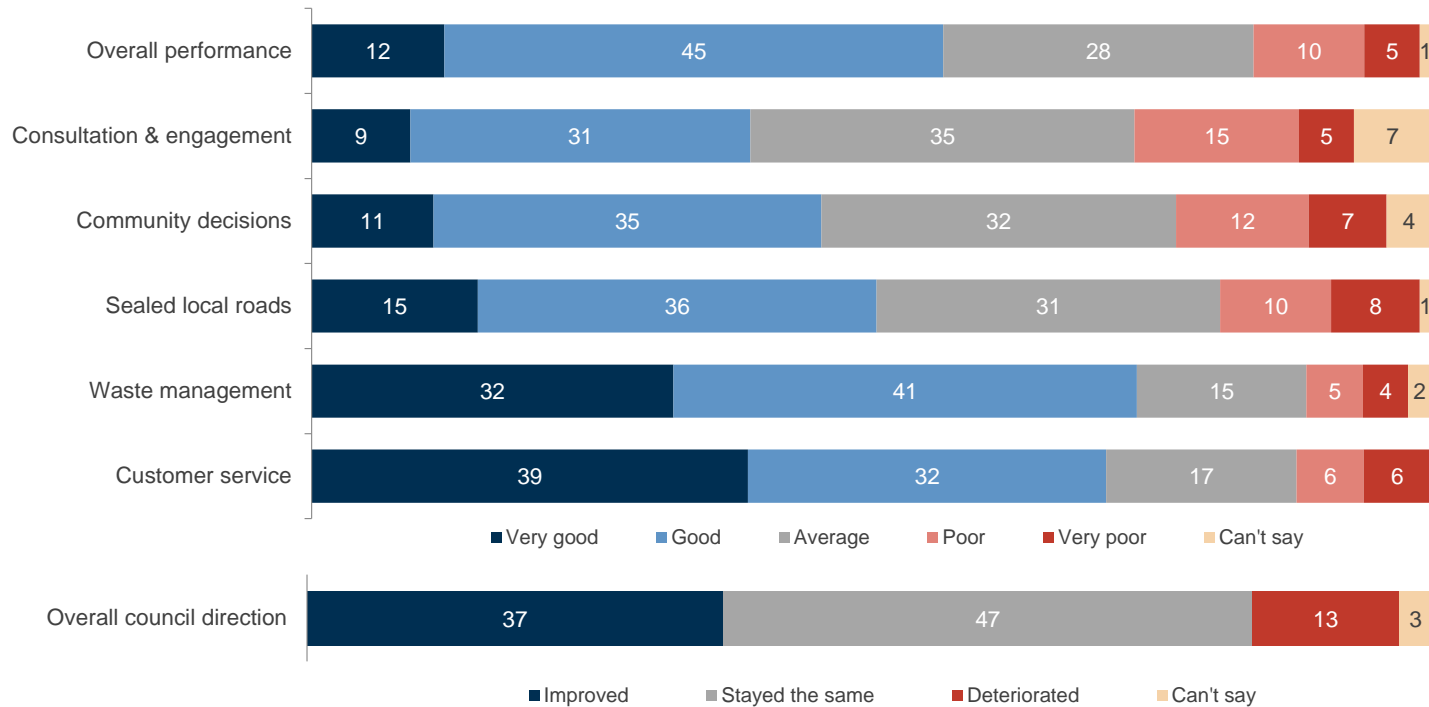
Summary of core measures















Summary of core measures

Core measures summary results (%)





Summary of Warrnambool City Council performance

Services		Warrnambool 2022	Warrnambool 2021	Regional Centres 2022	State-wide 2022	Highest score	Lowest score
	Overall performance	62	55	59	59	Aged 65+ years	Aged 18-49 years
	Value for money	55	54	53	53	Aged 65+ years	Aged 35-49 years
	Overall council direction	63	59	52	50	Aged 65+ years	Aged 18-34 years
	Customer service	73	71	69	68	Aged 35-49 years	Aged 18-34 years
	Appearance of public areas	76	76	73	71	Aged 65+ years	Aged 18-34 years
	Waste management	73	71	68	68	Aged 35-49 years, Aged 65+ years, Women	Aged 18-34 years
	Recreational facilities	71	71	72	69	Aged 65+ years	Aged 18-34 years
	Emergency & disaster mngt	71	70	67	66	Aged 35-49 years, Women	Aged 50-64 years
	Art centres & libraries	70	68	76	73	Women, Aged 65+ years	Men
	Elderly support services	69	67	65	67	Aged 65+ years	Aged 18-34 years

Significantly higher / lower than Warrnambool City Council 2022 result at the 95% confidence interval.
Please see Appendix A for explanation of significant differences.











Summary of Warrnambool City Council performance

Services		Warrnambool 2022	Warrnambool 2021	Regional Centres 2022	State-wide 2022	Highest score	Lowest score
	Family support services	68	68	67	65	Aged 65+ years	Aged 50-64 years
	Enforcement of local laws	67	69	66	63	Women	Men
	Community & cultural	66	64	65	65	Women, Aged 65+ years	Aged 50-64 years, Men
	Environmental sustainability	66	62	62	61	Aged 18-34 years	Aged 35-49 years
	Bus/community dev./tourism	64	61	62	60	65+ years	Aged 50-64 years, Aged 18-34 years
	Disadvantaged support serv.	63	64	62	62	Aged 65+ years	Aged 50-64 years
	Business & community dev.	62	60	58	58	Women	Aged 50-64 years
	Local streets & footpaths	62	64	59	57	Aged 65+ years	Aged 50-64 years
	Sealed local roads	60	59	54	53	Aged 35-49 years, Aged 65+ years	Aged 18-34 years
	Informing the community	60	52	58	59	Aged 35-49 years	Aged 50-64 years

Significantly higher / lower than Warrnambool City Council 2022 result at the 95% confidence interval.
Please see Appendix A for explanation of significant differences.



Summary of Warrnambool City Council performance

Services	Warrnambool 2022	Warrnambool 2021	Regional Centres 2022	State-wide 2022	Highest score	Lowest score
 Population growth	59	60	58	52	Aged 65+ years	Aged 18-34 years
 Lobbying	58	53	55	53	Aged 35-49 years	Aged 50-64 years
 Community decisions	58	49	54	54	Aged 35-49 years	Aged 18-34 years
 Town planning policy	57	55	55	54	Aged 65+ years	Aged 18-34 years
 Consultation & engagement	56	50	54	54	Aged 35-49 years	Aged 50-64 years
 Parking facilities	56	51	56	57	Men, Aged 65+ years	Women
 Planning & building permits	56	59	54	50	Aged 65+ years	Aged 50-64 years
 Traffic management	55	59	57	58	Women, Aged 50-64 years	Men

Significantly higher / lower than Warrnambool City Council 2022 result at the 95% confidence interval.
Please see Appendix A for explanation of significant differences.



Focus areas for the next 12 months

Overview

Perceptions of Council performance have continued to build upon the strong gains made in 2021. Council's overall performance index is 62 in 2022, up seven points from 2021 and similar to the peak levels seen in 2013 and 2014. This positive result is reflected in significantly higher ratings for seven individual service areas, including some of Council's weaker performing areas such as informing the community, lobbying, community decisions, consultation and engagement, and parking facilities.

Key influences on perceptions of overall performance

Council should focus on maintaining and further improving performance in the individual service area that most influences perceptions of overall performance, namely community decisions. Other key influences, where Council should work to strengthen performance, include the related areas of community consultation and informing the community, as well as town planning and the condition of sealed local roads.

Comparison to state and area grouping

Council performs in line with or significantly higher than the Regional Centres group and State-wide averages on almost all core and individual service areas evaluated. Arts centres and libraries and traffic management are the only service areas where Council performs below the State-wide average. Council also performs below the Regional Centres group average on arts centres and libraries.

Maintain and consolidate gains achieved

Council should look to maintain efforts in its stronger performing service areas such as the appearance of public areas and waste management. However, over the next 12 months, it should also seek to build upon the strong gains made over the past two years in many of its weaker performing areas – particularly those related to planning, Council's communication with residents and its consideration of community views and interests.

DETAILED FINDINGS



Overall performance





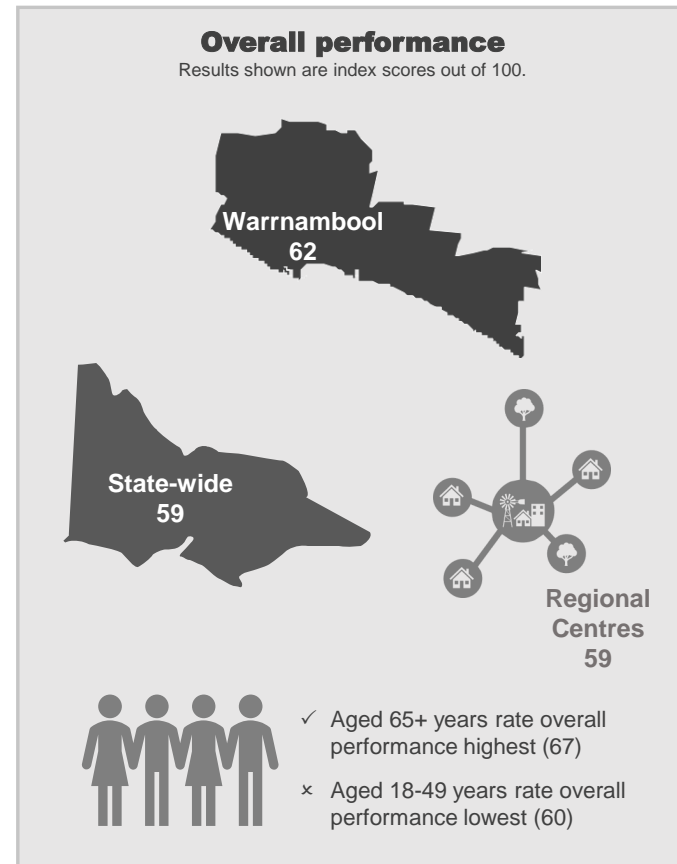
Overall performance

The overall performance index score of 62 for Warrnambool City Council has increased significantly (at the 95% confidence interval), up seven points, following a previous 13-point increase in 2021.

- Council's overall rating is now line with the peak levels seen across 2013 and 2014 (index scores of 64 and 63 respectively).
- Council performance is rated significantly higher than the Regional Centres group and State-wide averages for councils (index score of 59 for each).
- Perceptions among residents aged 65 years and over have improved significantly (up 15 points on 2021) and this group provides Council's highest overall performance rating.

More than four in 10 residents (43%) rate the value for money they receive from Council in infrastructure and services provided to their community as 'very good' or 'good', almost twice those who rate this as 'very poor' or 'poor' (23%). A further one third (33%) of residents rate Council as 'average' at providing value for money.

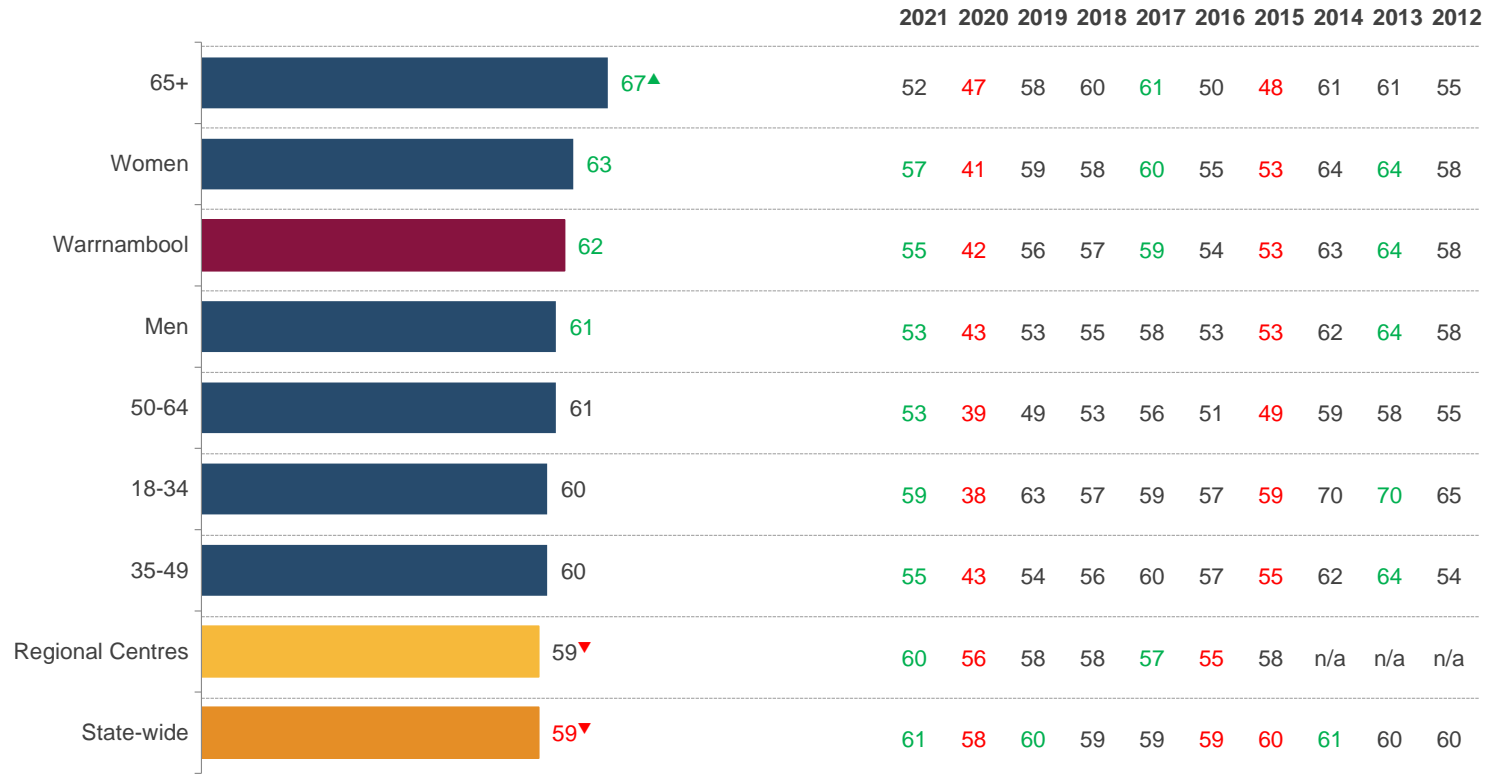
- Perceptions of value for money are in line with the Regional Centres council group and State-wide averages.





Overall performance

2022 overall performance (index scores)

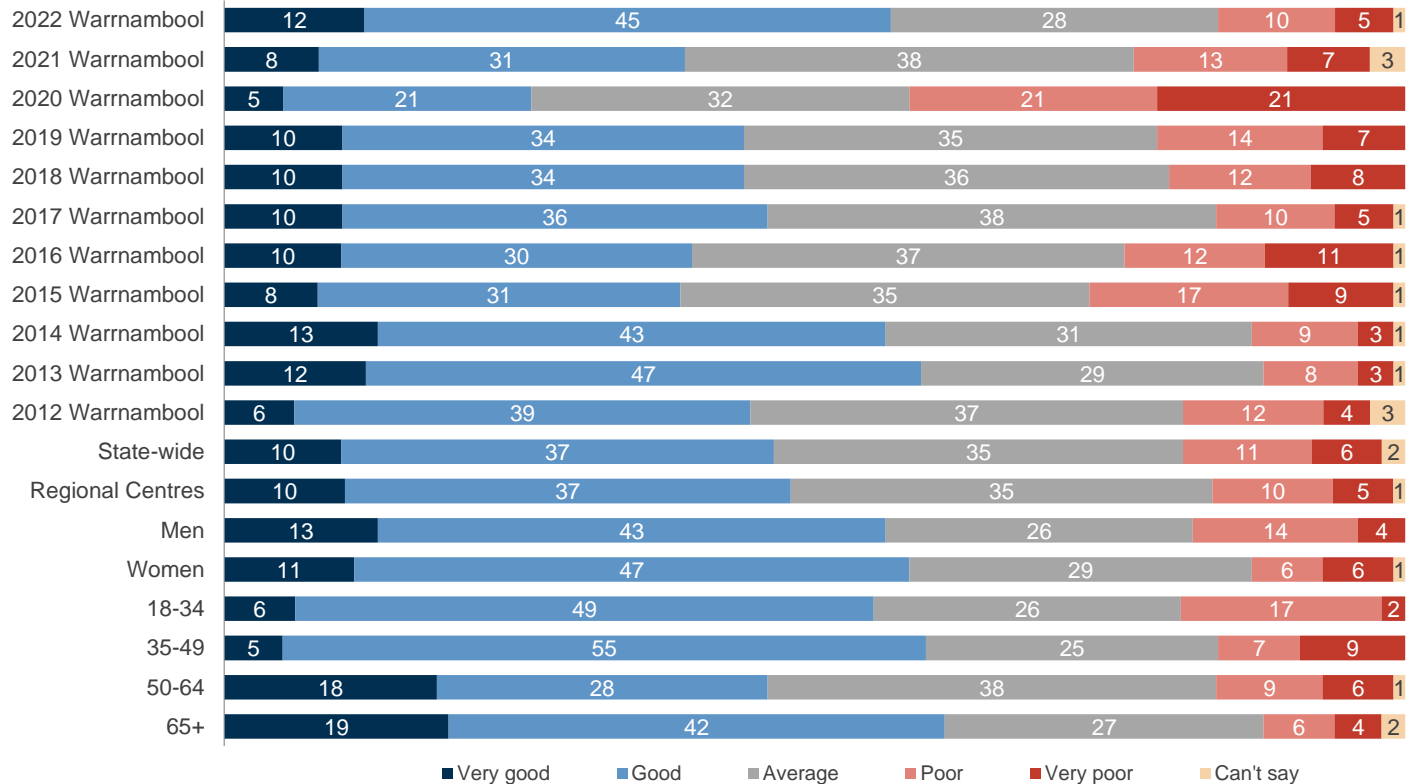


Q3. ON BALANCE, for the last twelve months, how do you feel about the performance of Warrnambool City Council, not just on one or two issues, BUT OVERALL across all responsibility areas? Has it been very good, good, average, poor or very poor?
Base: All respondents. Councils asked State-wide: 67 Councils asked group: 9
Note: Please see Appendix A for explanation of significant differences.



Overall performance

2022 overall performance (%)

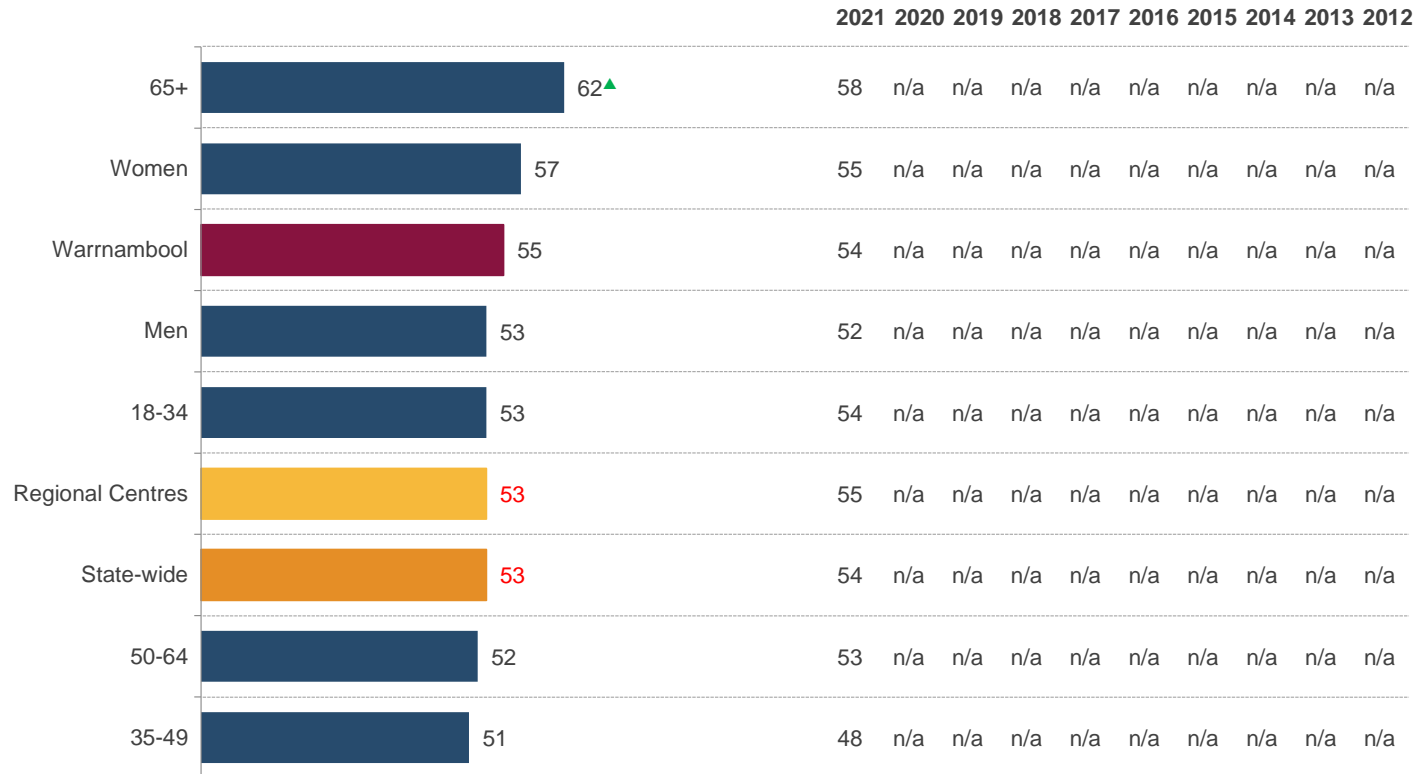


Q3. ON BALANCE, for the last twelve months, how do you feel about the performance of Warrnambool City Council, not just on one or two issues, BUT OVERALL across all responsibility areas? Has it been very good, good, average, poor or very poor?
Base: All respondents. Councils asked State-wide: 67 Councils asked group: 9



Value for money in services and infrastructure

2022 value for money (index scores)



Q3b. How would you rate Warrnambool City Council at providing good value for money in infrastructure and services provided to your community?

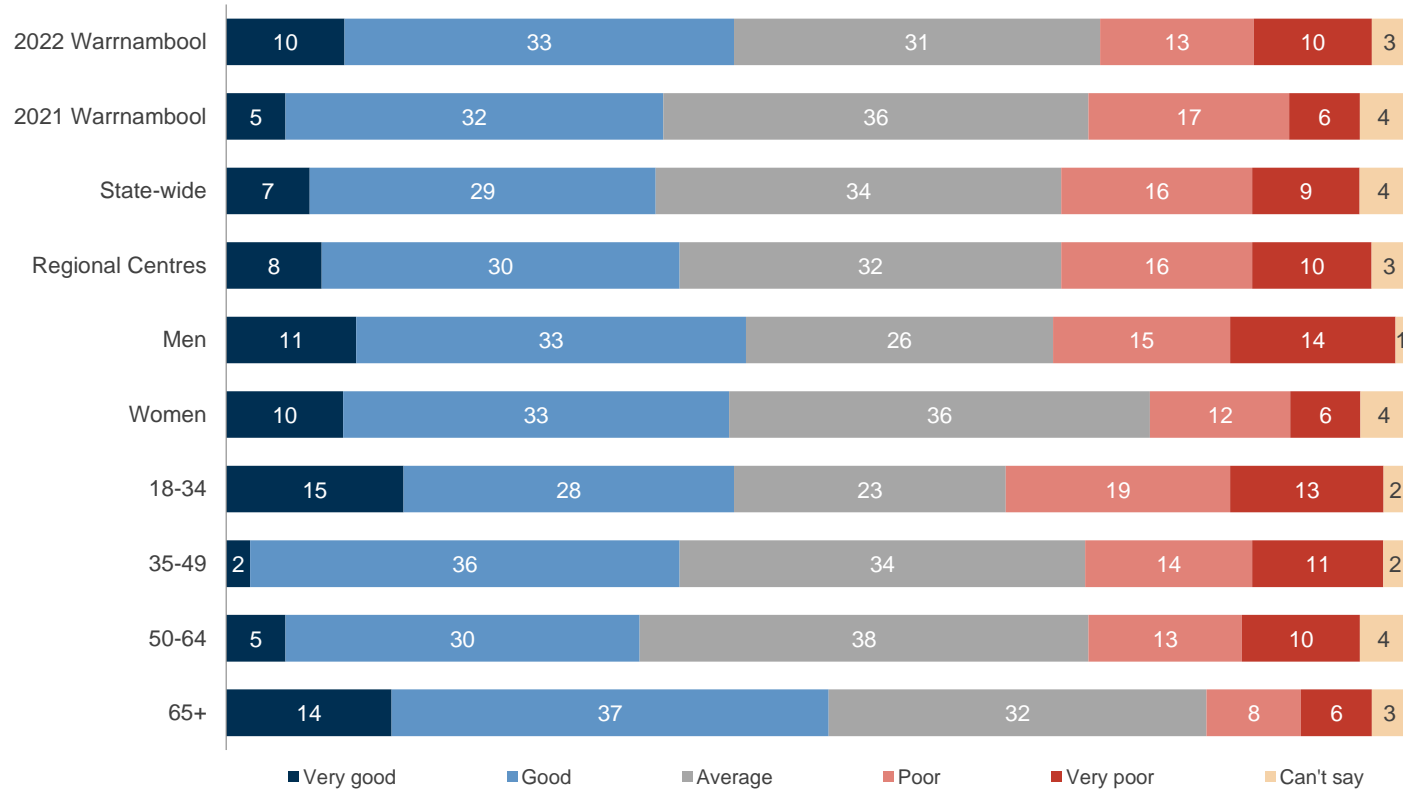
Base: All respondents. Councils asked State-wide: 66 Councils asked group: 9

Note: Please see Appendix A for explanation of significant differences.



Value for money in services and infrastructure

2022 value for money (%)



Q3b. How would you rate Warrnambool City Council at providing good value for money in infrastructure and services provided to your community?
Base: All respondents. Councils asked State-wide: 66 Councils asked group: 9



Top performing service areas

The appearance of public areas is Council's best performing area – index score of 76, maintaining the significant five-point gain made in 2021.

- Council rates significantly higher than the Regional Centres group and State-wide averages for councils (index scores of 73 and 71 respectively).
- However, residents aged 18 to 34 years rate performance significantly lower than the Council average for this service area.

Waste management (index score of 73) is Council's next highest rated service area – index score of 73, improving a further two points after a significant five-point gain in 2021.

- Again, Council rates significantly higher than the Regional Centres group and State-wide averages for councils (index scores of 68 for each).
- Perceptions among 35 to 49 year olds have improved significantly (up eight points on 2021) and, along with women and residents aged 65 years and over, provide Council's highest ratings in this area (index scores of 75 for each).

Significant gains have also been made on other better performing areas such as environmental sustainability and business, community development and tourism (up four and five points respectively).



Appearance of public areas (index score of 76) is the area where Council performed best in 2022.



Low performing service areas



Council rates lowest in the area of traffic management (index score of 55, a significant four- point decrease on 2021).

- Contributing to this decline are significant decreases among residents aged 18 to 34 years and men.
- Council rates slightly lower than the Regional Centres group average for councils and significantly lower than the State-wide average for this area (index scores of 57 and 58 respectively).

Consultation and engagement and parking facilities continue to be other lower performing service areas, in addition to planning and building permits (index score of 56 for each).

- However, Council performs in line with or significantly higher than the Regional Centres group and State-wide averages for councils.
- Council is making ground on consultation and parking, which have improved significantly for the second year in a row (up six and five points respectively) but is slightly down on permits this year (three points).

Further, community consultation (10%) is the second most cited area for improvement, after financial management (13%).



Individual service area performance

2022 individual service area performance (index scores)

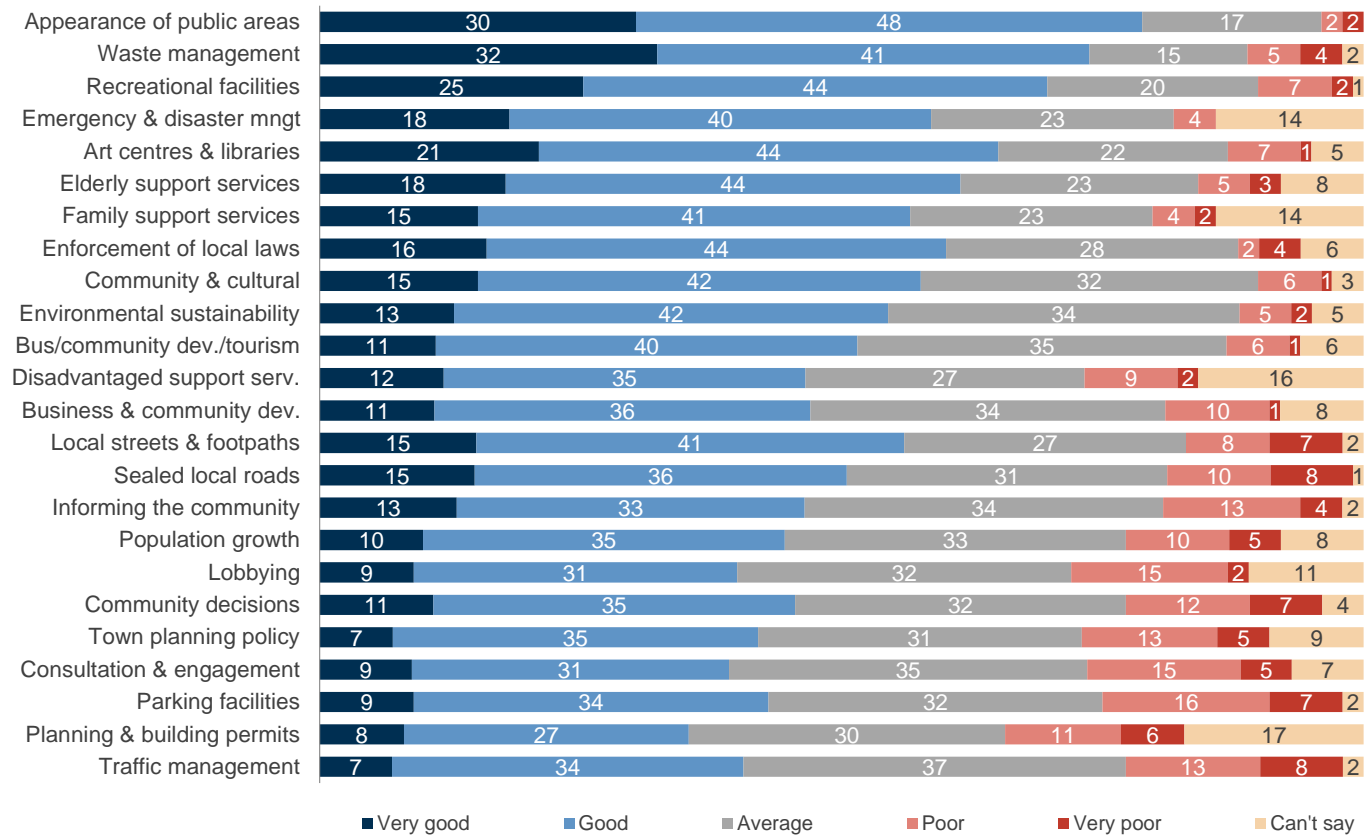
	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	
Appearance of public areas	76	76	71	79	74	74	76	77	77	82	n/a
Waste management	73	71	66	68	67	70	70	74	71	73	n/a
Recreational facilities	71	71	65	70	69	71	72	72	74	75	n/a
Emergency & disaster mngt	71	70	67	74	75	73	70	72	74	73	n/a
Art centres & libraries	70	68	69	73	72	72	74	76	77	78	n/a
Elderly support services	69	67	65	71	70	71	68	71	75	73	n/a
Family support services	68	68	66	70	67	67	67	68	73	72	n/a
Enforcement of local laws	67	69	63	69	66	67	66	69	70	71	n/a
Community & cultural	66	64	65	70	66	68	71	70	76	75	n/a
Environmental sustainability	66	62	61	61	62	63	63	65	67	68	n/a
Bus/community dev./tourism	64	61	60	67	60	64	65	58	70	70	n/a
Disadvantaged support serv.	63	64	61	66	63	63	61	63	68	68	n/a
Business & community dev.	62	60	53	61	55	62	58	54	n/a	n/a	n/a
Local streets & footpaths	62	64	56	64	58	55	58	65	64	65	n/a
Sealed local roads	60	59	48	58	53	49	49	53	n/a	n/a	n/a
Informing the community	60	52	45	54	54	60	55	58	61	62	n/a
Population growth	59	60	57	64	63	67	66	64	66	67	n/a
Lobbying	58	53	43	53	53	59	54	55	59	60	57
Community decisions	58	49	38	48	46	51	51	50	n/a	n/a	n/a
Town planning policy	57	55	50	56	54	58	56	57	61	61	n/a
Consultation & engagement	56	50	42	47	50	55	51	50	58	58	56
Parking facilities	56	51	38	45	39	49	54	48	50	55	n/a
Planning & building permits	56	59	58	64	58	61	58	60	61	62	n/a
Traffic management	55	59	50	59	52	61	57	62	62	65	n/a

Q2. How has Council performed on [RESPONSIBILITY AREA] over the last 12 months?
Base: All respondents. Councils asked State-wide: 67 Councils asked group: 9
Note: Please see Appendix A for explanation of significant differences.



Individual service area performance

2022 individual service area performance (%)



Q2. How has Council performed on [RESPONSIBILITY AREA] over the last 12 months?
Base: All respondents. Councils asked State-wide: 67 Councils asked group: 9



Individual service area importance

2022 individual service area importance (index scores)

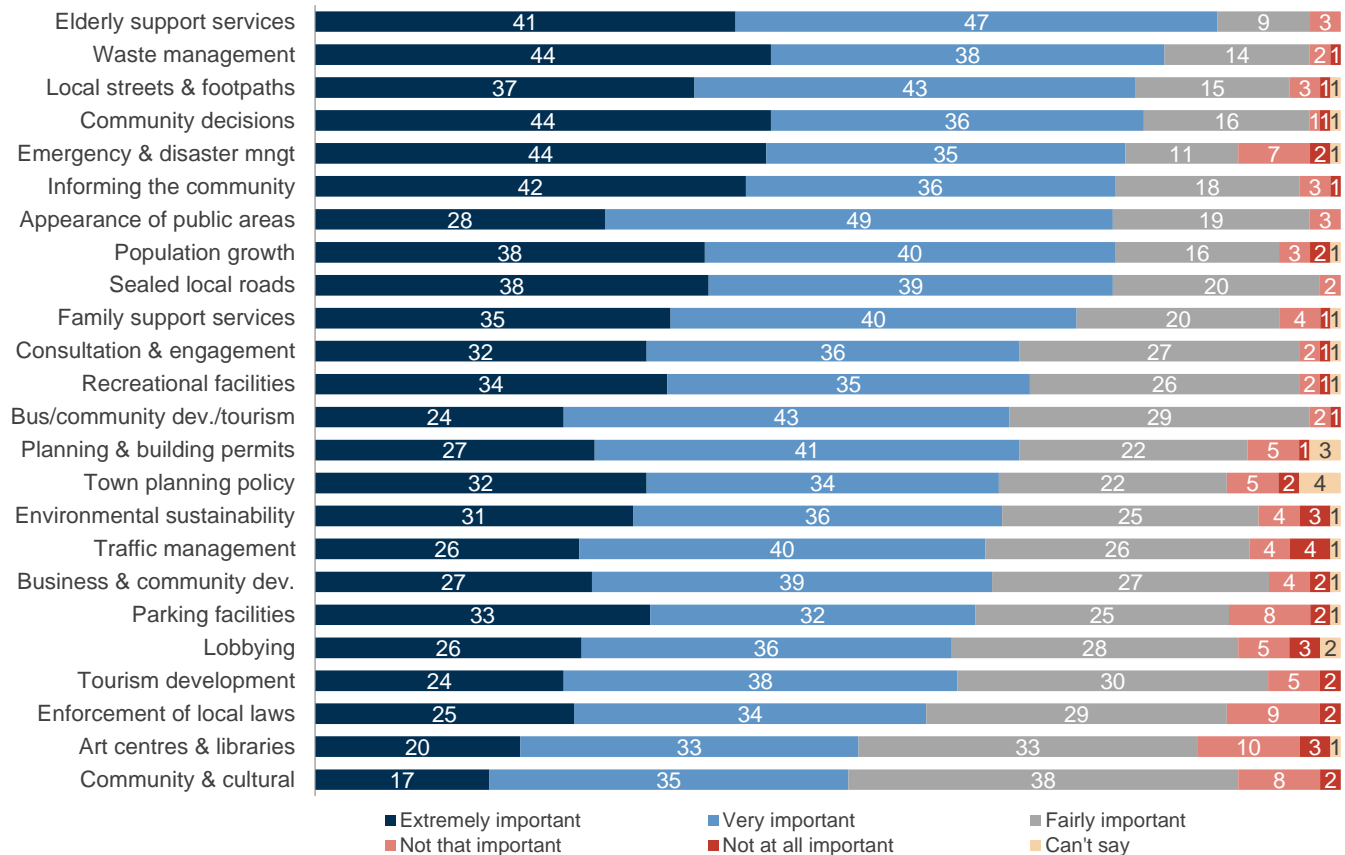
	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
Elderly support services	81	82	79	81	79	76	80	79	80	n/a
Community decisions	81	83	80	83	82	n/a	n/a	n/a	n/a	n/a
Waste management	80	82	79	81	80	77	77	78	80	78
Informing the community	79	83	78	81	78	77	76	75	76	76
Sealed local roads	79	78	79	80	82	81	n/a	n/a	n/a	n/a
Local streets & footpaths	78	78	73	78	77	76	77	79	78	77
Emergency & disaster mngt	78	79	77	79	83	79	n/a	n/a	n/a	n/a
Population growth	78	77	75	76	76	76	76	75	77	77
Family support services	76	78	75	74	75	76	73	78	75	74
Appearance of public areas	76	76	71	74	76	73	77	76	77	74
Recreational facilities	75	74	71	73	74	74	75	75	74	73
Consultation & engagement	74	77	78	80	78	75	74	77	74	74
Town planning policy	73	76	70	72	74	71	72	75	73	72
Planning & building permits	72	73	69	70	72	68	69	70	74	71
Environmental sustainability	72	75	72	76	73	73	71	73	73	72
Bus/community dev./tourism	72	75	74	73	75	73	76	76	75	73
Parking facilities	72	74	75	78	78	74	75	75	76	74
Business & community dev.	72	74	70	72	71	71	n/a	n/a	n/a	n/a
Traffic management	70	73	68	73	74	70	71	73	73	71
Lobbying	70	72	69	72	72	70	68	72	71	71
Tourism development	69	72	70	69	71	71	n/a	n/a	n/a	n/a
Enforcement of local laws	68	71	67	67	69	70	72	71	71	73
Art centres & libraries	64	64	59	65	64	64	65	65	67	65
Community & cultural	64	68	60	64	63	63	64	65	65	62

Q1. Firstly, how important should [RESPONSIBILITY AREA] be as a responsibility for Council?
Base: All respondents. Councils asked State-wide: 34 Councils asked group: 5
Note: Please see Appendix A for explanation of significant differences.



Individual service area importance

2022 individual service area importance (%)

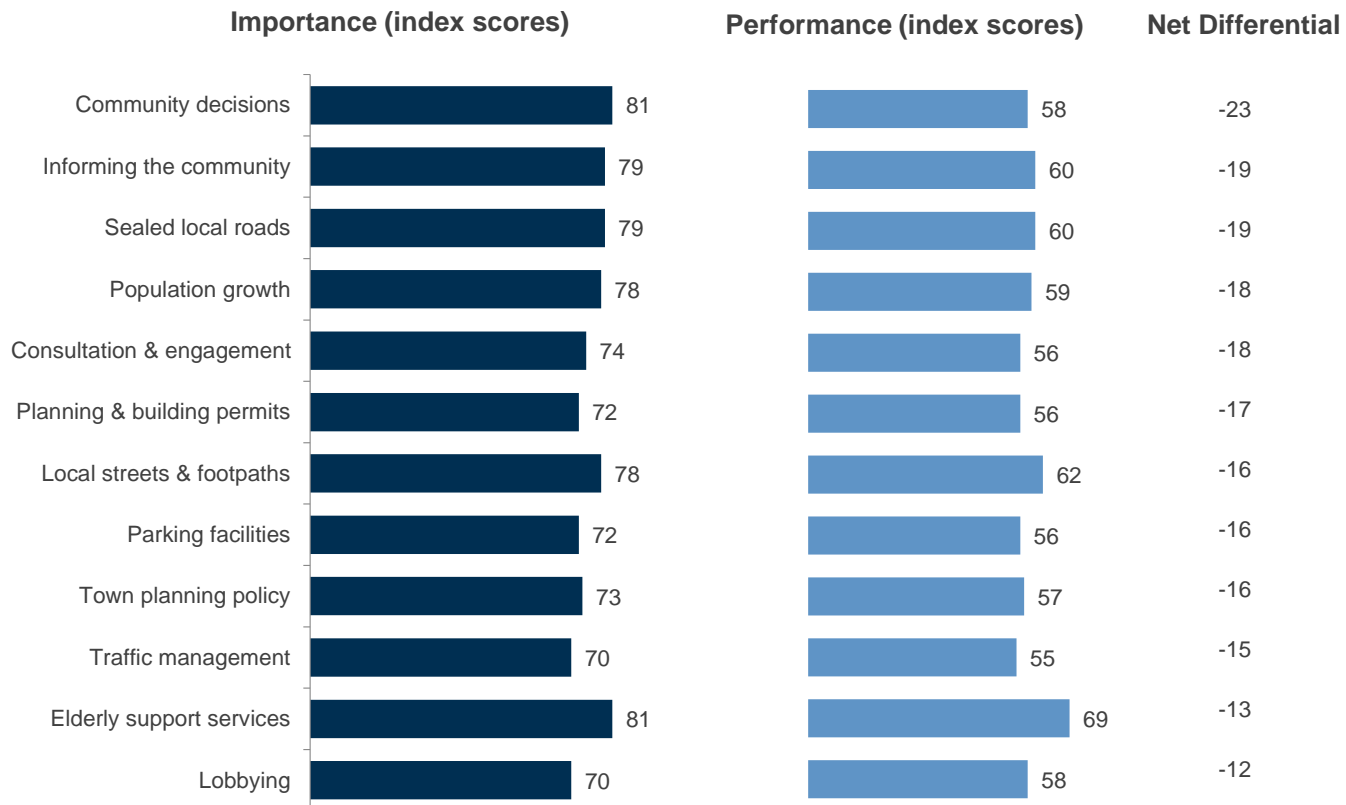


Q1. Firstly, how important should [RESPONSIBILITY AREA] be as a responsibility for Council?
Base: All respondents. Councils asked State-wide: 34 Councils asked group: 5



Individual service areas importance vs performance

Service areas where importance exceeds performance by 10 points or more, suggesting further investigation is necessary.



Note: Net differentials are calculated based on the unrounded importance and performance scores, then rounded to the nearest whole number, which may result in differences of +/-1% in the importance and performance scores and the net differential scores.



Influences on perceptions of overall performance

The individual service area that has the strongest influence on the overall performance rating (based on regression analysis) is:

- Decisions made in the interest of the community.

Good communication and transparency with residents about decisions Council has made in the community's interest provides the greatest opportunity to drive up overall opinion of Council's performance.

Following on from that, other individual service areas with a moderate to strong influence on the overall performance rating are:

- Community consultation and engagement
- Town planning
- Informing the community
- Condition of sealed local roads
- Elderly support services.

Looking at these key service areas only, Council's elderly support services are performing well (index of 69) and a moderate influence on the overall performance rating. Maintaining this positive result should remain a focus – but there is greater work to be done elsewhere.

Other service areas that have a moderate to strong influence on overall perceptions, but perform relatively less well, are the condition of sealed local roads, informing the community, town planning and community consultation (index of 60, 60, 57 and 56 respectively).

Ensuring sealed roads are well maintained and that residents are consulted and well informed about local issues and Council activities, particularly around planning, can also help shore up Council's overall performance rating.



Regression analysis explained

We use regression analysis to investigate which individual service areas, such as community consultation, condition of sealed local roads, etc. (the independent variables) are influencing respondent perceptions of overall council performance (the dependent variable).

In the charts that follow:

- The horizontal axis represents the council performance index for each individual service. Service areas appearing on the right side of the chart have a higher performance index than those on the left.
- The vertical axis represents the Standardised Beta Coefficient from the multiple regression performed. This measures the contribution of each service area to the model. Service areas near the top of the chart have a greater positive effect on overall performance ratings than service areas located closer to the axis.

The regressions are shown on the following two charts.

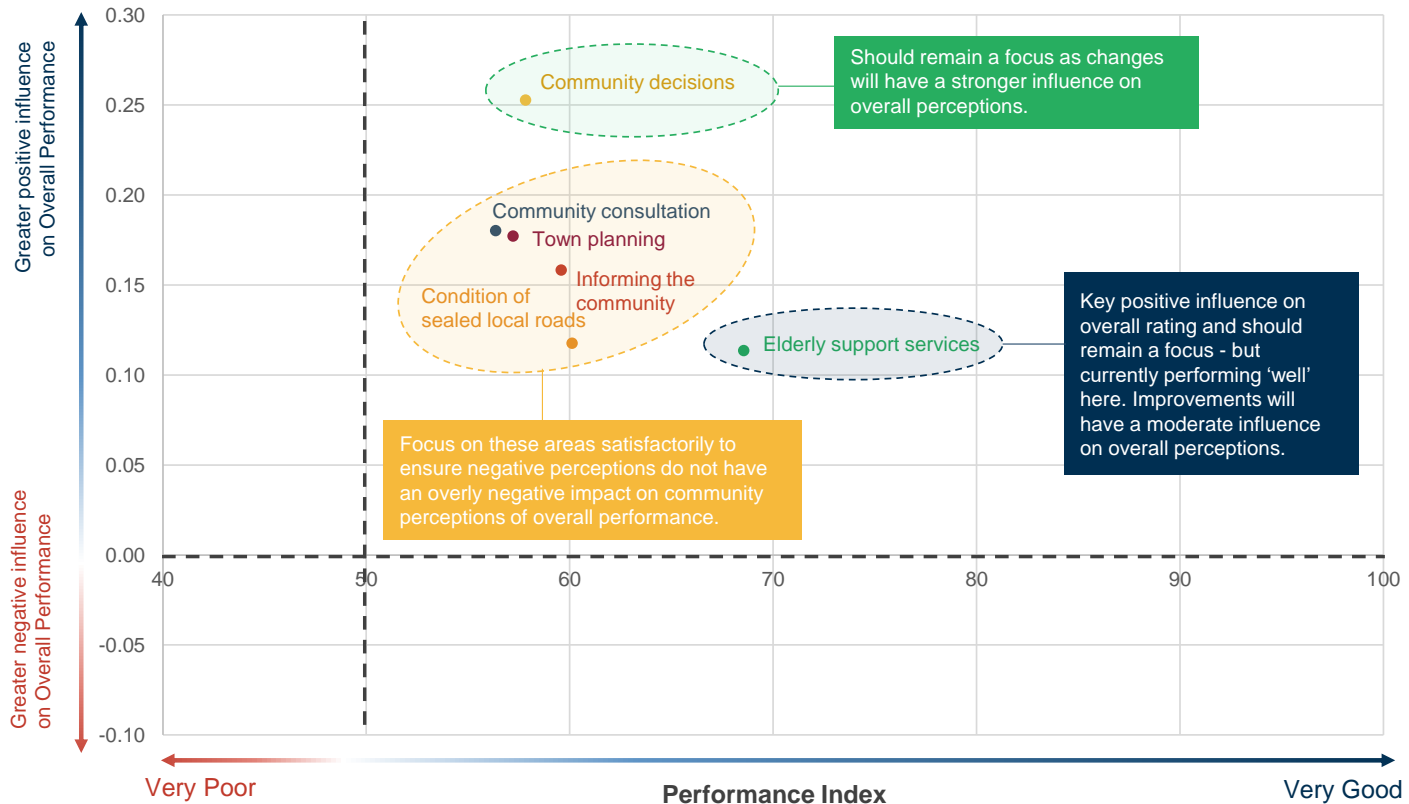
1. **The first chart** shows the results of a regression analysis of *all* individual service areas selected by Council.
2. **The second chart** shows the results of a regression performed on a smaller set of service areas, being those with a moderate-to-strong influence on overall performance. Service areas with a weak influence on overall performance (i.e. a low Standardised Beta Coefficient) have been excluded from the analysis.

Key insights from this analysis are derived from the second chart.



Influence on overall performance: key service areas

2022 regression analysis (key service areas)



The multiple regression analysis model above (reduced set of service areas) has an R^2 value of 0.557 and adjusted R^2 value of 0.550, which means that 56% of the variance in community perceptions of overall performance can be predicted from these variables. The overall model effect was statistically significant at $p = 0.0001$, $F = 82.28$.



Areas for improvement

2022 areas for improvement (%)
- Top mentions only -



Q17. What does Warrnambool City Council MOST need to do to improve its performance?
Base: All respondents. Councils asked State-wide: 47 Councils asked group: 7
A verbatim listing of responses to this question can be found in the accompanying dashboard.



Customer service



Contact with council and customer service

Contact with council

Rate of contact with Council has declined for the third year in a row to its lowest level recorded – just 52% of residents made contact in the last 12 months.

- Rate of contact is significantly lower than the Regional Centres council group and State-wide averages (59% and 63% respectively).
- Rates of contact across demographic cohorts are not significantly different from the Council average.

Telephone (30%) has remained the primary method of contact with Council, followed by in person (23%) and via email (16%).



Customer service

Perceptions of Council's customer service (index score of 73) continue to improve – up two points in 2022, following a significant eight-point increase in 2021.

- Council's customer service rates slightly higher than the Regional Centres group average and significantly higher than the State-wide average (index scores of 69 and 68 respectively).
- Perceptions of customer service across individual demographic cohorts are not significantly different from the Council average.

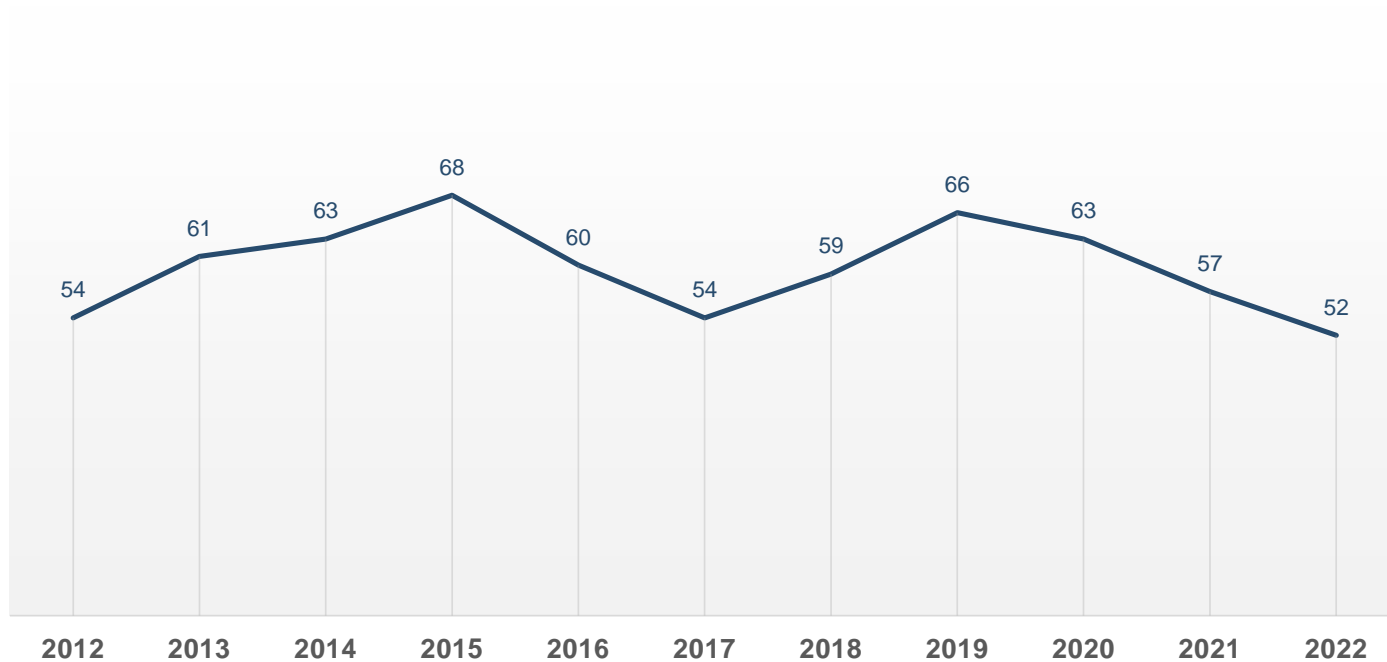
Seven in 10 residents (71%) provide a positive customer service rating of 'very good' or 'good'. Few (12%) rate Council's customer service as 'poor' or 'very poor'.

On the main methods of contact, customer service ratings are higher for telephone contact than in person or via email, however residents rate in person interactions less favourably than in 2021.



Contact with council

2022 contact with council (%)
Have had contact

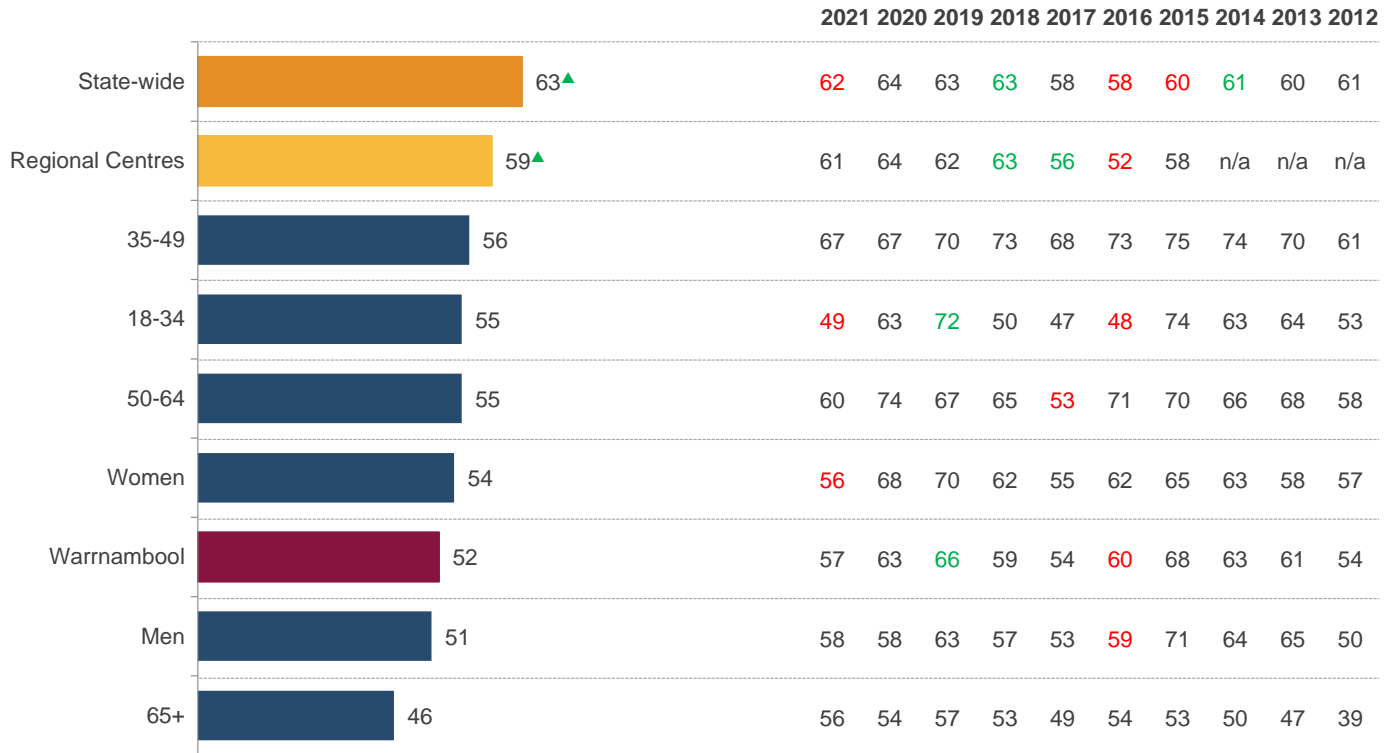


Q5a. Have you or any member of your household had any recent contact with Warrnambool City Council in any of the following ways?
Base: All respondents. Councils asked State-wide: 25 Councils asked group: 4



Contact with council

2022 contact with council (%)



Q5a. Have you or any member of your household had any recent contact with Warrnambool City Council in any of the following ways?

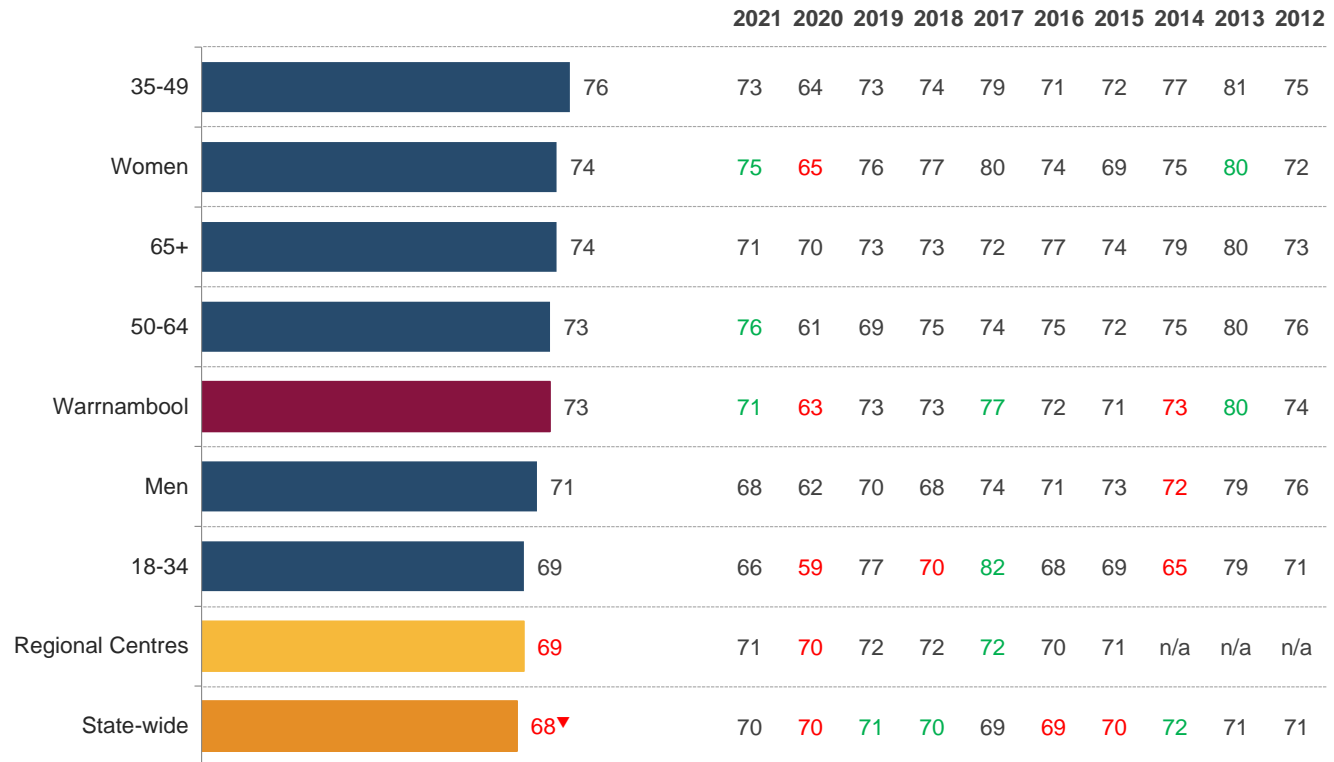
Base: All respondents. Councils asked State-wide: Councils asked group: 4

Note: Please see Appendix A for explanation of significant differences.



Customer service rating

2022 customer service rating (index scores)

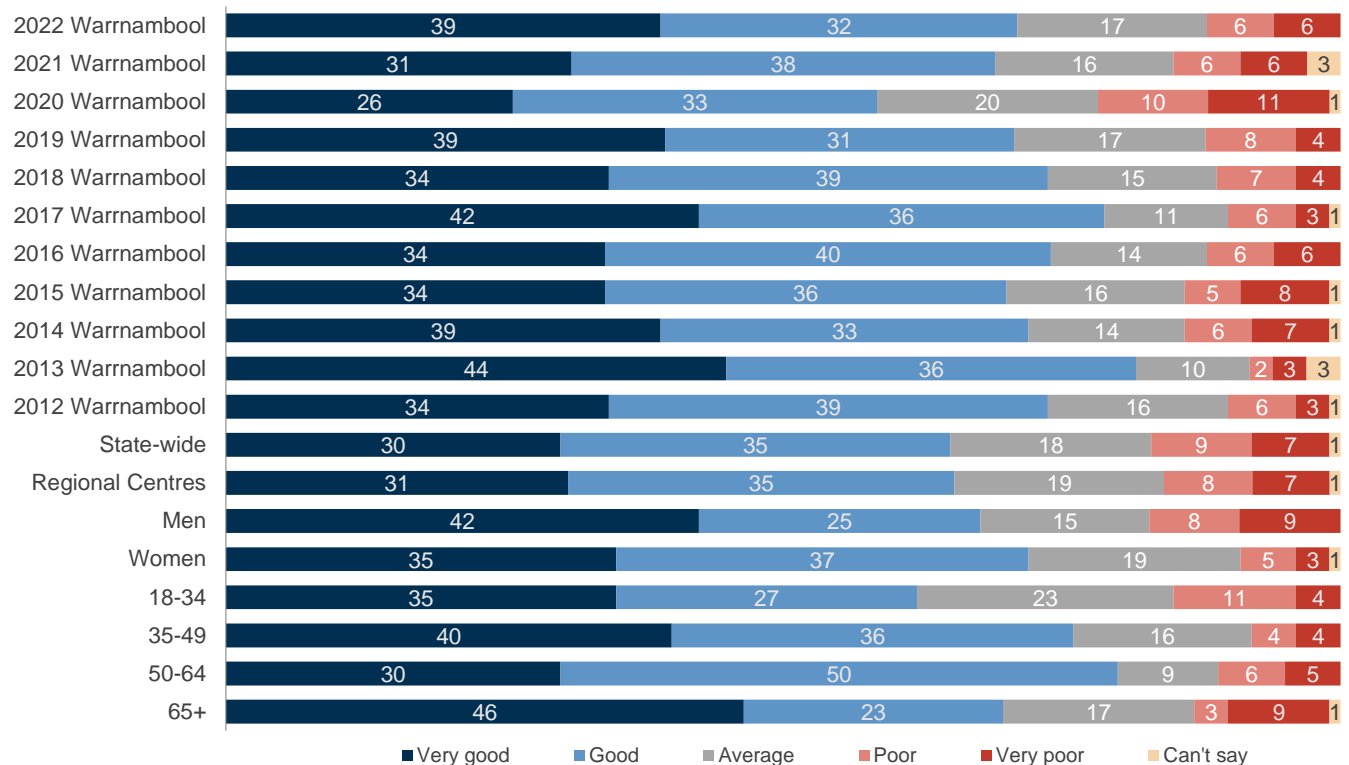


Q5c. Thinking of the most recent contact, how would you rate Warrnambool City Council for customer service?
Please keep in mind we do not mean the actual outcome but rather the actual service that was received.
Base: All respondents who have had contact with Council in the last 12 months.
Councils asked State-wide: 67 Councils asked group: 9
Note: Please see Appendix A for explanation of significant differences.



Customer service rating

2022 customer service rating (%)



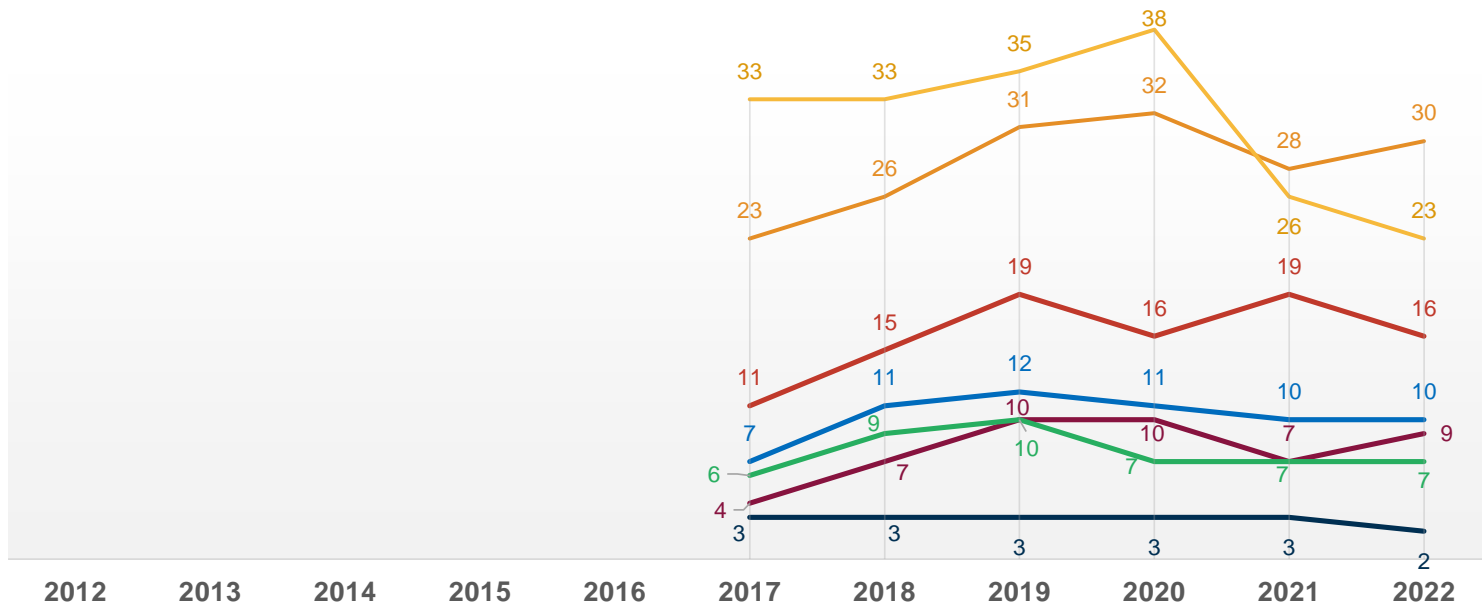
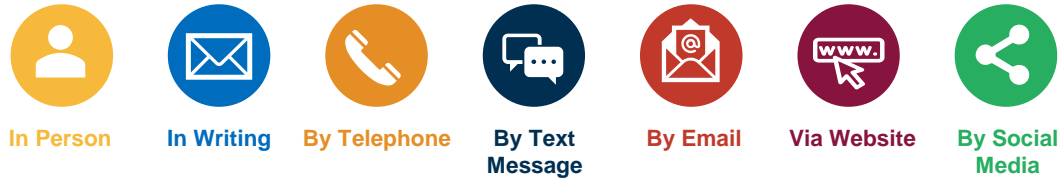
Q5c. Thinking of the most recent contact, how would you rate Warrnambool City Council for customer service? Please keep in mind we do not mean the actual outcome but rather the actual service that was received.

Base: All respondents who have had contact with Council in the last 12 months.
Councils asked State-wide: 67 Councils asked group: 9



Method of contact with council

2022 method of contact (%)



Q5a. Have you or any member of your household had any recent contact with Warrnambool City Council in any of the following ways?

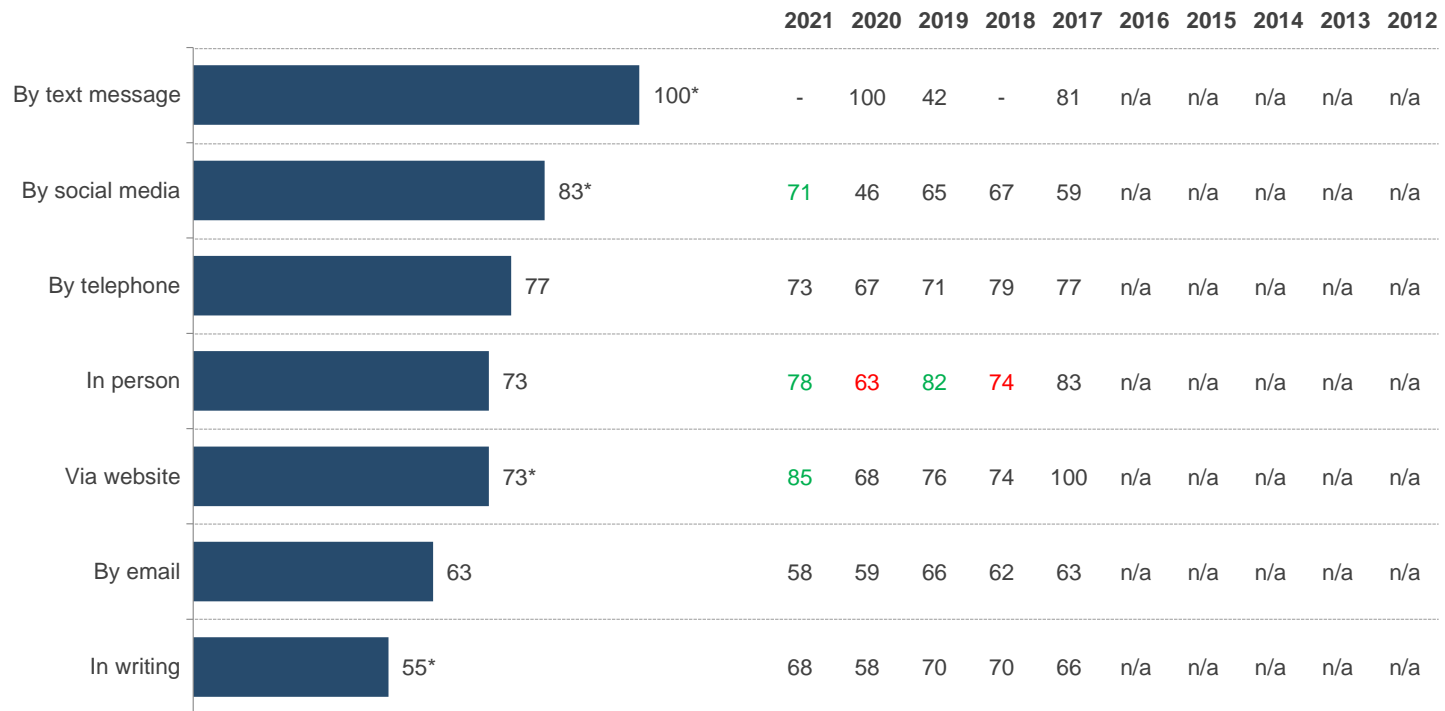
Base: All respondents. Councils asked State-wide: 25 Councils asked group: 4

Note: Respondents could name multiple contacts methods so responses may add to more than 100%



Customer service rating by method of last contact

2022 customer service rating (index score by method of last contact)

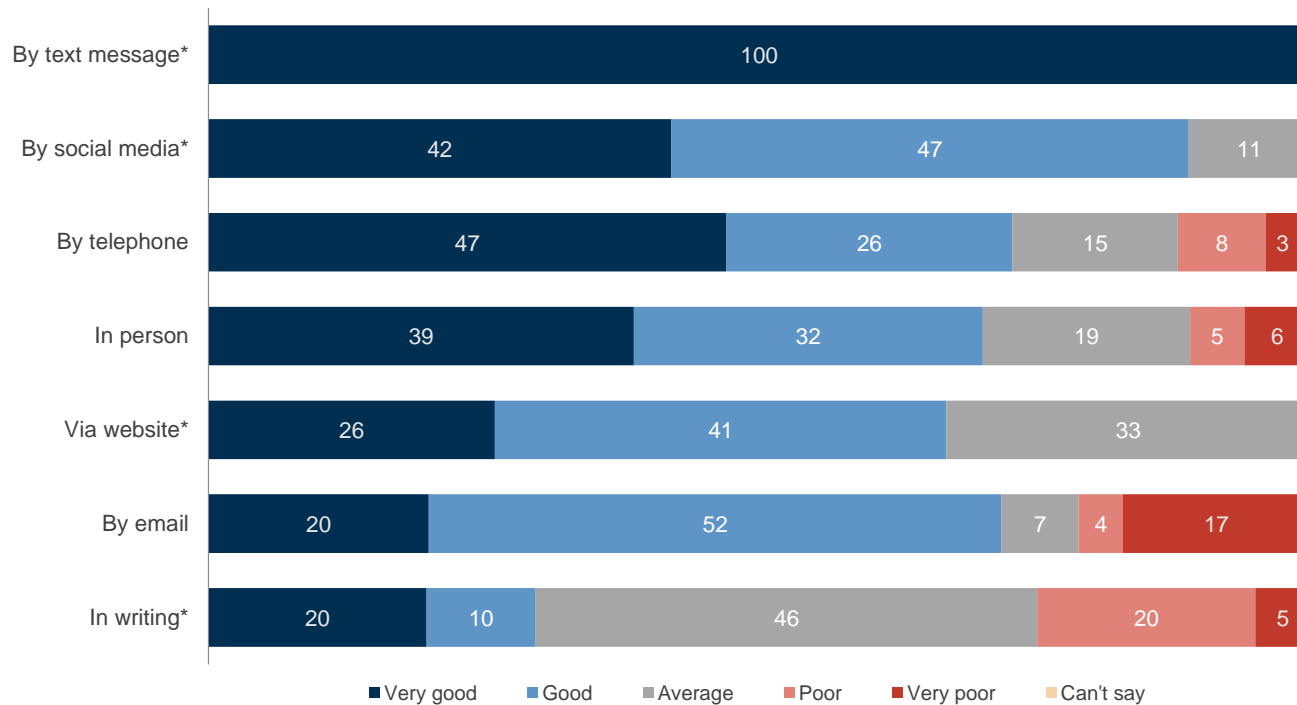


Q5c. Thinking of the most recent contact, how would you rate Warrnambool City Council for customer service? Please keep in mind we do not mean the actual outcome but rather the actual service that was received.
Base: All respondents who have had contact with Council in the last 12 months.
Councils asked State-wide: 25 Councils asked group: 4
Note: Please see Appendix A for explanation of significant differences.
*Caution: small sample size < n=30



Customer service rating by method of last contact

2022 customer service rating (% by method of last contact)



Q5c. Thinking of the most recent contact, how would you rate Warrnambool City Council for customer service?
Please keep in mind we do not mean the actual outcome but rather the actual service that was received.
Base: All respondents who have had contact with Council in the last 12 months.
Councils asked State-wide: 25 Councils asked group: 4
*Caution: small sample size < n=30



Communication



Communication

Newsletters sent via mail (25%) or email (23%) are the preferred form of communication from Council about news, information and upcoming events, followed by social media (21%).

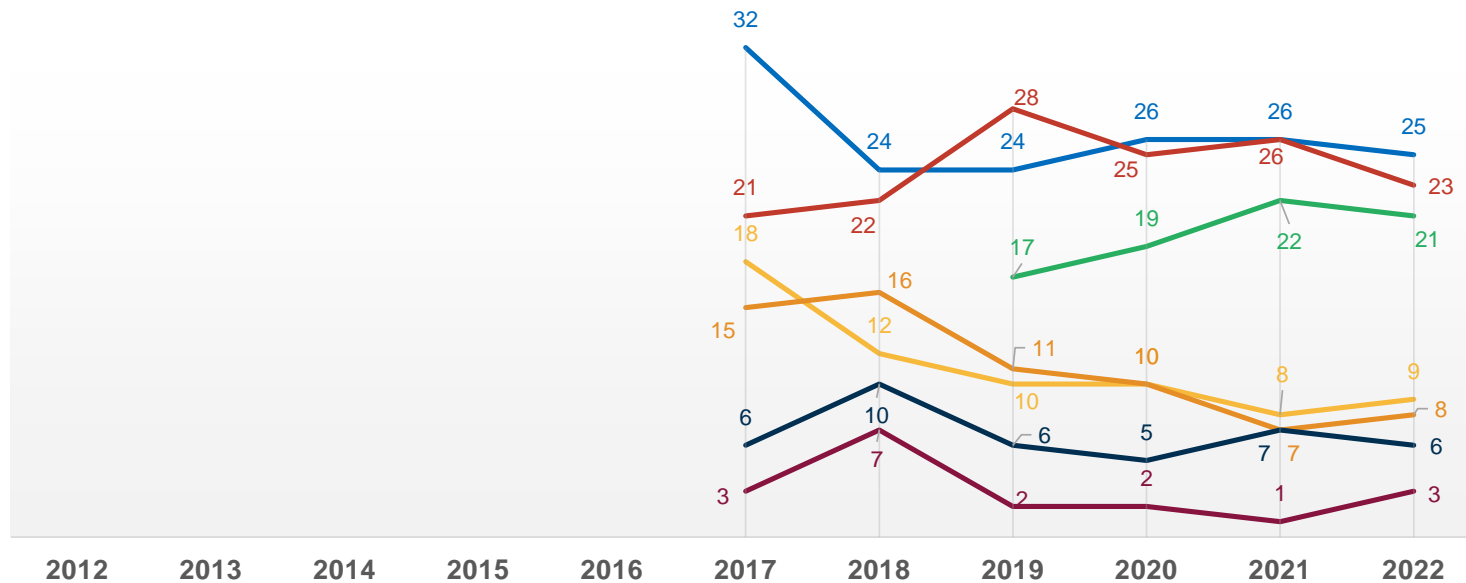
- Among residents aged under 50 years, social media (33%) remains the preferred form of communication from Council, followed by newsletters via email (24%) or mail (18%).
- Among residents aged over 50 years, newsletters via mail (32%) remain the preferred form of communication from Council. This continues to be followed by interest in newsletters via email (21%), which has declined since 2021, and both advertising (14%) and newsletter inserts (13%) in local newspapers.





Best form of communication

2022 best form of communication (%)

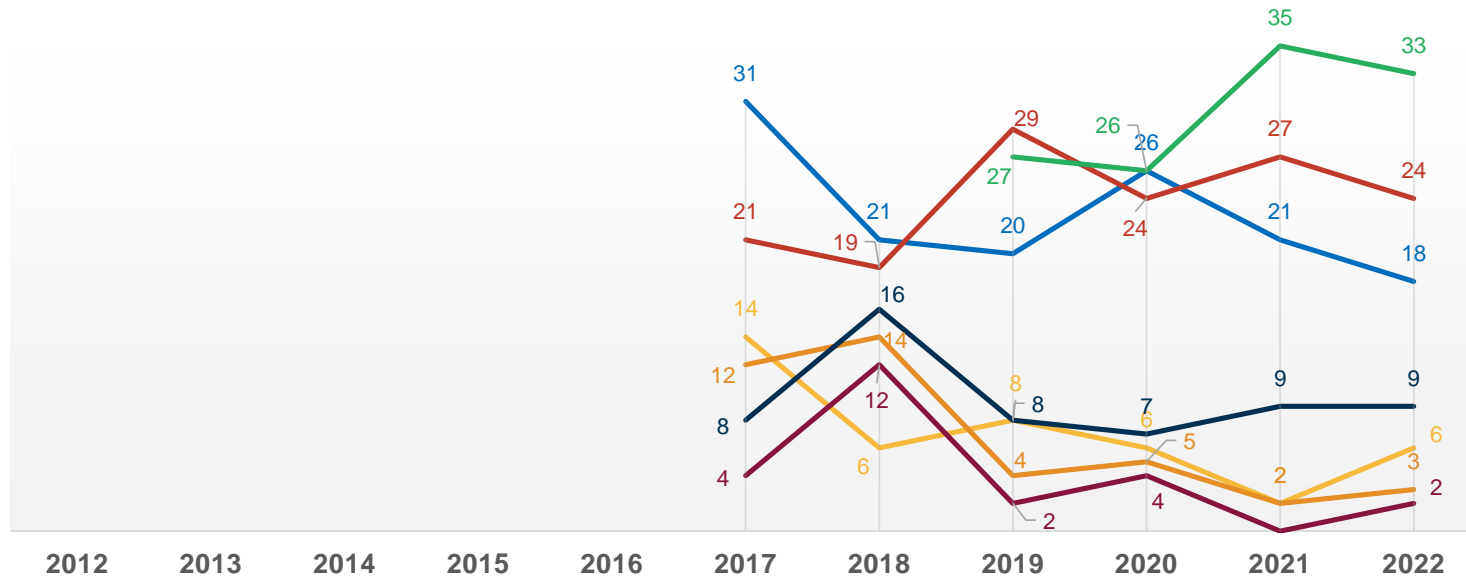


Q13. If Warrnambool City Council was going to get in touch with you to inform you about Council news and information and upcoming events, which ONE of the following is the BEST way to communicate with you?
Base: All respondents. Councils asked State-wide: 39 Councils asked group: 6
Note: 'Social Media' was included in 2019.



Best form of communication: under 50s

2022 under 50s best form of communication (%)

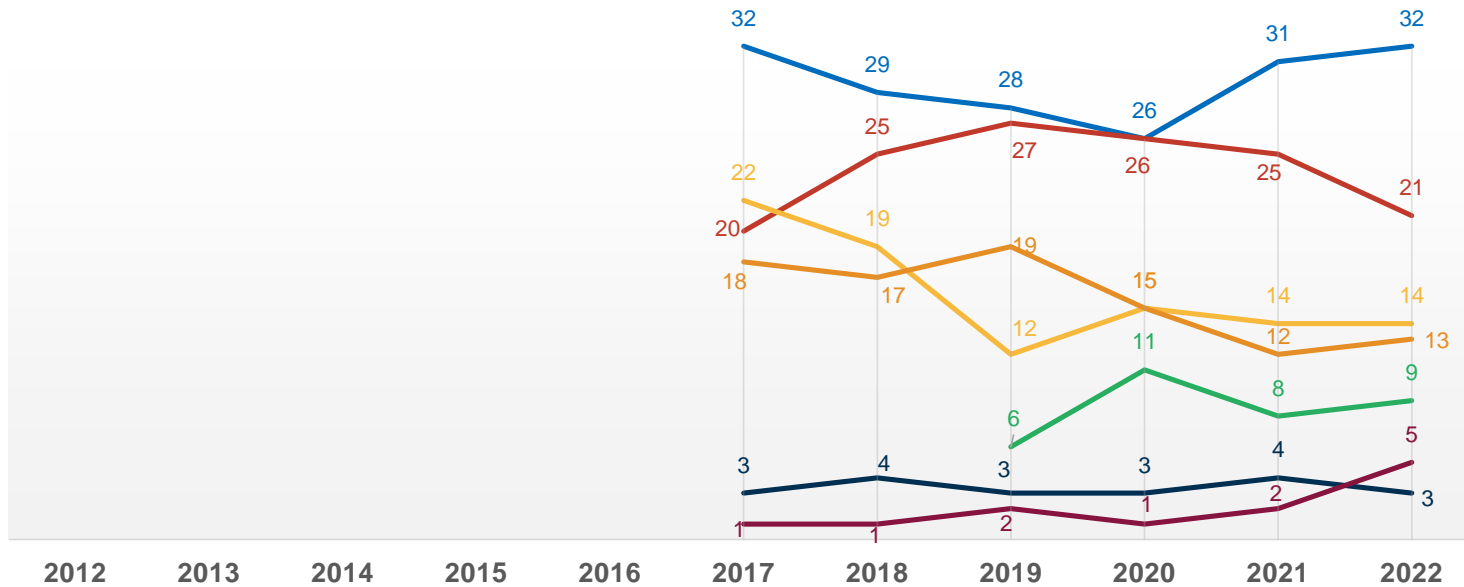


Q13. If Warrnambool City Council was going to get in touch with you to inform you about Council news and information and upcoming events, which ONE of the following is the BEST way to communicate with you?
Base: All respondents aged under 50. Councils asked State-wide: 39 Councils asked group: 6
Note: 'Social Media' was included in 2019.



Best form of communication: over 50s

2022 over 50s best form of communication (%)



Q13. If Warrnambool City Council was going to get in touch with you to inform you about Council news and information and upcoming events, which ONE of the following is the BEST way to communicate with you?
 Base: All respondents aged over 50. Councils asked State-wide: 39 Councils asked group: 6
 Note: 'Social Media' was included in 2019.



Council direction



Council direction

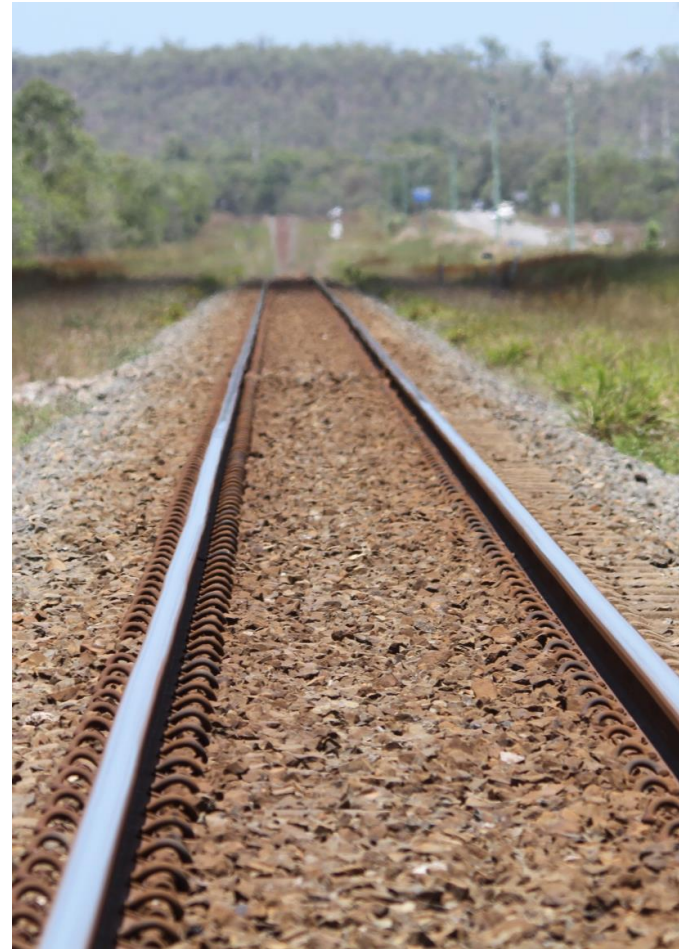
Perceptions of the direction of Council's overall performance (index score of 63) are at their most positive since tracking began in 2012.

- Council also rates significantly higher than the Regional Centres council group and State-wide averages (index scores of 52 and 50 respectively).

Over the last 12 months, close to half of residents (47%) believe the direction of Council's overall performance has stayed the same – down one point since 2021.

- 37% believe it has improved, up six points on 2021.
- 13% believe it has deteriorated, down two points on 2021.
- The most satisfied with council direction are residents aged 65 years and over, who rate it significantly higher than the Council average.
- The least satisfied with council direction are residents aged 18 to 34 years, who rate it significantly lower than the Council average.

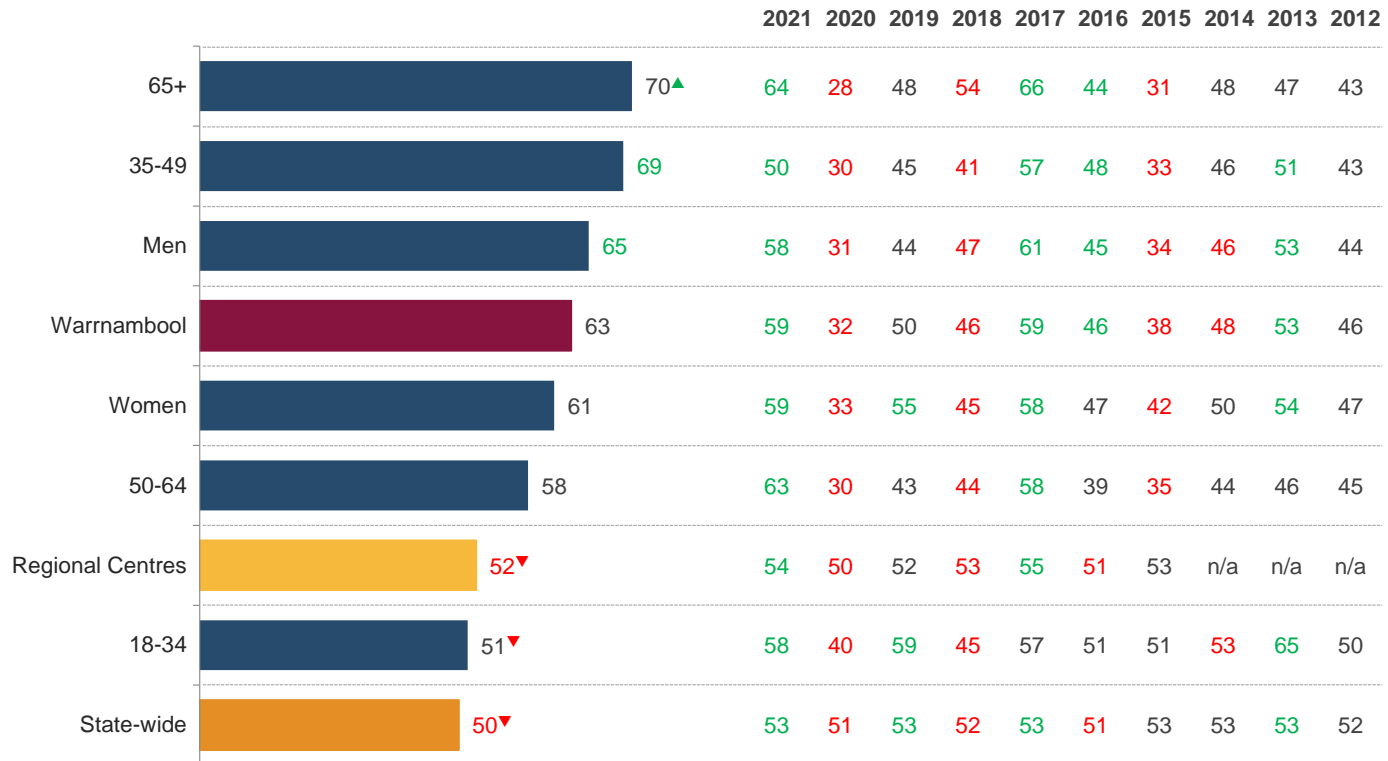
A decreased majority believe Council is heading in the 'right' direction (72%, down from 76%), while 23% (up from 14%) believe it is heading in the 'wrong' direction. Similar to 2021, a slight majority (53%) would prefer service cuts to keep council rates the same. Just 29% would prefer a rate rise to improve services.





Overall council direction last 12 months

2022 overall council direction (index scores)

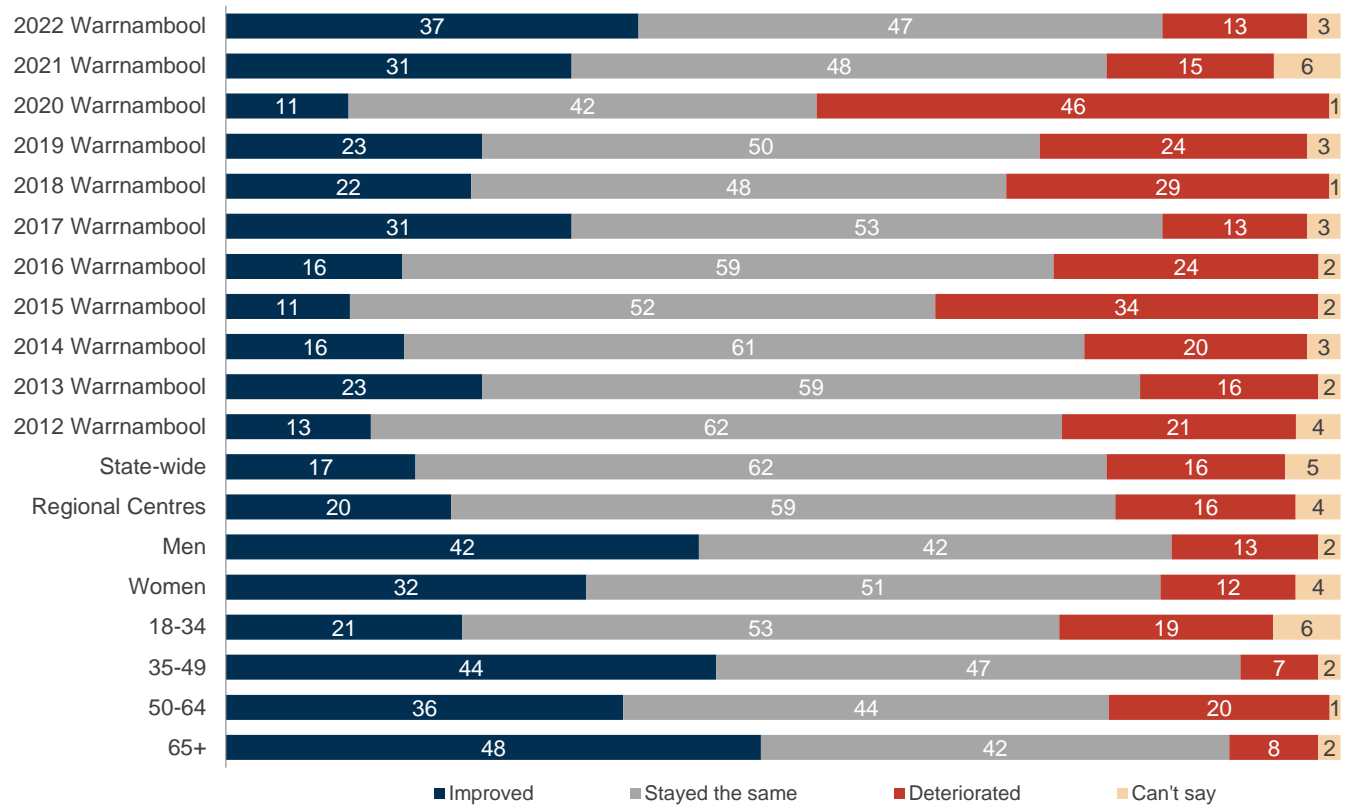


Q6. Over the last 12 months, what is your view of the direction of Warrnambool City Council's overall performance?
Base: All respondents. Councils asked State-wide: 67 Councils asked group: 9
Note: Please see Appendix A for explanation of significant differences.



Overall council direction last 12 months

2022 overall council direction (%)

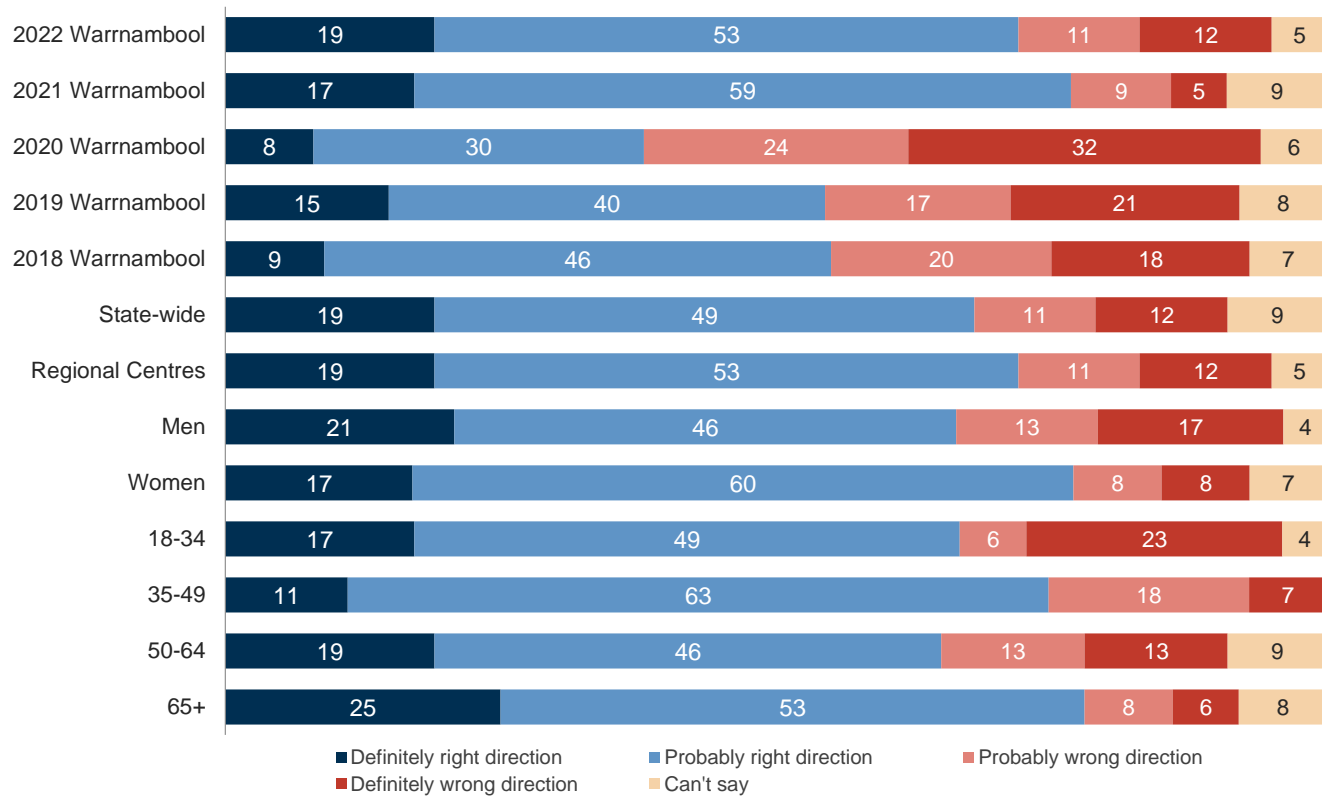


Q6. Over the last 12 months, what is your view of the direction of Warrnambool City Council's overall performance?
Base: All respondents. Councils asked State-wide: 67 Councils asked group: 9



Right / wrong direction

2022 right / wrong direction (%)

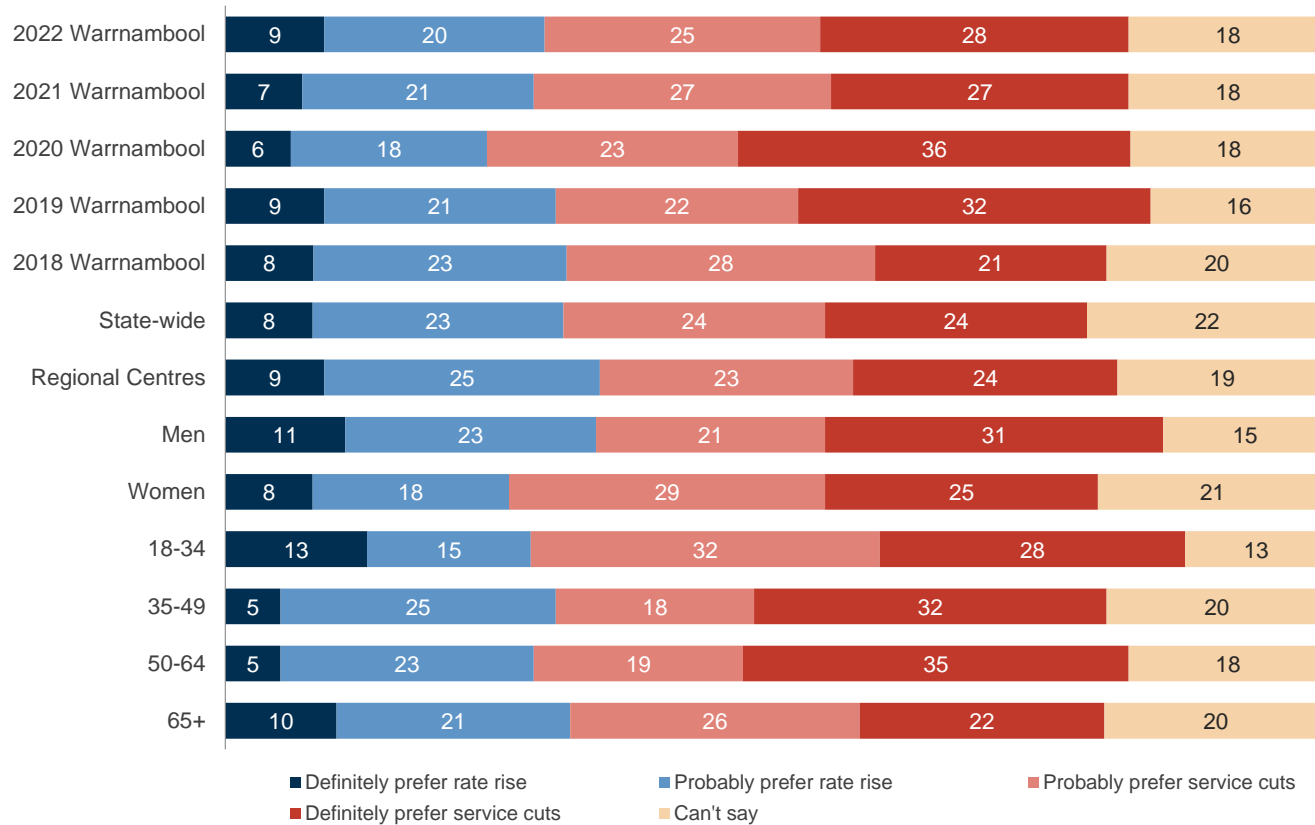


Q8. Would you say your local Council is generally heading in the right direction or the wrong direction?
Base: All respondents. Councils asked State-wide: 9 Councils asked group: 1



Rates / services trade-off

2022 rates / services trade-off (%)



Q10. If you had to choose, would you prefer to see council rate rises to improve local services OR would you prefer to see cuts in council services to keep council rates at the same level as they are now?
Base: All respondents. Councils asked State-wide: 18 Councils asked group: 2

Individual service areas

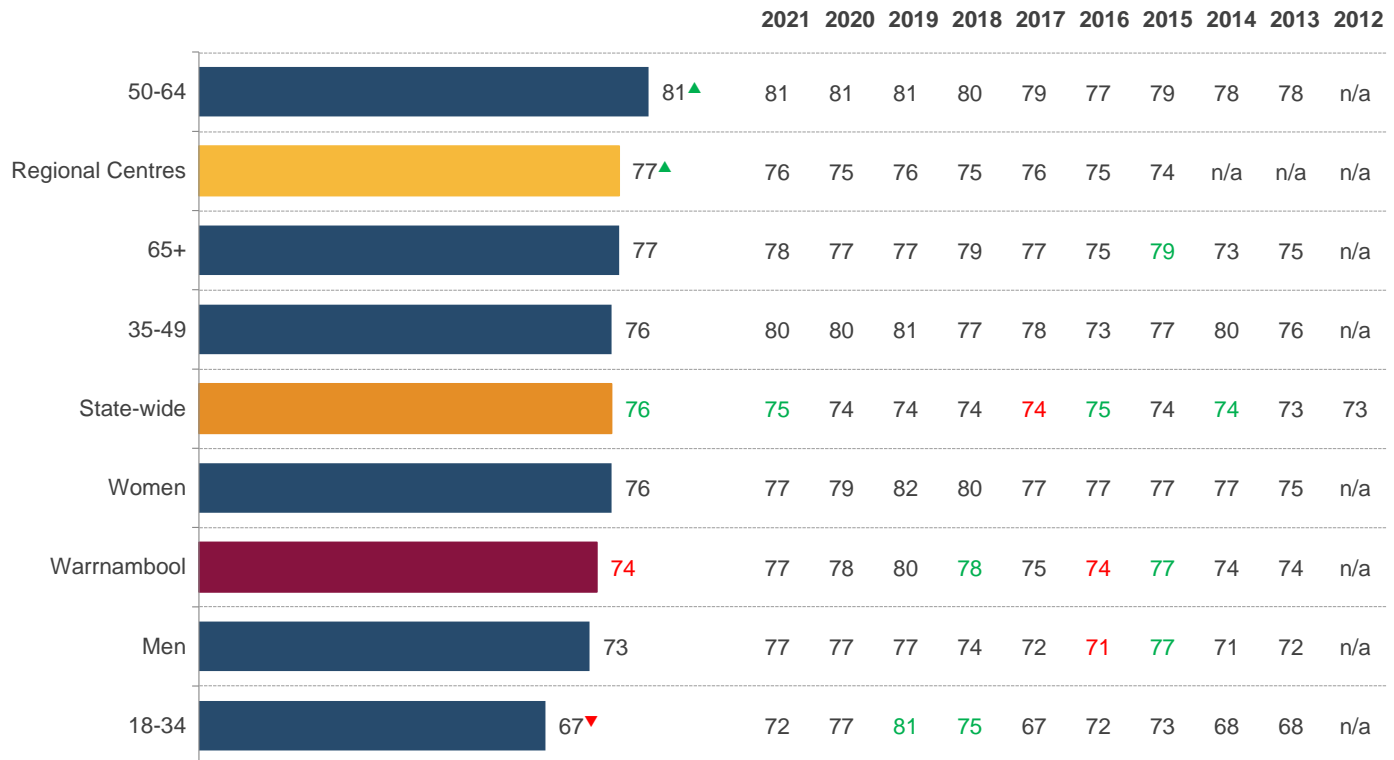




Community consultation and engagement importance



2022 consultation and engagement importance (index scores)



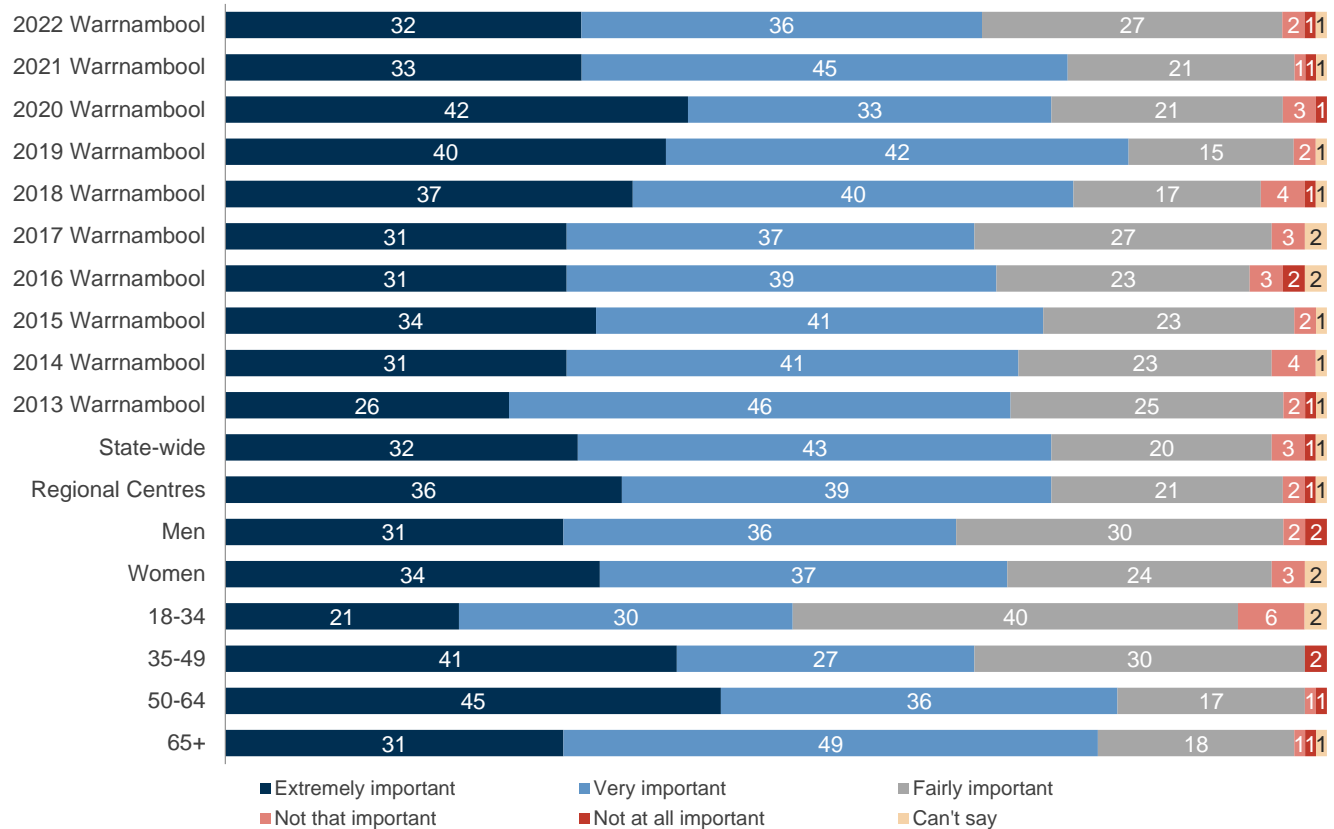
Q1. Firstly, how important should 'Community consultation and engagement' be as a responsibility for Council?
Base: All respondents. Councils asked State-wide: 30 Councils asked group: 5
Note: Please see Appendix A for explanation of significant differences.



Community consultation and engagement importance



2022 consultation and engagement importance (%)



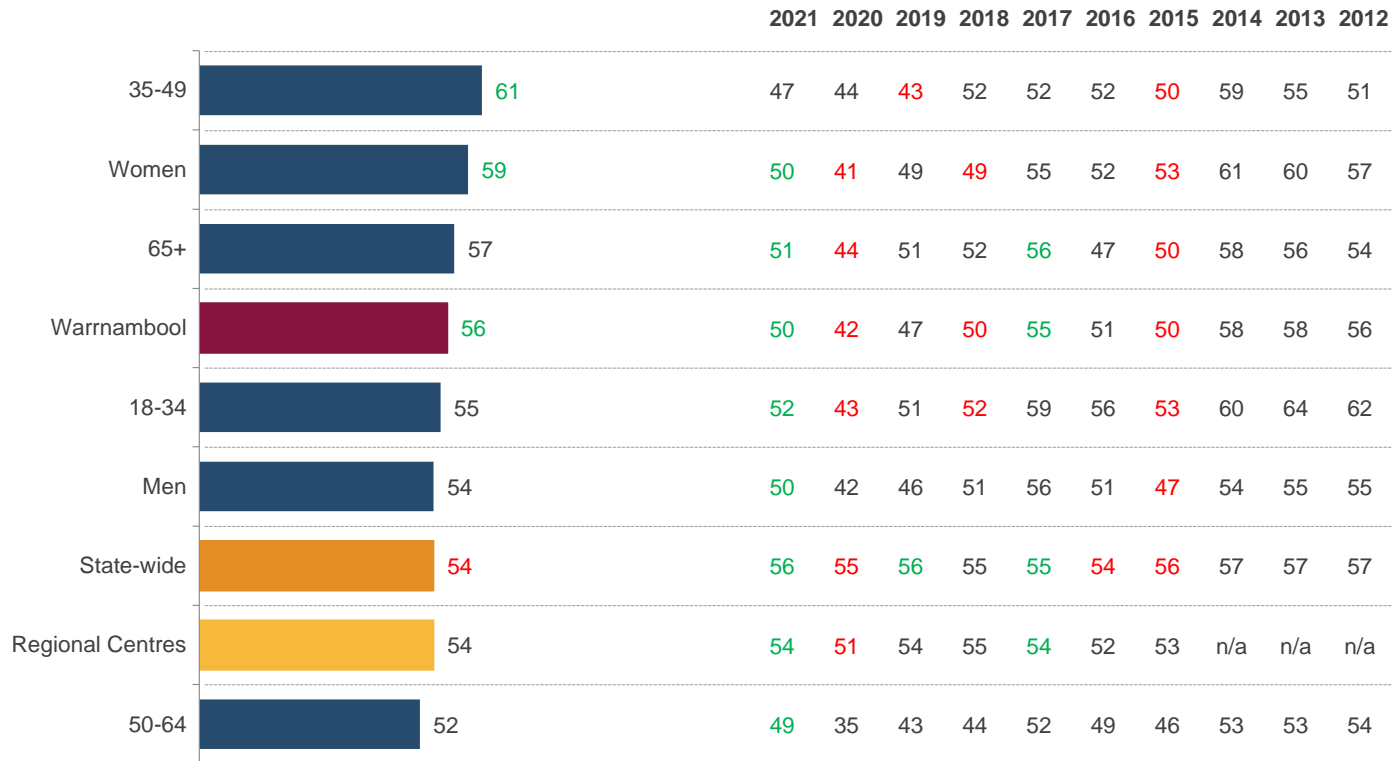
Q1. Firstly, how important should 'Community consultation and engagement' be as a responsibility for Council?
Base: All respondents. Councils asked State-wide: 30 Councils asked group: 5



Community consultation and engagement performance



2022 consultation and engagement performance (index scores)



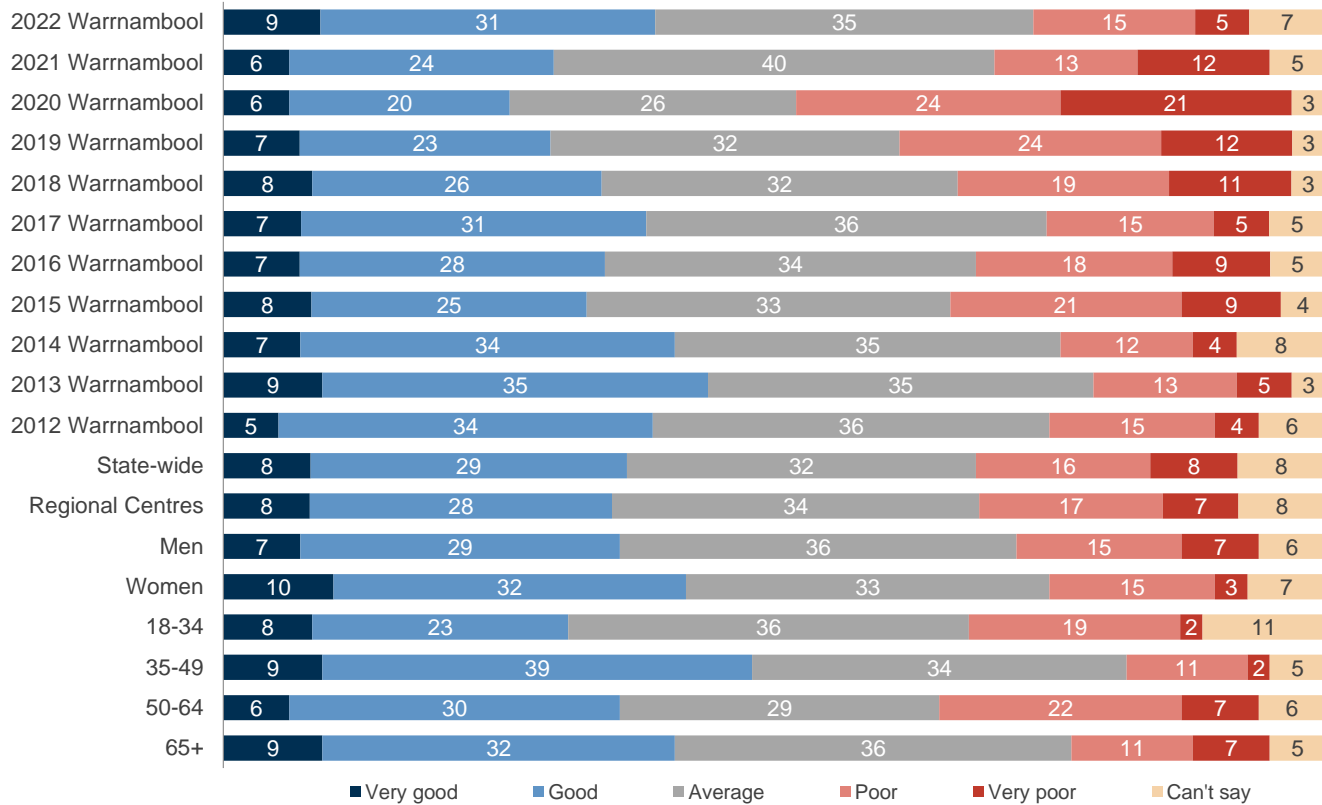
Q2. How has Council performed on 'Community consultation and engagement' over the last 12 months?
Base: All respondents. Councils asked State-wide: 67 Councils asked group: 9
Note: Please see Appendix A for explanation of significant differences.



Community consultation and engagement performance



2022 consultation and engagement performance (%)



Q2. How has Council performed on 'Community consultation and engagement' over the last 12 months?
Base: All respondents. Councils asked State-wide: 67 Councils asked group: 9



Lobbying on behalf of the community importance



2022 lobbying importance (index scores)

	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	
Women	74▲	72	71	75	77	70	74	73	75	74	n/a
35-49	71	75	70	76	70	75	66	76	72	75	n/a
50-64	71	73	74	74	73	75	73	71	78	74	n/a
Regional Centres	71	70	70	70	70	72	69	68	n/a	n/a	n/a
State-wide	71	69	68	67	68	69	69	69	70	70	70
Warrnambool	70	72	69	72	72	70	68	72	71	71	n/a
65+	69	70	65	70	73	70	68	71	70	71	n/a
18-34	69	70	70	69	72	63	68	70	65	66	n/a
Men	65▼	71	68	68	67	70	62	70	67	68	n/a

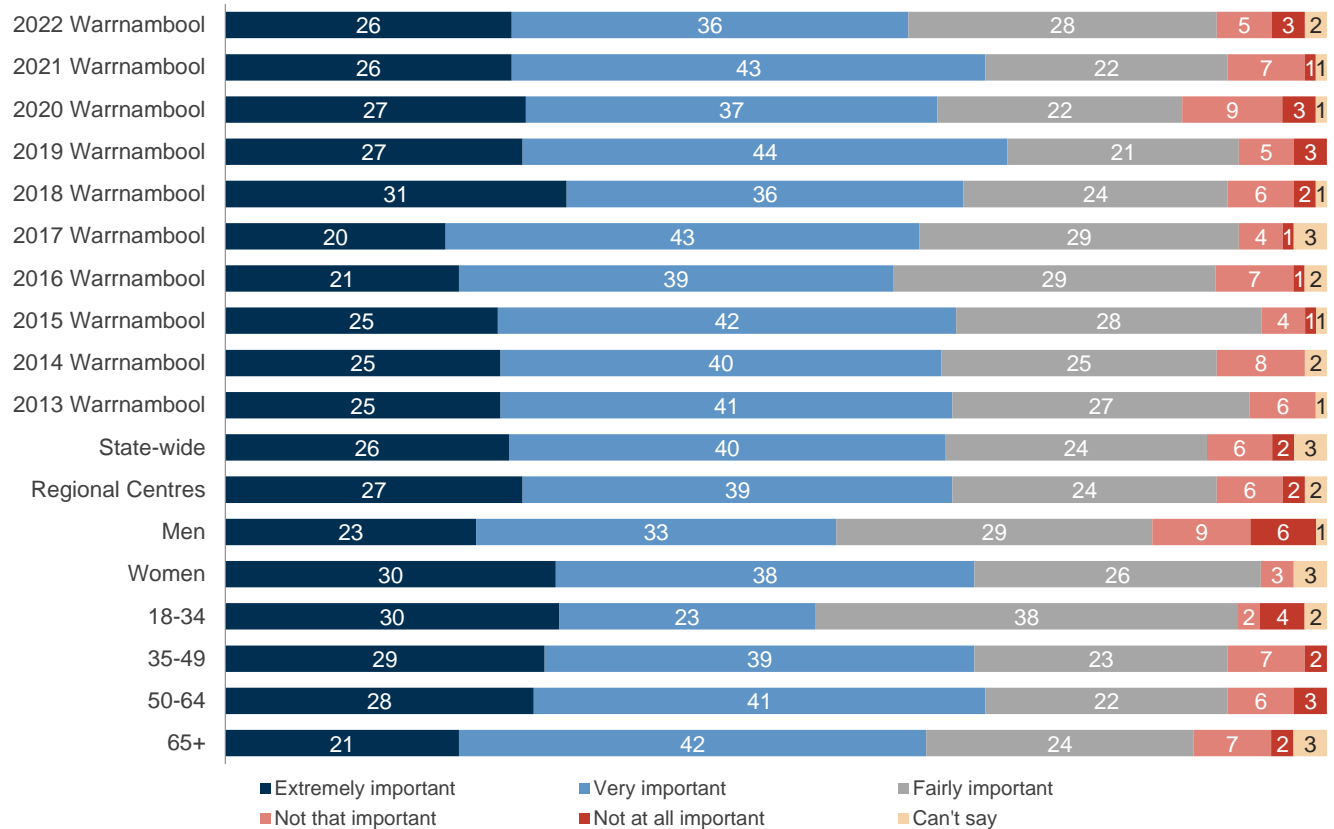
Q1. Firstly, how important should 'Lobbying on behalf of the community' be as a responsibility for Council?
Base: All respondents. Councils asked State-wide: 25 Councils asked group: 5
Note: Please see Appendix A for explanation of significant differences.



Lobbying on behalf of the community importance



2022 lobbying importance (%)



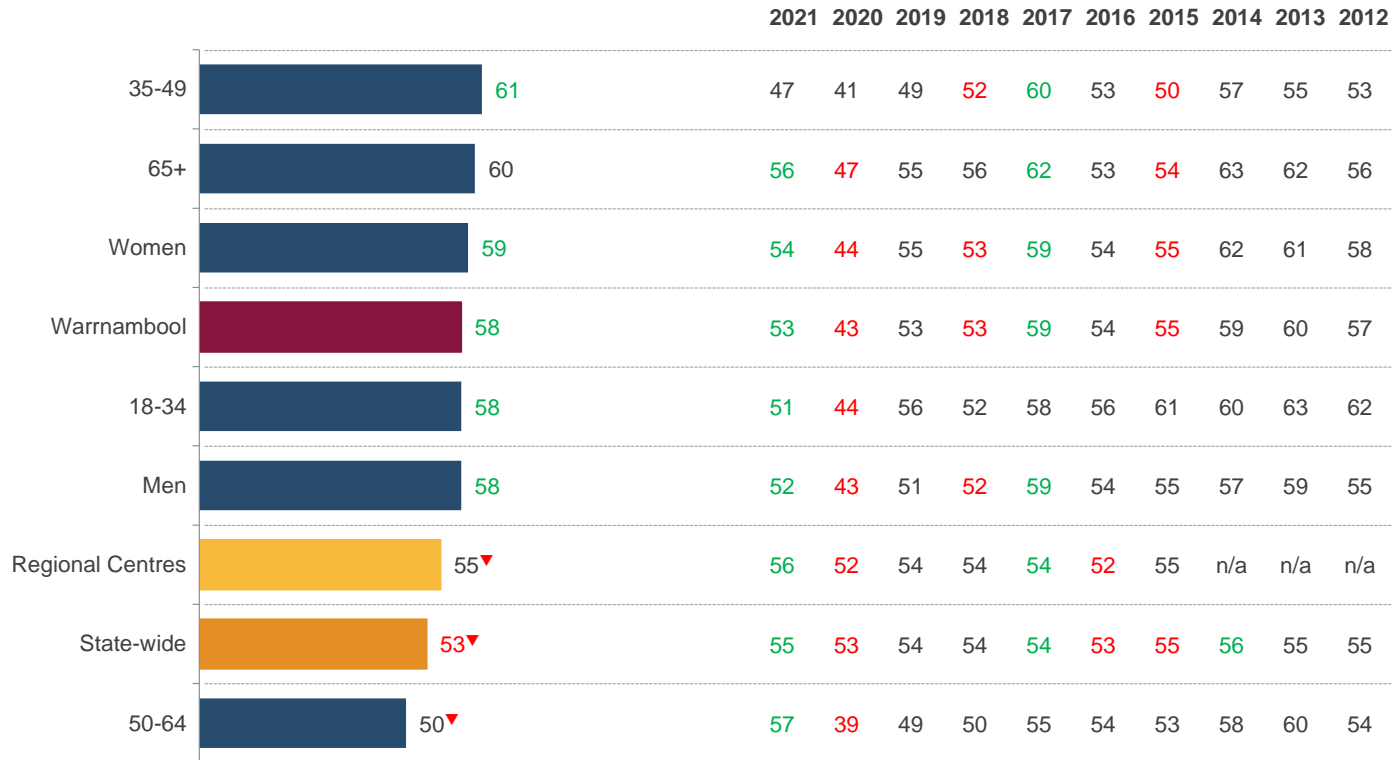
Q1. Firstly, how important should 'Lobbying on behalf of the community' be as a responsibility for Council?
Base: All respondents. Councils asked State-wide: 25 Councils asked group: 5



Lobbying on behalf of the community performance



2022 lobbying performance (index scores)



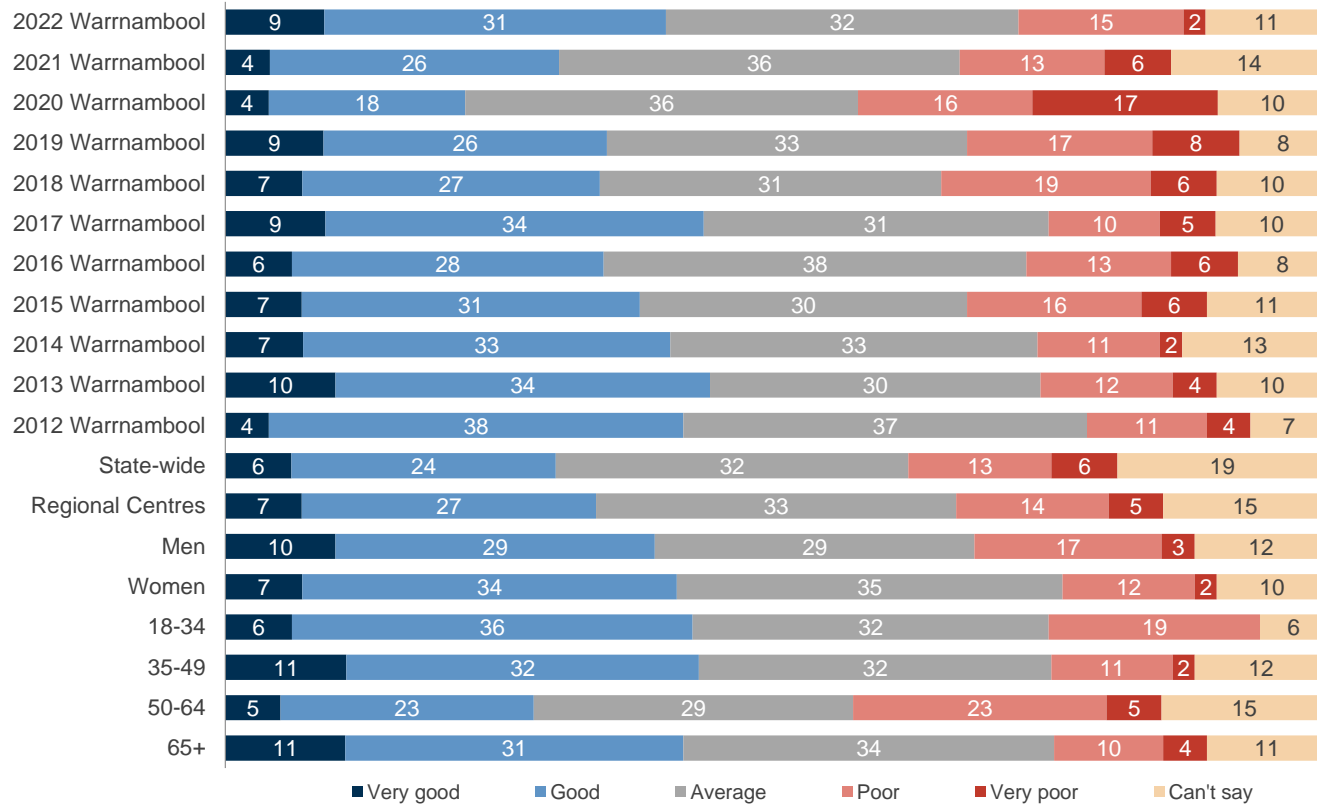
Q2. How has Council performed on 'Lobbying on behalf of the community' over the last 12 months?
Base: All respondents. Councils asked State-wide: 49 Councils asked group: 6
Note: Please see Appendix A for explanation of significant differences.



Lobbying on behalf of the community performance



2022 lobbying performance (%)



Q2. How has Council performed on 'Lobbying on behalf of the community' over the last 12 months?
Base: All respondents. Councils asked State-wide: 49 Councils asked group: 6

Decisions made in the interest of the community importance



2022 community decisions made importance (index scores)

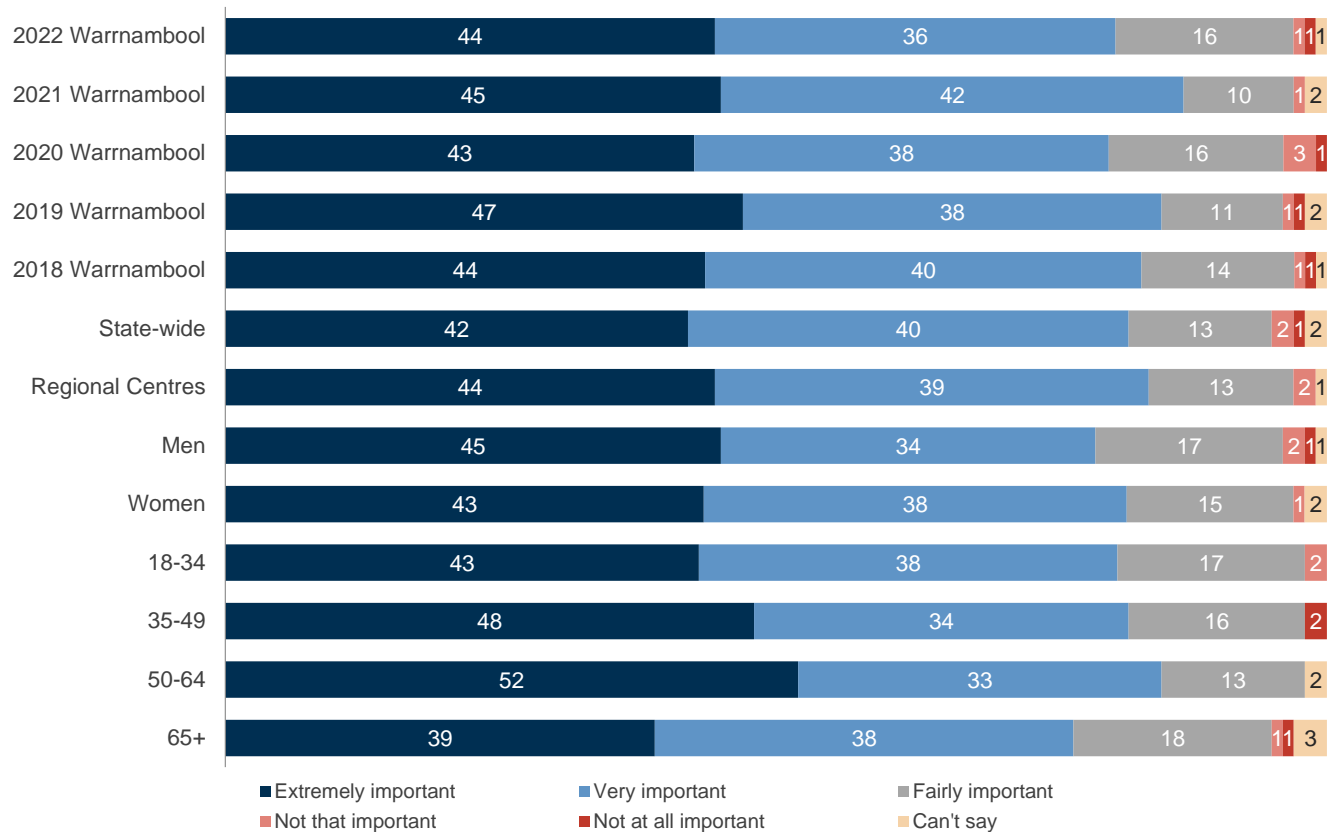
	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
50-64	85	83	85	79	84	n/a	n/a	n/a	n/a	n/a
Regional Centres	82	81	80	82	81	82	82	80	n/a	n/a
Women	82	83	81	84	82	n/a	n/a	n/a	n/a	n/a
35-49	81	85	84	84	79	n/a	n/a	n/a	n/a	n/a
Warrnambool	81	83	80	83	82	n/a	n/a	n/a	n/a	n/a
State-wide	81	81	80	80	80	79	80	80	79	n/a
18-34	80	84	77	86	84	n/a	n/a	n/a	n/a	n/a
Men	80	83	79	83	81	n/a	n/a	n/a	n/a	n/a
65+	79	82	77	83	81	n/a	n/a	n/a	n/a	n/a

Q1. Firstly, how important should 'Decisions made in the interest of the community' be as a responsibility for Council?
Base: All respondents. Councils asked State-wide: 24 Councils asked group: 4
Note: Please see Appendix A for explanation of significant differences.

Decisions made in the interest of the community importance



2022 community decisions made importance (%)

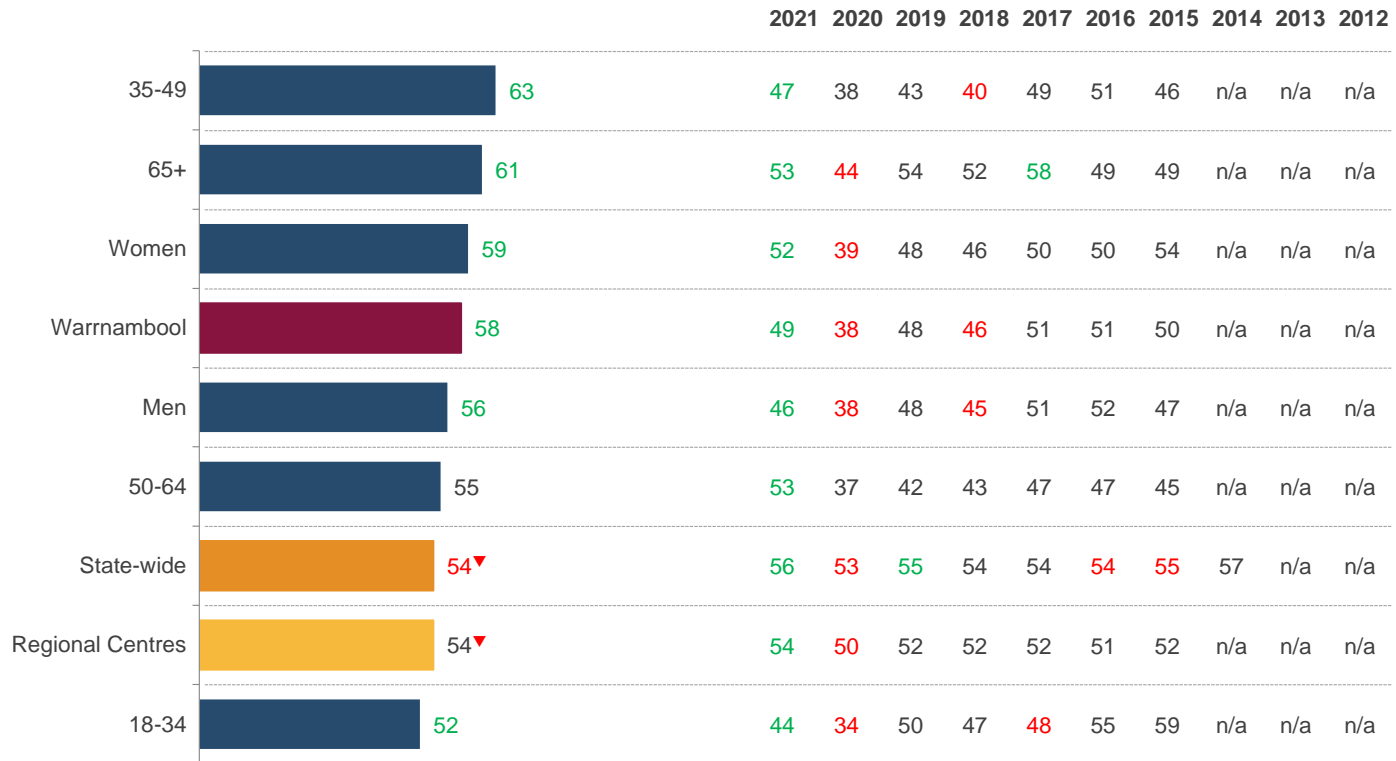


Q1. Firstly, how important should 'Decisions made in the interest of the community' be as a responsibility for Council?
Base: All respondents. Councils asked State-wide: 24 Councils asked group: 4

Decisions made in the interest of the community performance



2022 community decisions made performance (index scores)

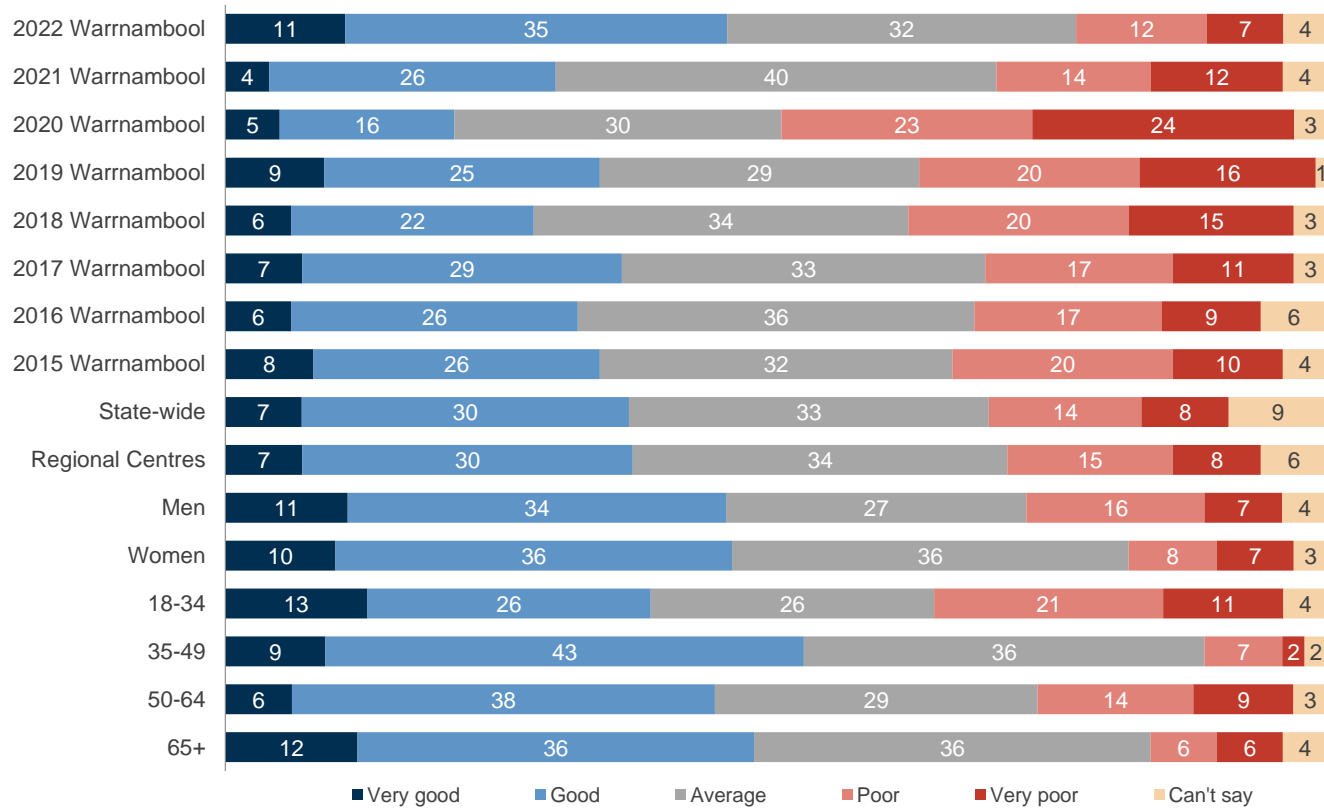


Q2. How has Council performed on 'Decisions made in the interest of the community' over the last 12 months?
Base: All respondents. Councils asked State-wide: 67 Councils asked group: 9
Note: Please see Appendix A for explanation of significant differences.

Decisions made in the interest of the community performance



2022 community decisions made performance (%)



Q2. How has Council performed on 'Decisions made in the interest of the community' over the last 12 months?
Base: All respondents. Councils asked State-wide: 67 Councils asked group: 9

The condition of sealed local roads in your area importance



2022 sealed local roads importance (index scores)

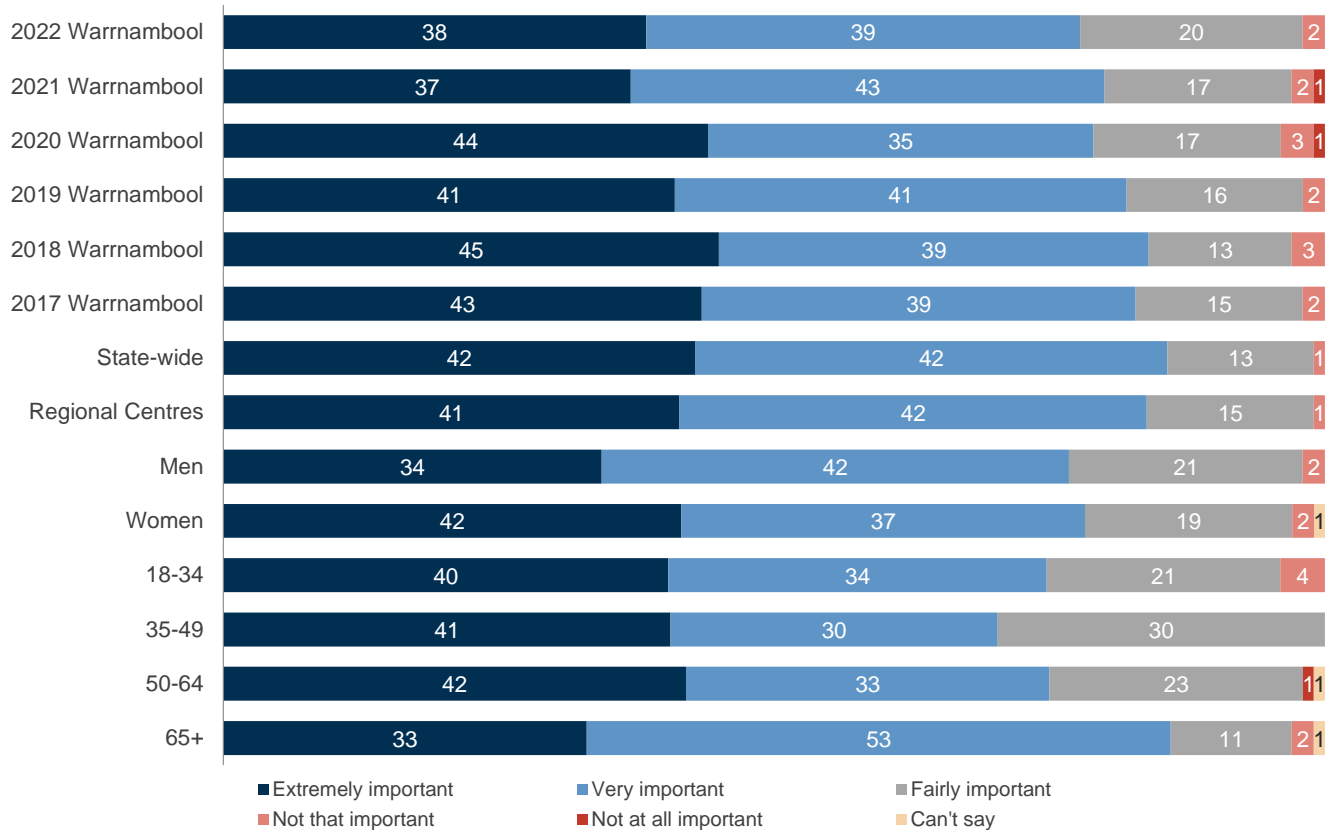
	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	
State-wide	81▲	79	79	79	80	78	78	76	77	n/a	n/a
Regional Centres	81	79	79	79	81	80	76	77	n/a	n/a	n/a
Women	80	78	83	81	83	84	n/a	n/a	n/a	n/a	n/a
65+	80	78	79	79	81	83	n/a	n/a	n/a	n/a	n/a
50-64	79	79	83	82	83	81	n/a	n/a	n/a	n/a	n/a
Warrnambool	79	78	79	80	82	81	n/a	n/a	n/a	n/a	n/a
35-49	78	80	79	82	84	85	n/a	n/a	n/a	n/a	n/a
18-34	78	77	78	80	79	77	n/a	n/a	n/a	n/a	n/a
Men	77	78	76	80	80	78	n/a	n/a	n/a	n/a	n/a

Q1. Firstly, how important should 'The condition of sealed local roads in your area' be as a responsibility for Council?
Base: All respondents. Councils asked State-wide: 23 Councils asked group: 4
Note: Please see Appendix A for explanation of significant differences.

The condition of sealed local roads in your area importance



2022 sealed local roads importance (%)



Q1. Firstly, how important should 'The condition of sealed local roads in your area' be as a responsibility for Council?
Base: All respondents. Councils asked State-wide: 23 Councils asked group: 4

The condition of sealed local roads in your area performance



2022 sealed local roads performance (index scores)

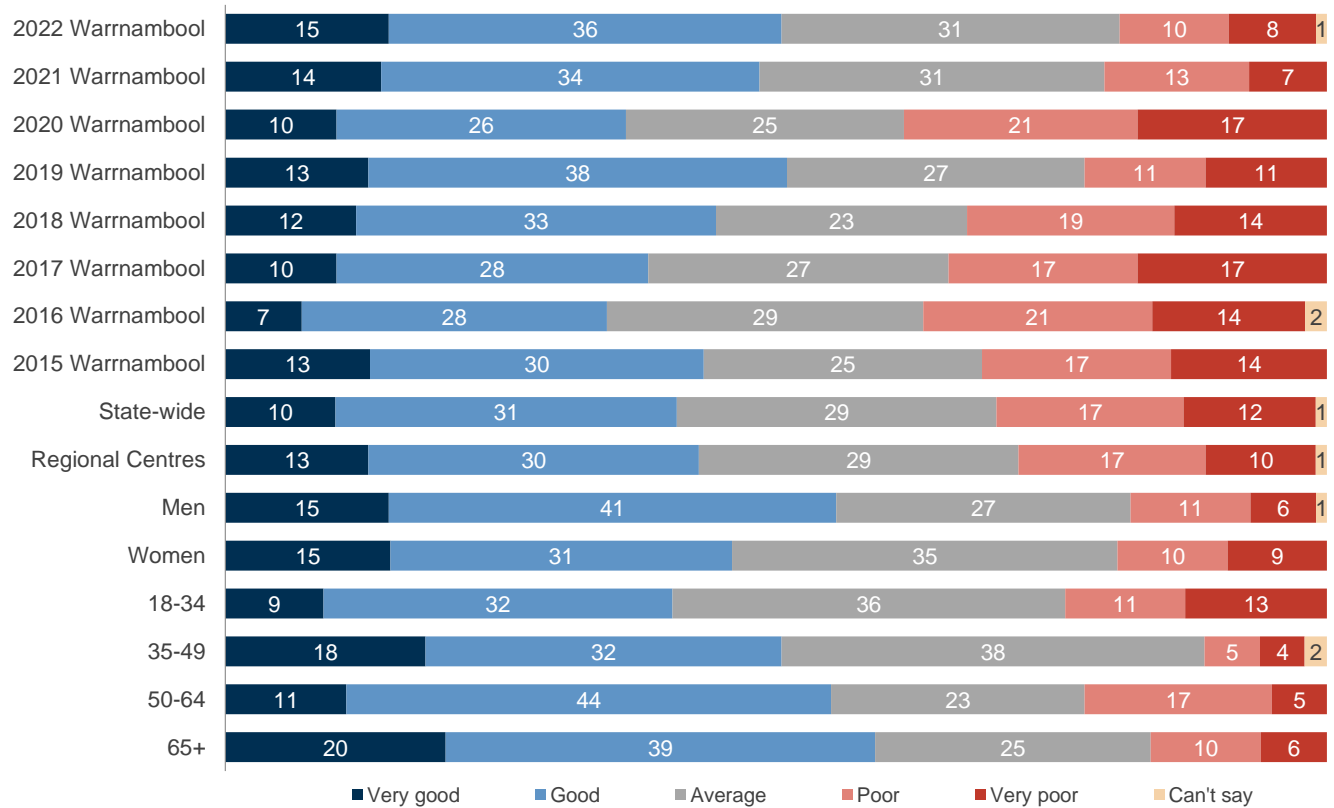
	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	
35-49	64	61	48	56	44	49	50	55	n/a	n/a	n/a
65+	64	61	52	60	59	54	47	56	n/a	n/a	n/a
Men	62	58	51	56	53	56	48	55	n/a	n/a	n/a
Warrnambool	60	59	48	58	53	49	49	53	n/a	n/a	n/a
50-64	60	61	48	57	54	50	47	53	n/a	n/a	n/a
Women	58	59	45	60	52	43	49	51	n/a	n/a	n/a
Regional Centres	54▼	60	55	57	54	53	54	55	n/a	n/a	n/a
18-34	53▼	52	43	58	52	45	50	48	n/a	n/a	n/a
State-wide	53▼	57	54	56	53	53	54	55	55	n/a	n/a

Q2. How has Council performed on 'The condition of sealed local roads in your area' over the last 12 months?
Base: All respondents. Councils asked State-wide: 67 Councils asked group: 9
Note: Please see Appendix A for explanation of significant differences.

The condition of sealed local roads in your area performance



2022 sealed local roads performance (%)



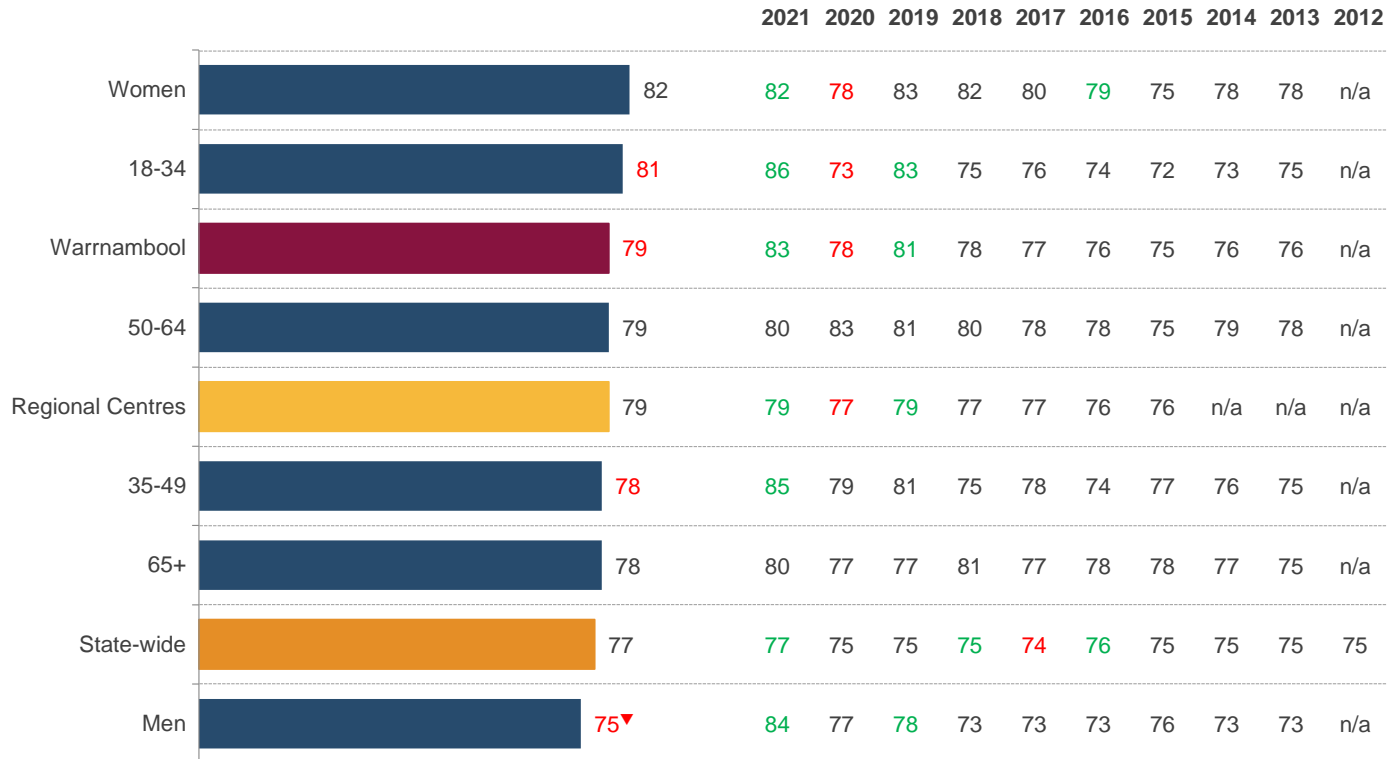
Q2. How has Council performed on 'The condition of sealed local roads in your area' over the last 12 months?
Base: All respondents. Councils asked State-wide: 67 Councils asked group: 9



Informing the community importance



2022 informing community importance (index scores)



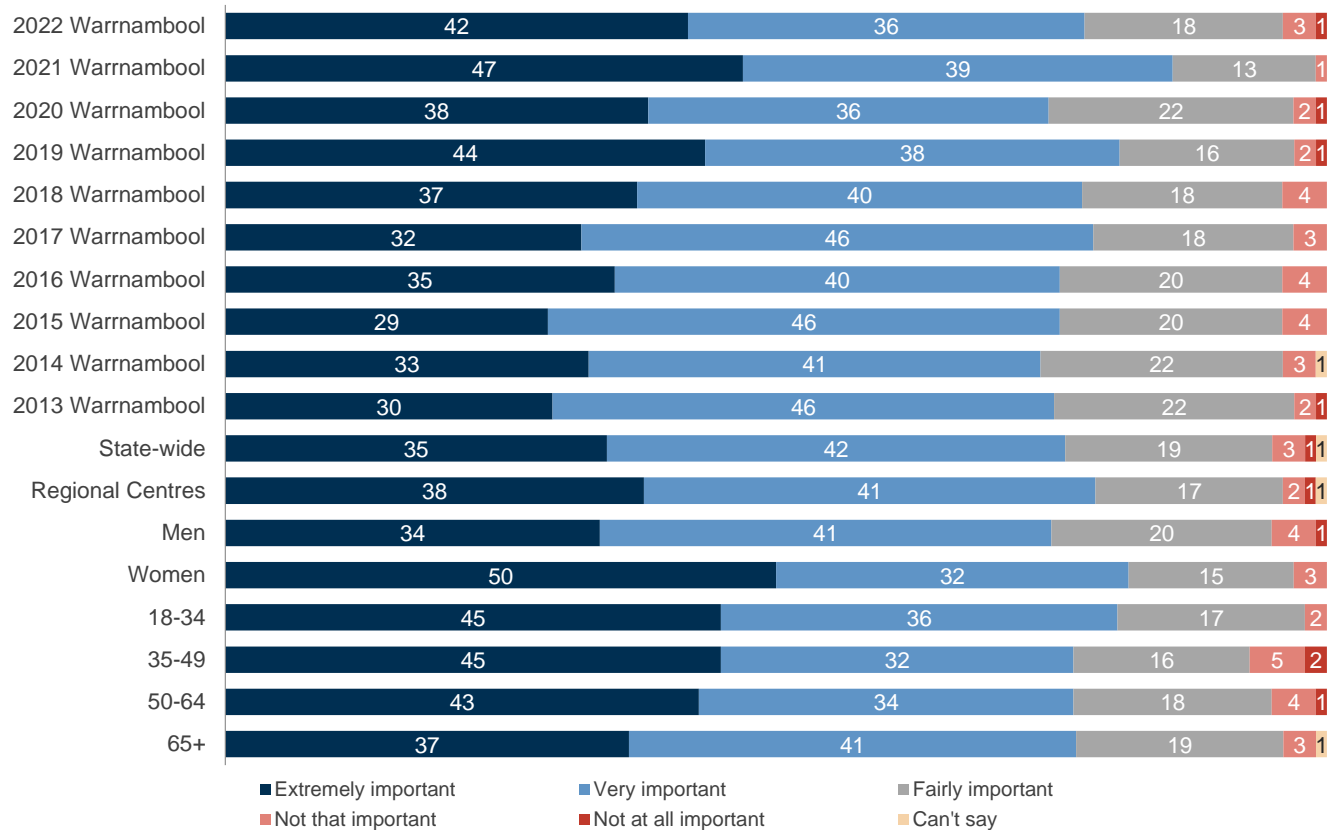
Q1. Firstly, how important should 'informing the community' be as a responsibility for Council?
Base: All respondents. Councils asked State-wide: 25 Councils asked group: 5
Note: Please see Appendix A for explanation of significant differences.



Informing the community importance



2022 informing community importance (%)



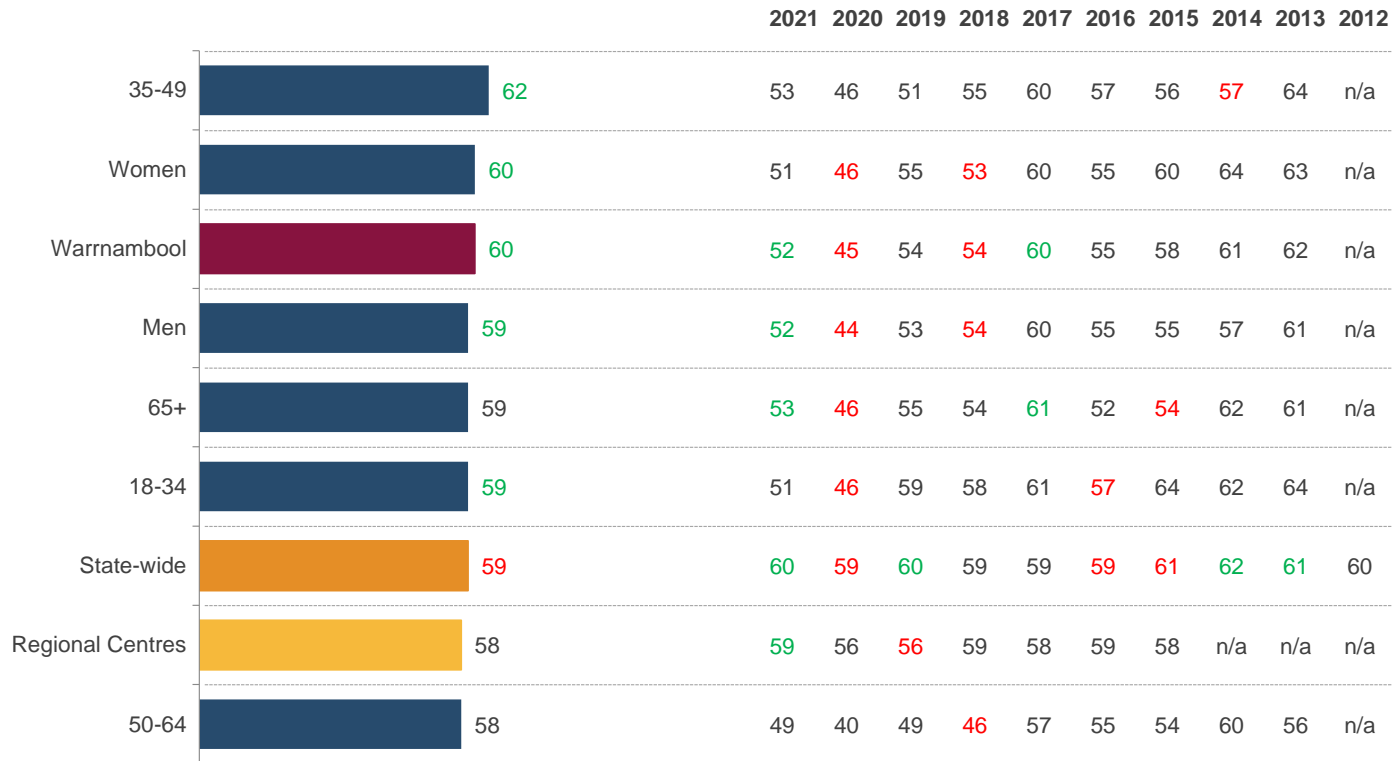
Q1. Firstly, how important should 'Informing the community' be as a responsibility for Council?
Base: All respondents. Councils asked State-wide: 25 Councils asked group: 5



Informing the community performance



2022 informing community performance (index scores)



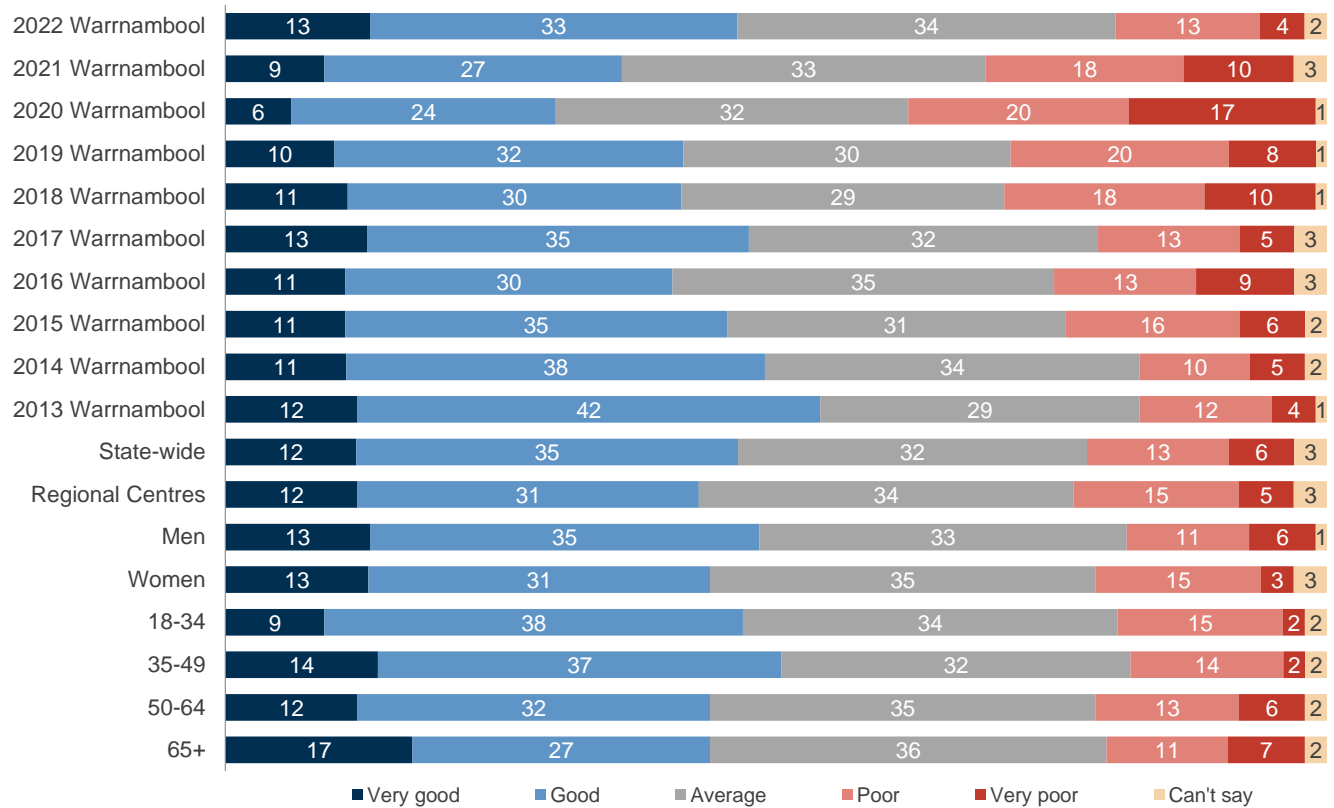
Q2. How has Council performed on 'informing the community' over the last 12 months?
Base: All respondents. Councils asked State-wide: 36 Councils asked group: 6
Note: Please see Appendix A for explanation of significant differences.



Informing the community performance



2022 informing community performance (%)



Q2. How has Council performed on 'Informing the community' over the last 12 months?
Base: All respondents. Councils asked State-wide: 36 Councils asked group: 6

The condition of local streets and footpaths in your area importance



2022 streets and footpaths importance (index scores)

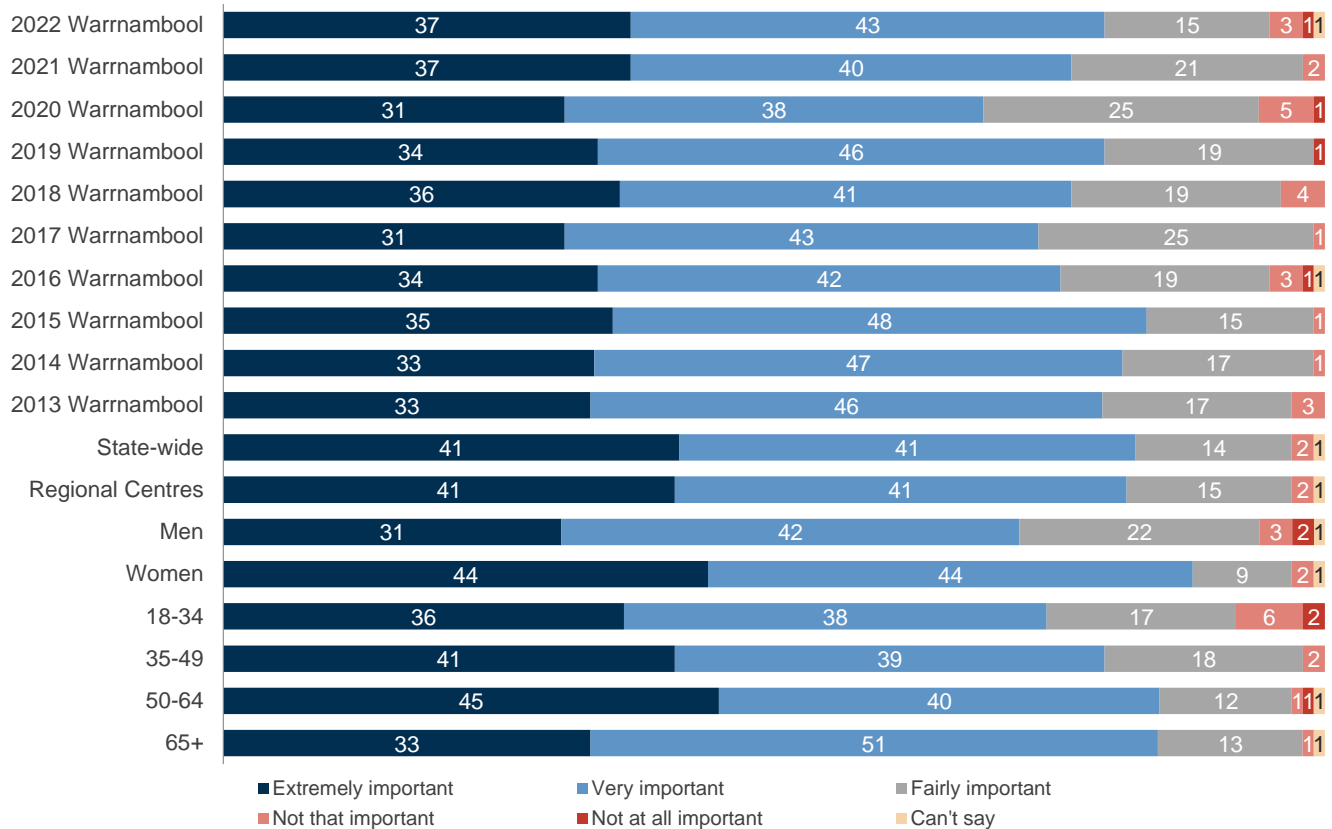
	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	
Women	82▲	78	76	81	78	80	80	79	83	81	n/a
50-64	82	79	81	77	78	77	79	76	78	78	n/a
State-wide	81▲	79	78	77	78	77	77	77	77	78	77
Regional Centres	80	78	78	77	79	77	77	77	n/a	n/a	n/a
35-49	79	79	75	80	79	79	75	83	79	77	n/a
65+	79	78	76	77	78	80	79	79	81	78	n/a
Warrnambool	78	78	73	78	77	76	77	79	78	77	n/a
18-34	75	76	65	78	75	68	75	78	75	76	n/a
Men	74▼	77	70	74	76	71	74	79	73	73	n/a

Q1. Firstly, how important should 'The condition of local streets and footpaths in your area' be as a responsibility for Council?
Base: All respondents. Councils asked State-wide: 25 Councils asked group: 5
Note: Please see Appendix A for explanation of significant differences.

The condition of local streets and footpaths in your area importance



2022 streets and footpaths importance (%)



Q1. Firstly, how important should 'The condition of local streets and footpaths in your area' be as a responsibility for Council?
Base: All respondents. Councils asked State-wide: 25 Councils asked group: 5

The condition of local streets and footpaths in your area performance



2022 streets and footpaths performance (index scores)

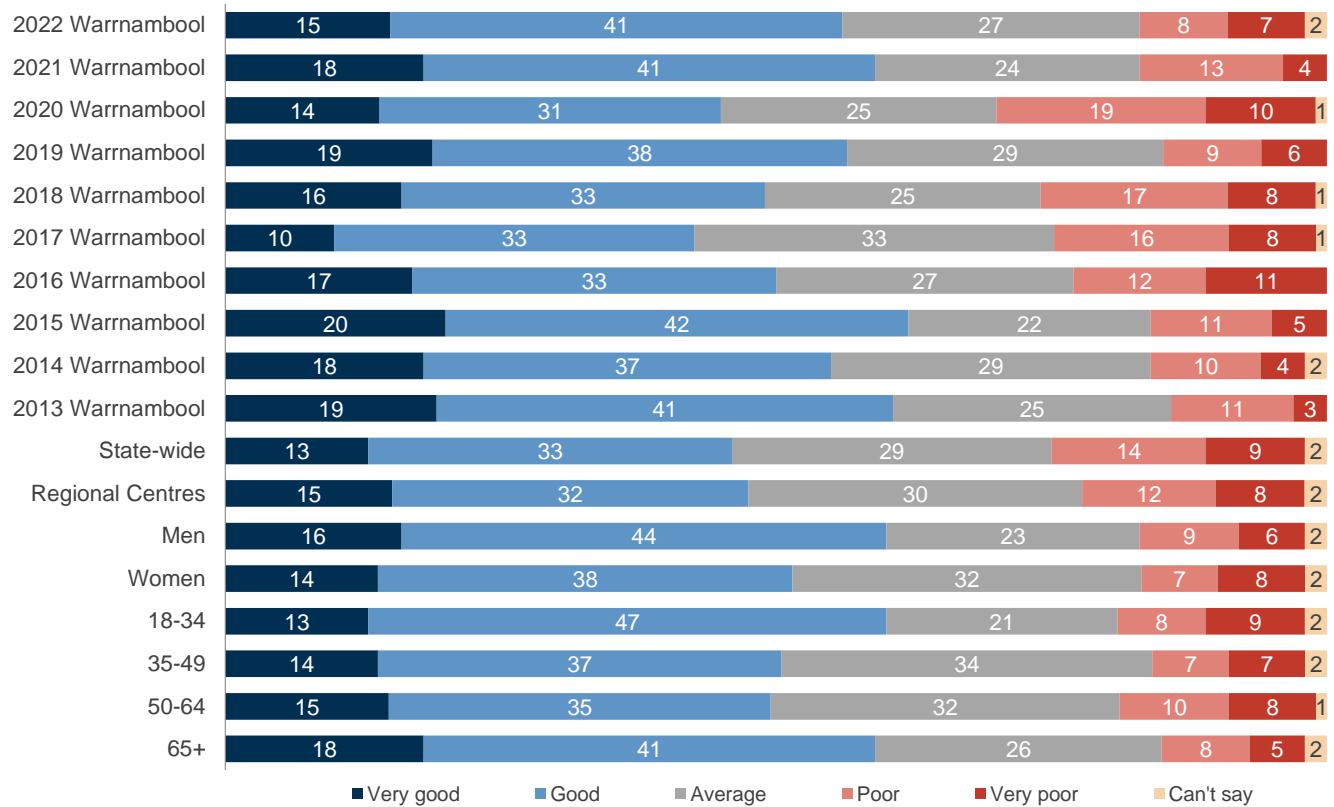
	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	
65+	65	64	57	63	62	56	55	61	65	66	n/a
Men	64	65	59	64	57	60	59	69	65	65	n/a
Warrnambool	62	64	56	64	58	55	58	65	64	65	n/a
18-34	62	66	53	66	57	56	55	70	62	65	n/a
35-49	61	60	55	65	57	58	62	66	63	66	n/a
Women	61	63	52	64	59	52	56	61	62	65	n/a
50-64	60	64	57	62	57	51	60	62	65	63	n/a
Regional Centres	59▼	62	59	61	59	57	58	58	n/a	n/a	n/a
State-wide	57▼	59	58	59	58	57	57	58	58	58	57

Q2. How has Council performed on 'The condition of local streets and footpaths in your area' over the last 12 months?
Base: All respondents. Councils asked State-wide: 33 Councils asked group: 6
Note: Please see Appendix A for explanation of significant differences.

The condition of local streets and footpaths in your area performance



2022 streets and footpaths performance (%)



Q2. How has Council performed on 'The condition of local streets and footpaths in your area' over the last 12 months?
Base: All respondents. Councils asked State-wide: 33 Councils asked group: 6



Traffic management importance



2022 traffic management importance (index scores)

	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	
Women	76▲	74	70	74	75	73	74	75	76	75	n/a
65+	74	79	72	74	75	75	75	76	75	77	n/a
50-64	74	73	74	71	74	74	72	74	76	73	n/a
State-wide	73▲	73	73	73	74	72	72	71	70	72	73
Regional Centres	72	74	72	73	74	71	72	72	n/a	n/a	n/a
Warrnambool	70	73	68	73	74	70	71	73	73	71	n/a
18-34	68	68	63	74	75	62	67	72	72	66	n/a
35-49	64	73	66	71	70	71	70	72	70	69	n/a
Men	64▼	73	66	71	72	66	68	72	70	67	n/a

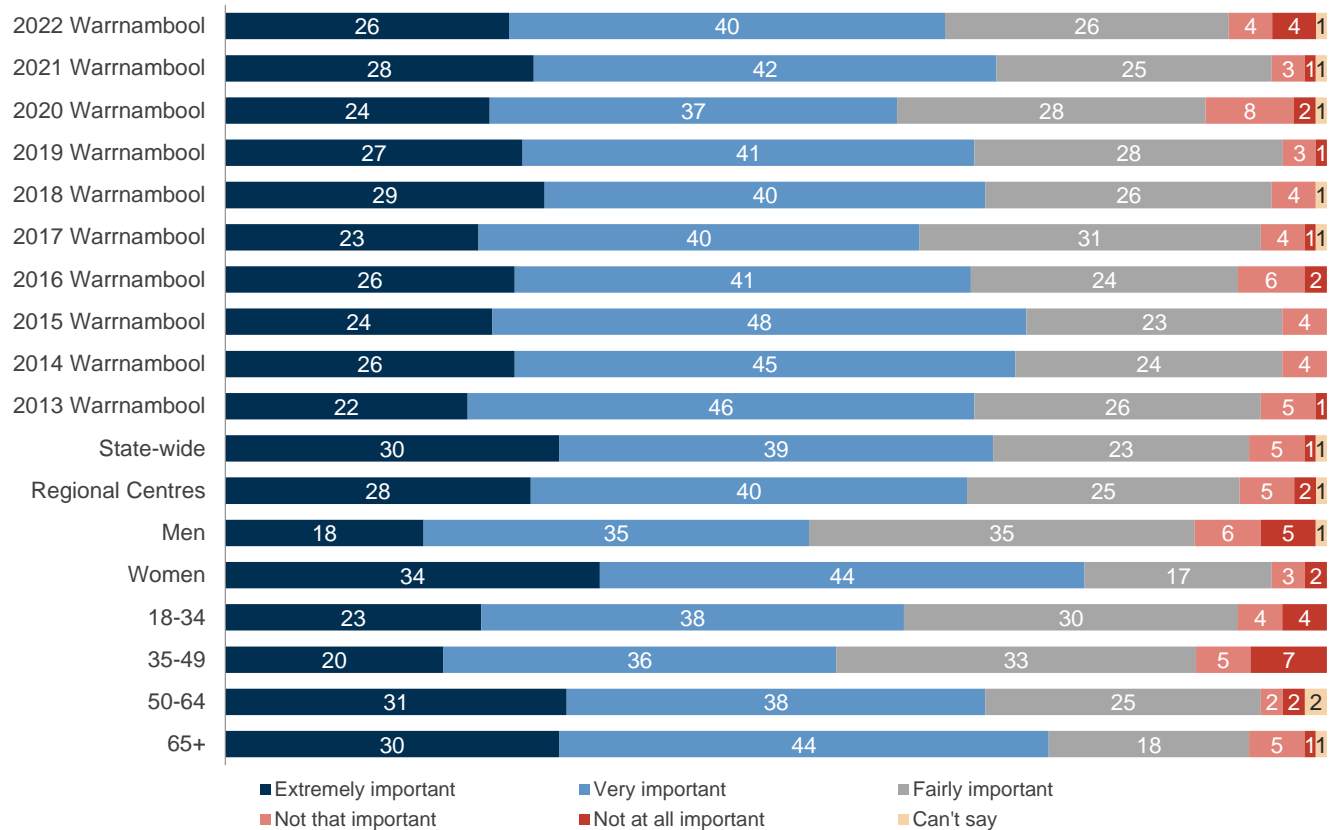
Q1. Firstly, how important should 'Traffic management' be as a responsibility for Council?
Base: All respondents. Councils asked State-wide: 8 Councils asked group: 2
Note: Please see Appendix A for explanation of significant differences.



Traffic management importance



2022 traffic management importance (%)



Q1. Firstly, how important should 'Traffic management' be as a responsibility for Council?
Base: All respondents. Councils asked State-wide: 8 Councils asked group: 2



Traffic management performance



2022 traffic management performance (index scores)

	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	
State-wide	58▲	59	58	57	59	59	60	60	60	58	
Women	57	58	51	61	53	61	58	63	64	66	n/a
Regional Centres	57	60	56	60	56	61	59	62	n/a	n/a	n/a
50-64	57	56	51	50	52	60	57	57	60	55	n/a
35-49	56	59	52	59	51	55	55	63	63	67	n/a
Warrnambool	55	59	50	59	52	61	57	62	62	65	n/a
18-34	55	68	48	64	53	63	55	65	64	68	n/a
65+	53	52	51	59	53	63	61	62	62	66	n/a
Men	52	60	50	56	52	60	56	61	60	65	n/a

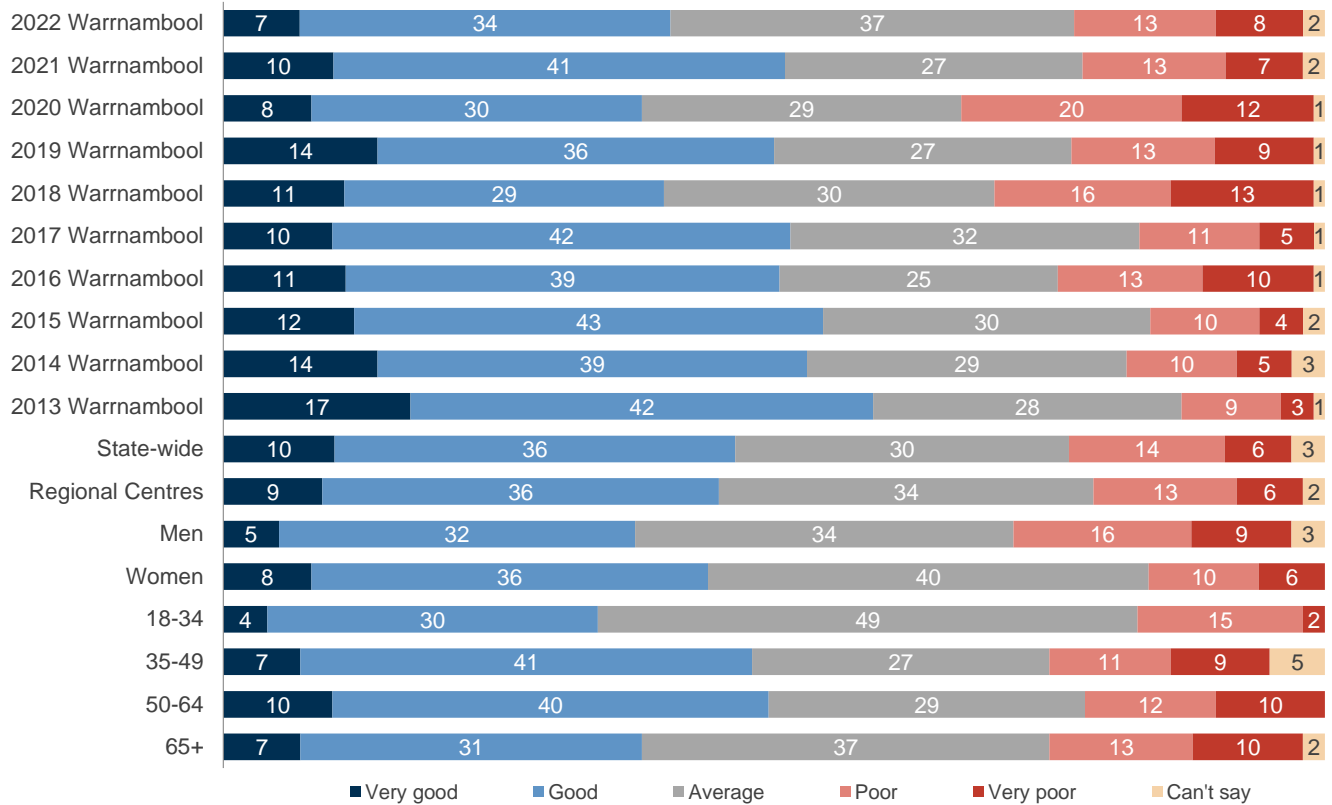
Q2. How has Council performed on 'Traffic management' over the last 12 months?
Base: All respondents. Councils asked State-wide: 13 Councils asked group: 2
Note: Please see Appendix A for explanation of significant differences.



Traffic management performance



2022 traffic management performance (%)



Q2. How has Council performed on 'Traffic management' over the last 12 months?
Base: All respondents. Councils asked State-wide: 13 Councils asked group: 2



Parking facilities importance



2022 parking importance (index scores)

	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	
Women	77▲	76	76	80	80	79	77	78	79	79	n/a
65+	76	76	77	79	81	77	80	78	77	77	n/a
Regional Centres	74	73	75	75	75	72	73	74	n/a	n/a	n/a
50-64	72	76	77	78	76	77	74	74	78	77	n/a
Warrnambool	72	74	75	78	78	74	75	75	76	74	n/a
State-wide	72	72	71	71	71	70	70	70	70	70	71
35-49	70	73	72	76	76	73	72	78	77	69	n/a
18-34	69	71	74	79	81	70	75	71	74	74	n/a
Men	66▼	71	74	76	76	68	73	72	73	69	n/a

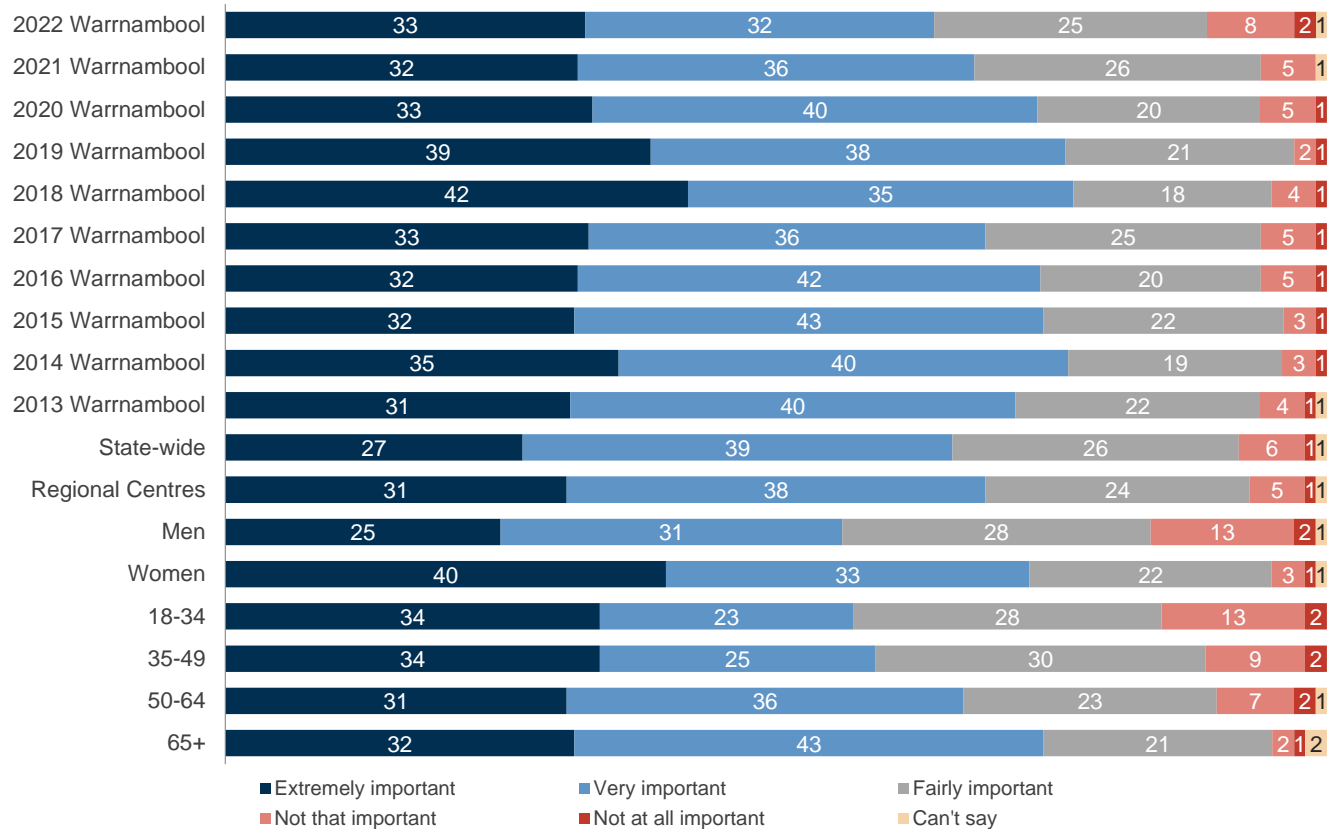
Q1. Firstly, how important should 'Parking facilities' be as a responsibility for Council?
Base: All respondents. Councils asked State-wide: 15 Councils asked group: 5
Note: Please see Appendix A for explanation of significant differences.



Parking facilities importance



2022 parking importance (%)



Q1. Firstly, how important should 'Parking facilities' be as a responsibility for Council?
Base: All respondents. Councils asked State-wide: 15 Councils asked group: 5



Parking facilities performance



2022 parking performance (index scores)

	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	
Men	57	54	41	46	40	51	55	49	50	56	n/a
State-wide	57	58	55	56	56	55	56	57	57	57	56
65+	57	50	40	43	43	50	51	45	48	55	n/a
Regional Centres	56	55	49	50	51	52	54	53	n/a	n/a	n/a
18-34	56	48	34	51	37	45	55	49	50	54	n/a
Warrnambool	56	51	38	45	39	49	54	48	50	55	n/a
50-64	55	52	37	41	41	47	56	47	49	48	n/a
35-49	55	55	42	44	36	54	56	51	54	62	n/a
Women	54	48	36	44	39	47	53	47	51	54	n/a

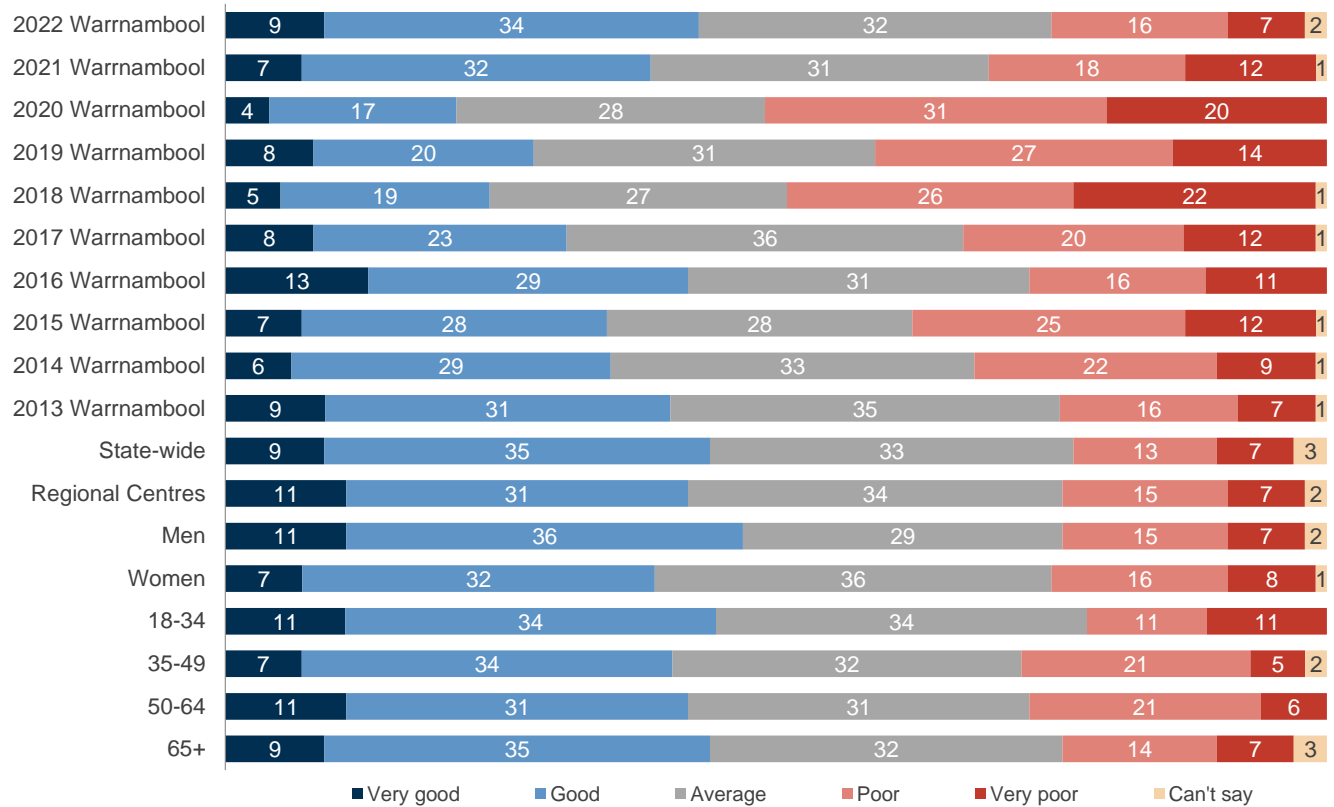
Q2. How has Council performed on 'Parking facilities' over the last 12 months?
Base: All respondents. Councils asked State-wide: 20 Councils asked group: 5
Note: Please see Appendix A for explanation of significant differences.



Parking facilities performance



2022 parking performance (%)



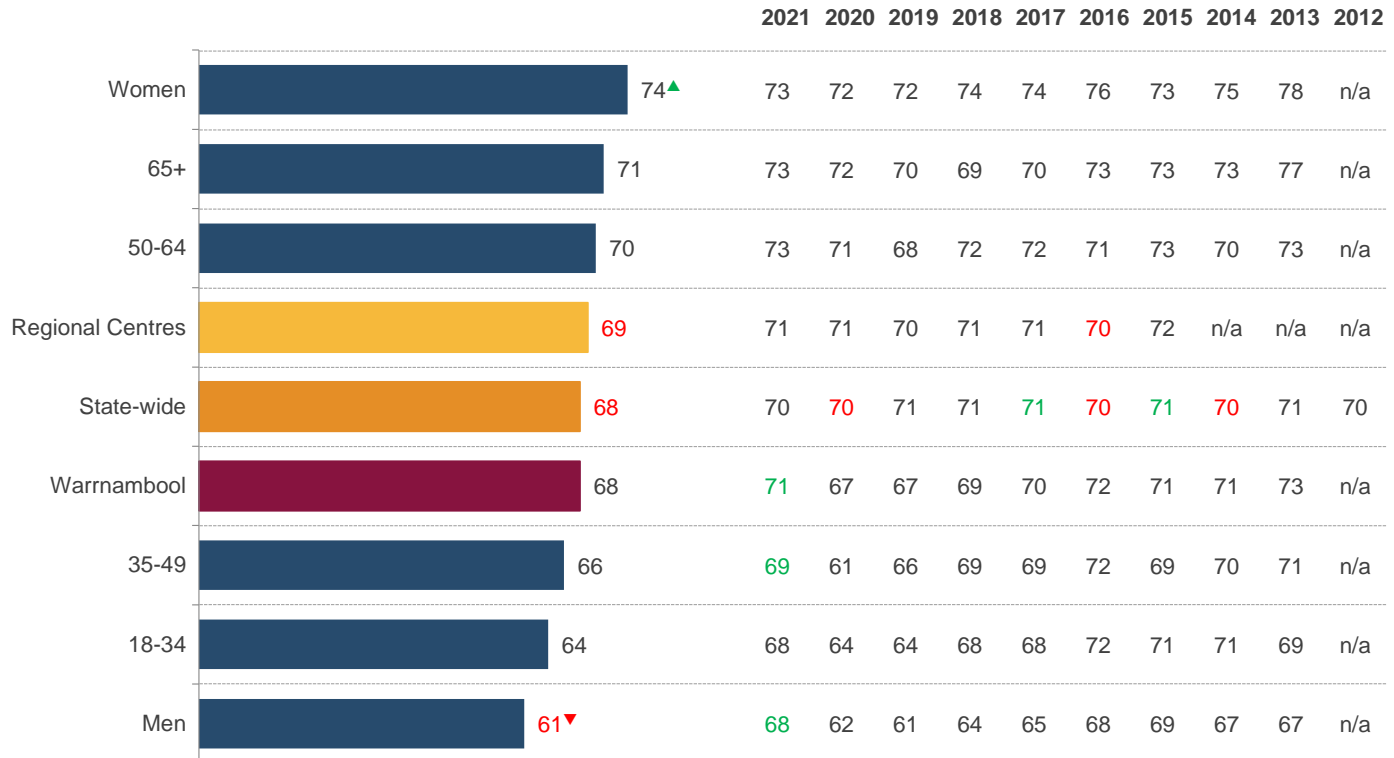
Q2. How has Council performed on 'Parking facilities' over the last 12 months?
Base: All respondents. Councils asked State-wide: 20 Councils asked group: 5



Enforcement of local laws importance



2022 law enforcement importance (index scores)



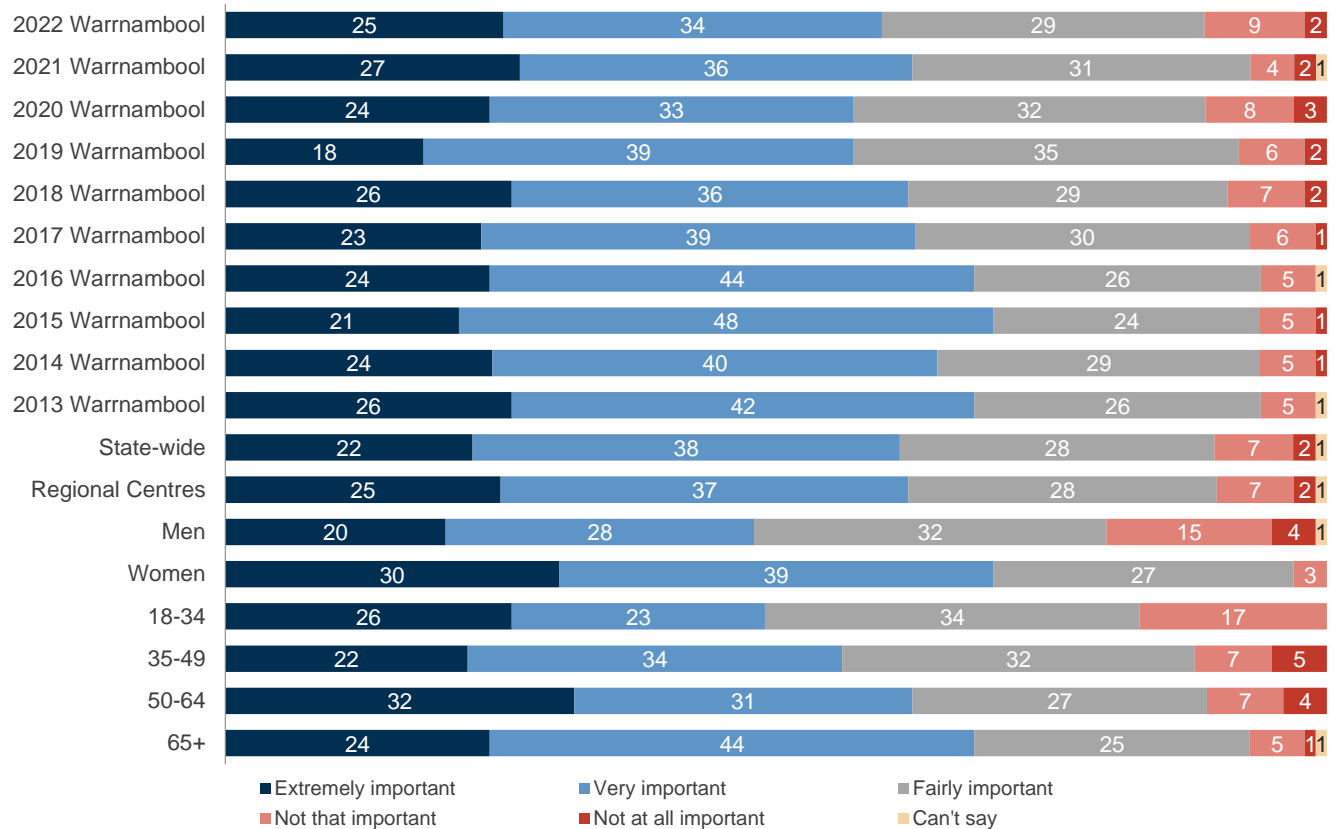
Q1. Firstly, how important should 'Enforcement of local laws' be as a responsibility for Council?
Base: All respondents. Councils asked State-wide: 24 Councils asked group: 4
Note: Please see Appendix A for explanation of significant differences.



Enforcement of local laws importance



2022 law enforcement importance (%)



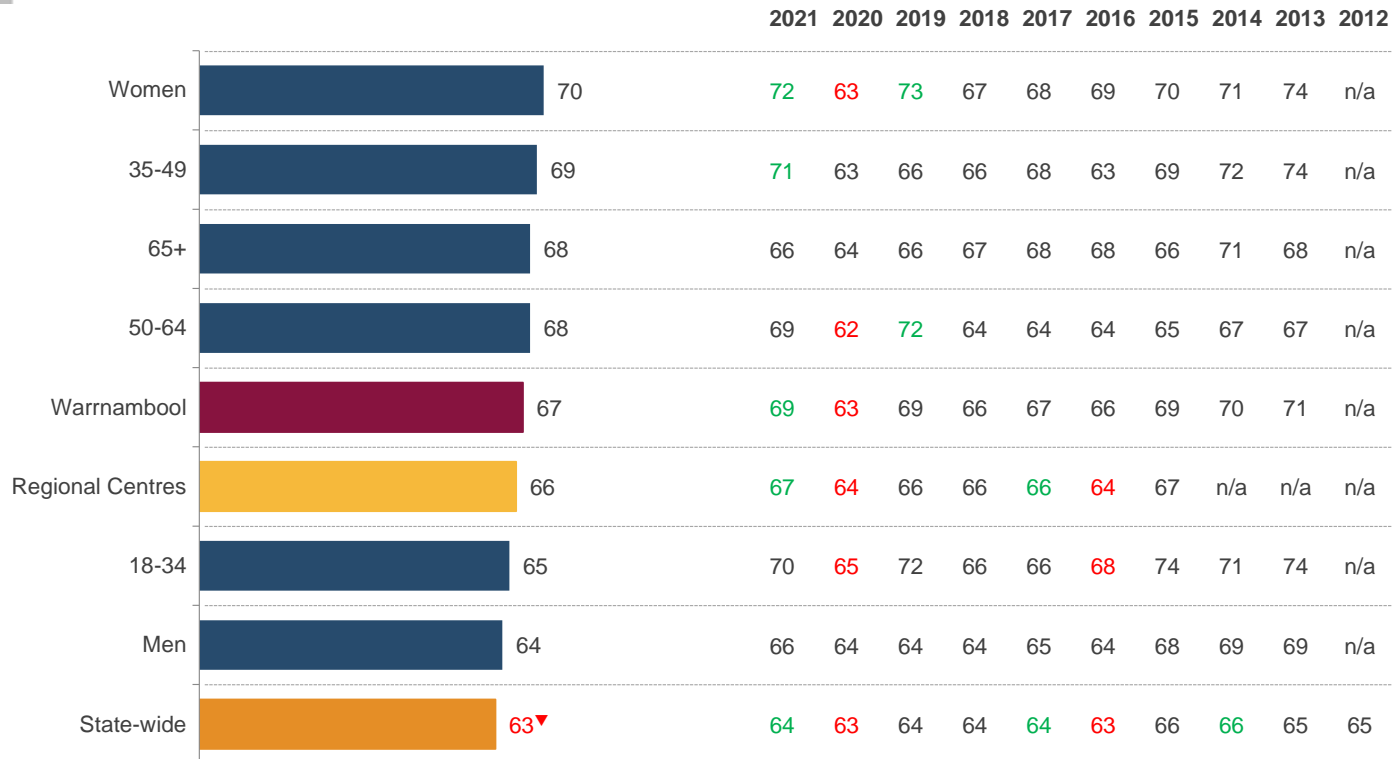
Q1. Firstly, how important should 'Enforcement of local laws' be as a responsibility for Council?
Base: All respondents. Councils asked State-wide: 24 Councils asked group: 4



Enforcement of local laws performance



2022 law enforcement performance (index scores)



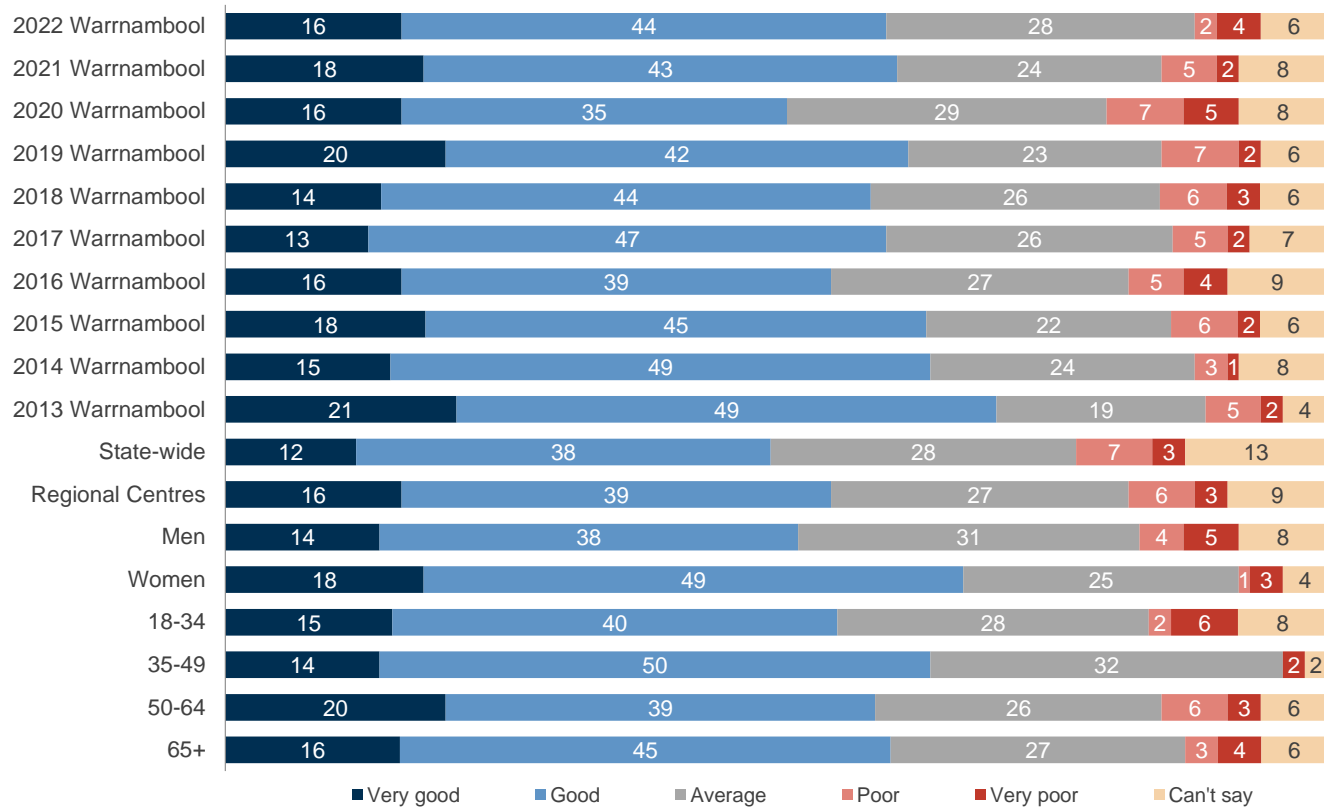
Q2. How has Council performed on 'Enforcement of local laws' over the last 12 months?
Base: All respondents. Councils asked State-wide: 32 Councils asked group: 4
Note: Please see Appendix A for explanation of significant differences.



Enforcement of local laws performance



2022 law enforcement performance (%)



Q2. How has Council performed on 'Enforcement of local laws' over the last 12 months?
Base: All respondents. Councils asked State-wide: 32 Councils asked group: 4



Family support services importance



2022 family support importance (index scores)

	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	
18-34	81▲	84	79	77	78	76	76	85	76	69	n/a
Women	81▲	81	80	79	80	80	77	79	80	78	n/a
35-49	78	78	72	76	73	76	73	76	77	78	n/a
50-64	77	76	78	70	76	77	70	73	74	74	n/a
Warrnambool	76	78	75	74	75	76	73	78	75	74	n/a
State-wide	76	76	75	74	74	73	73	73	72	73	73
Regional Centres	76	78	76	75	75	76	73	75	n/a	n/a	n/a
Men	71▼	75	70	69	69	72	68	76	70	69	n/a
65+	71▼	74	72	73	74	76	70	74	73	75	n/a

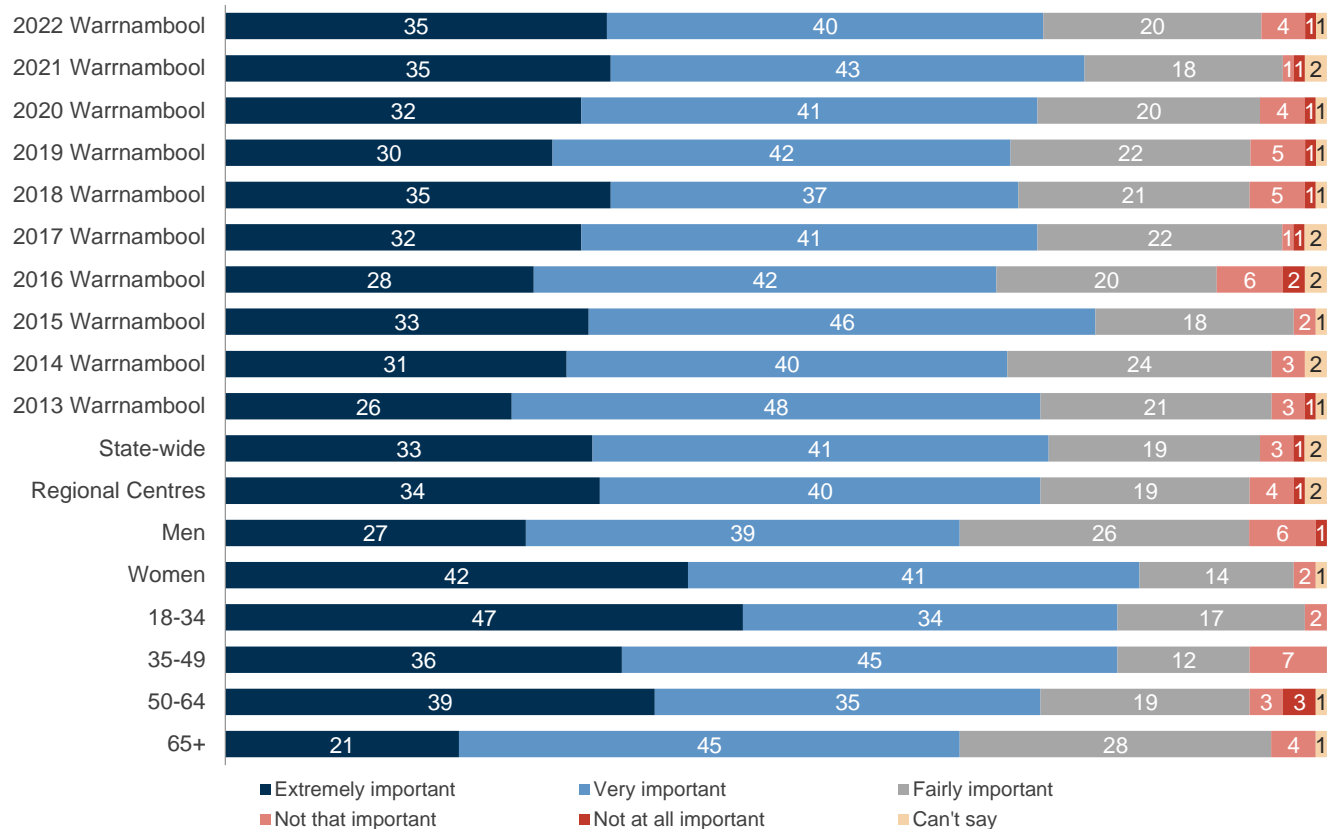
Q1. Firstly, how important should 'Family support services' be as a responsibility for Council?
Base: All respondents. Councils asked State-wide: 18 Councils asked group: 4
Note: Please see Appendix A for explanation of significant differences.



Family support services importance



2022 family support importance (%)



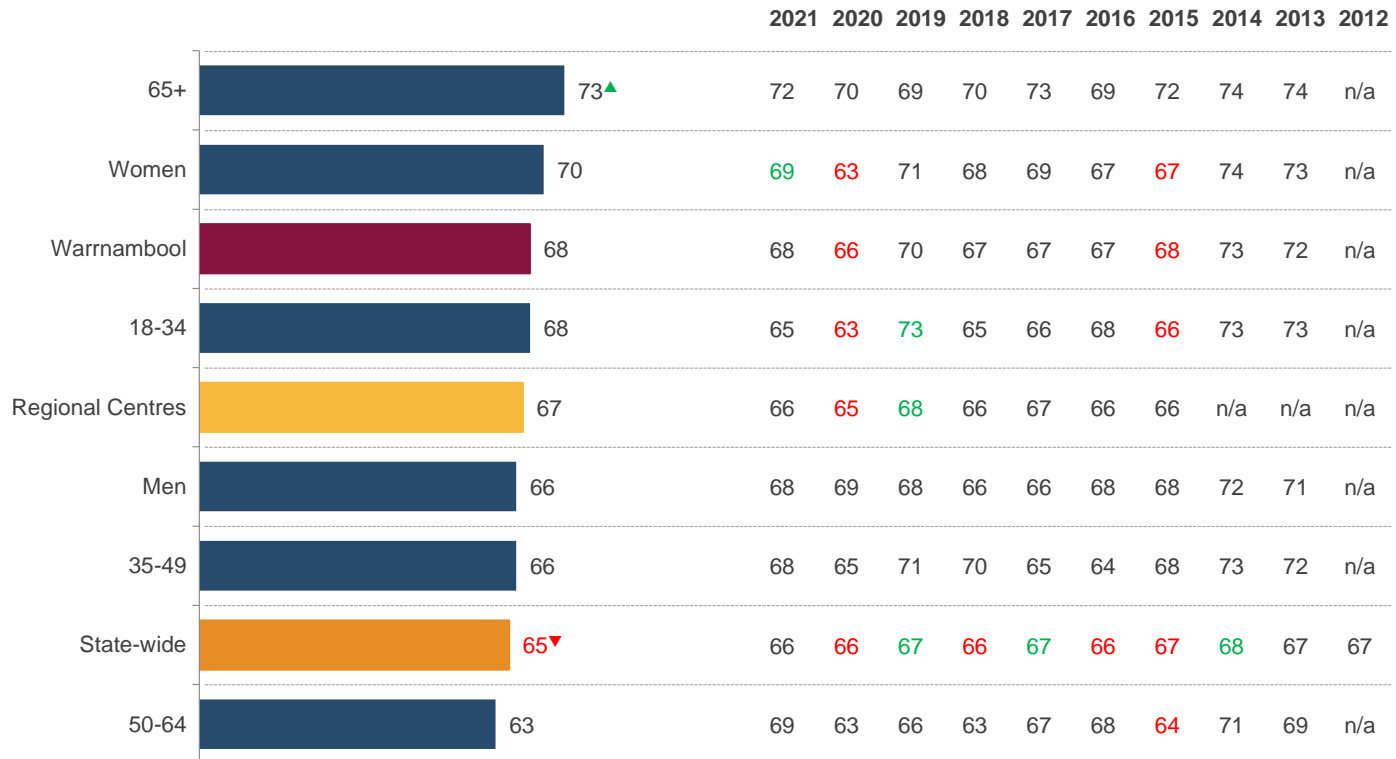
Q1. Firstly, how important should 'Family support services' be as a responsibility for Council?
Base: All respondents. Councils asked State-wide: 18 Councils asked group: 4



Family support services performance



2022 family support performance (index scores)



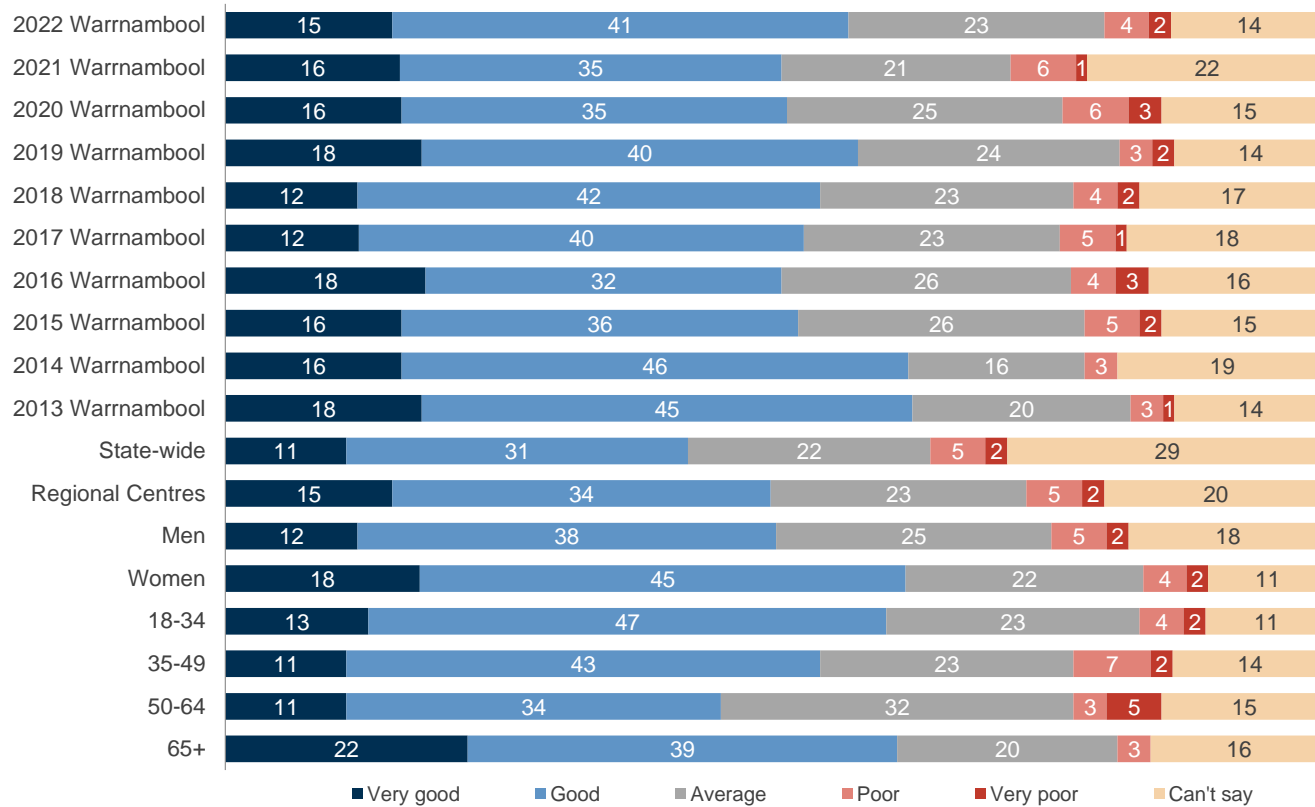
Q2. How has Council performed on 'Family support services' over the last 12 months?
Base: All respondents. Councils asked State-wide: 29 Councils asked group: 5
Note: Please see Appendix A for explanation of significant differences.



Family support services performance



2022 family support performance (%)



Q2. How has Council performed on 'Family support services' over the last 12 months?
Base: All respondents. Councils asked State-wide: 29 Councils asked group: 5



Elderly support services importance



2022 elderly support importance (index scores)

	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	
Women	85▲	86	85	86	86	82	81	82	82	83	n/a
50-64	84	86	85	80	83	81	76	77	83	81	n/a
35-49	83	81	77	81	76	82	77	82	78	82	n/a
Regional Centres	83	82	80	81	80	80	78	80	n/a	n/a	n/a
State-wide	82	82	80	80	79	78	78	79	79	79	80
Warrnambool	81	82	79	81	79	79	76	80	79	80	n/a
18-34	81	81	77	81	79	74	75	81	76	77	n/a
65+	80	80	78	83	81	81	78	79	81	81	n/a
Men	78	77	73	76	73	76	71	78	76	77	n/a

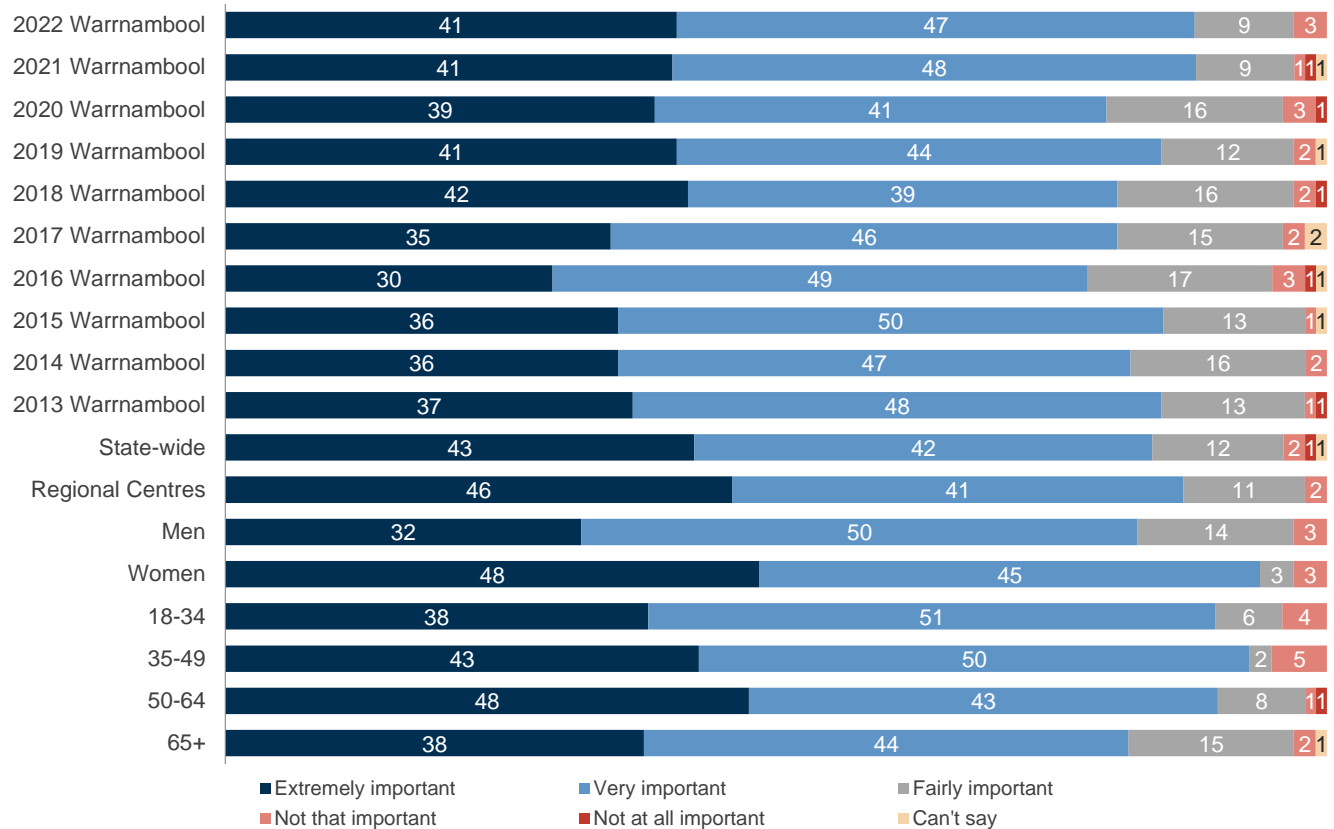
Q1. Firstly, how important should 'Elderly support services' be as a responsibility for Council?
Base: All respondents. Councils asked State-wide: 20 Councils asked group: 3
Note: Please see Appendix A for explanation of significant differences.



Elderly support services importance



2022 elderly support importance (%)



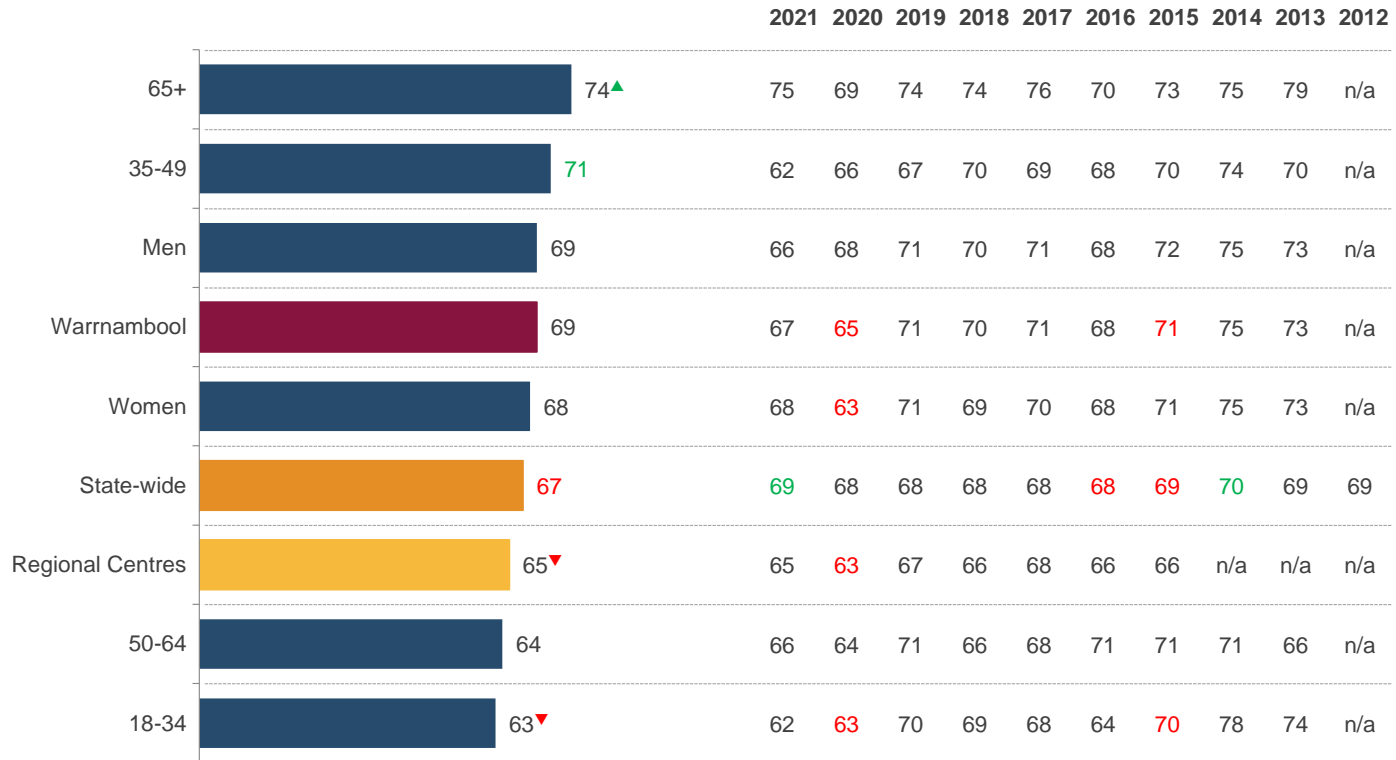
Q1. Firstly, how important should 'Elderly support services' be as a responsibility for Council?
Base: All respondents. Councils asked State-wide: 20 Councils asked group: 3



Elderly support services performance



2022 elderly support performance (index scores)



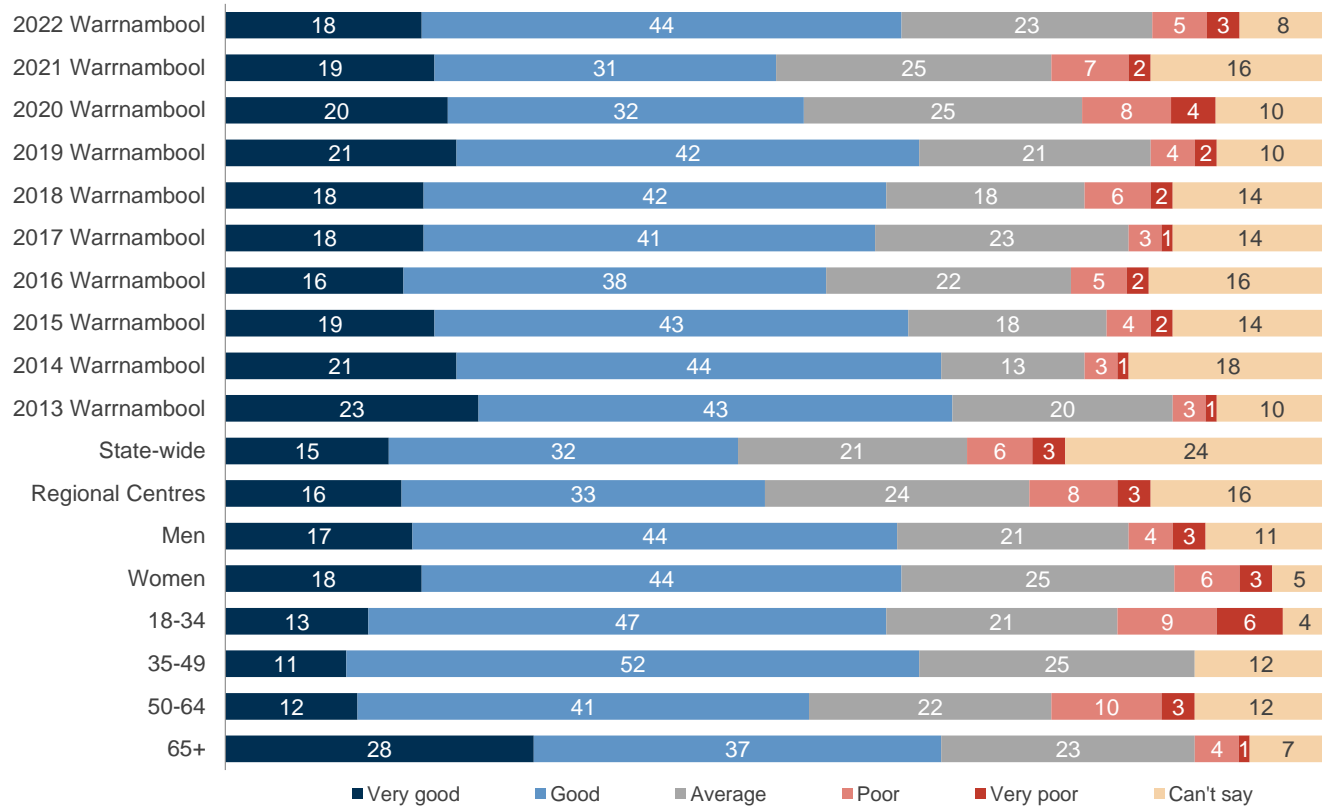
Q2. How has Council performed on 'Elderly support services' over the last 12 months?
Base: All respondents. Councils asked State-wide: 32 Councils asked group: 4
Note: Please see Appendix A for explanation of significant differences.



Elderly support services performance



2022 elderly support performance (%)



Q2. How has Council performed on 'Elderly support services' over the last 12 months?
Base: All respondents. Councils asked State-wide: 32 Councils asked group: 4



Disadvantaged support services performance



2022 disadvantaged support performance (index scores)

	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
65+	67	63	64	65	65	62	65	68	68	n/a
Men	65	65	67	65	65	63	64	68	67	n/a
35-49	64	60	64	64	63	64	66	68	68	n/a
Warrnambool	63	61	66	63	63	61	63	68	68	n/a
Regional Centres	62	59	63	61	63	59	61	n/a	n/a	n/a
State-wide	62	60	62	61	61	61	62	64	62	63
Women	62	58	66	62	61	60	62	67	68	n/a
18-34	61	61	70	64	64	59	62	71	70	n/a
50-64	60	58	66	60	59	59	61	62	63	n/a

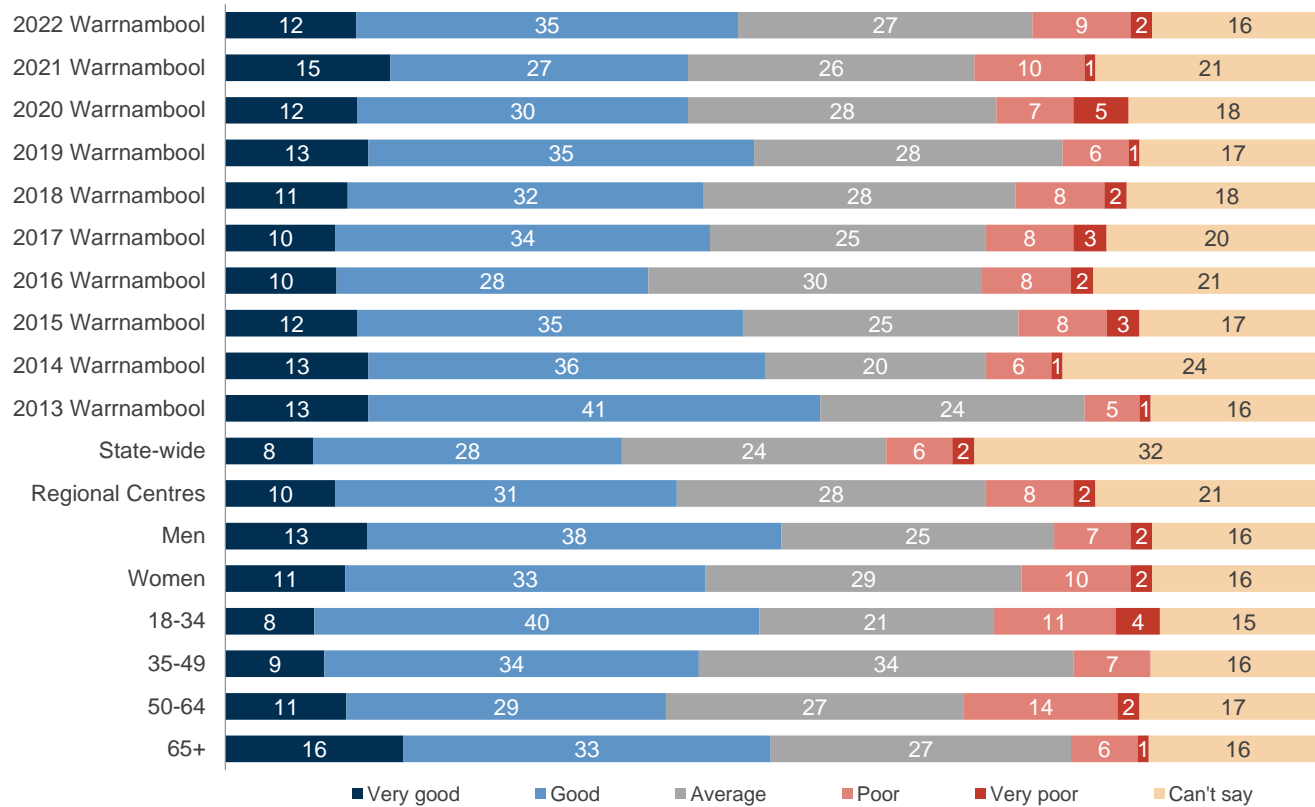
Q2. How has Council performed on 'Disadvantaged support services' over the last 12 months?
Base: All respondents. Councils asked State-wide: 13 Councils asked group: 2
Note: Please see Appendix A for explanation of significant differences.



Disadvantaged support services performance



2022 disadvantaged support performance (%)



Q2. How has Council performed on 'Disadvantaged support services' over the last 12 months?
Base: All respondents. Councils asked State-wide: 13 Councils asked group: 2



Recreational facilities importance



2022 recreational facilities importance (index scores)

	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	
35-49	79	77	72	71	70	75	76	79	76	75	n/a
Women	77	75	72	74	76	75	78	73	76	72	n/a
50-64	76	73	77	75	75	75	75	72	76	74	n/a
Regional Centres	75	74	72	72	74	73	73	72	n/a	n/a	n/a
Warrnambool	75	74	71	73	74	74	75	75	74	73	n/a
State-wide	74	74	72	72	73	72	73	72	72	72	72
65+	73	75	72	70	73	73	70	73	72	72	n/a
18-34	72	72	67	76	77	72	79	74	73	70	n/a
Men	72	73	71	72	71	72	72	76	73	73	n/a

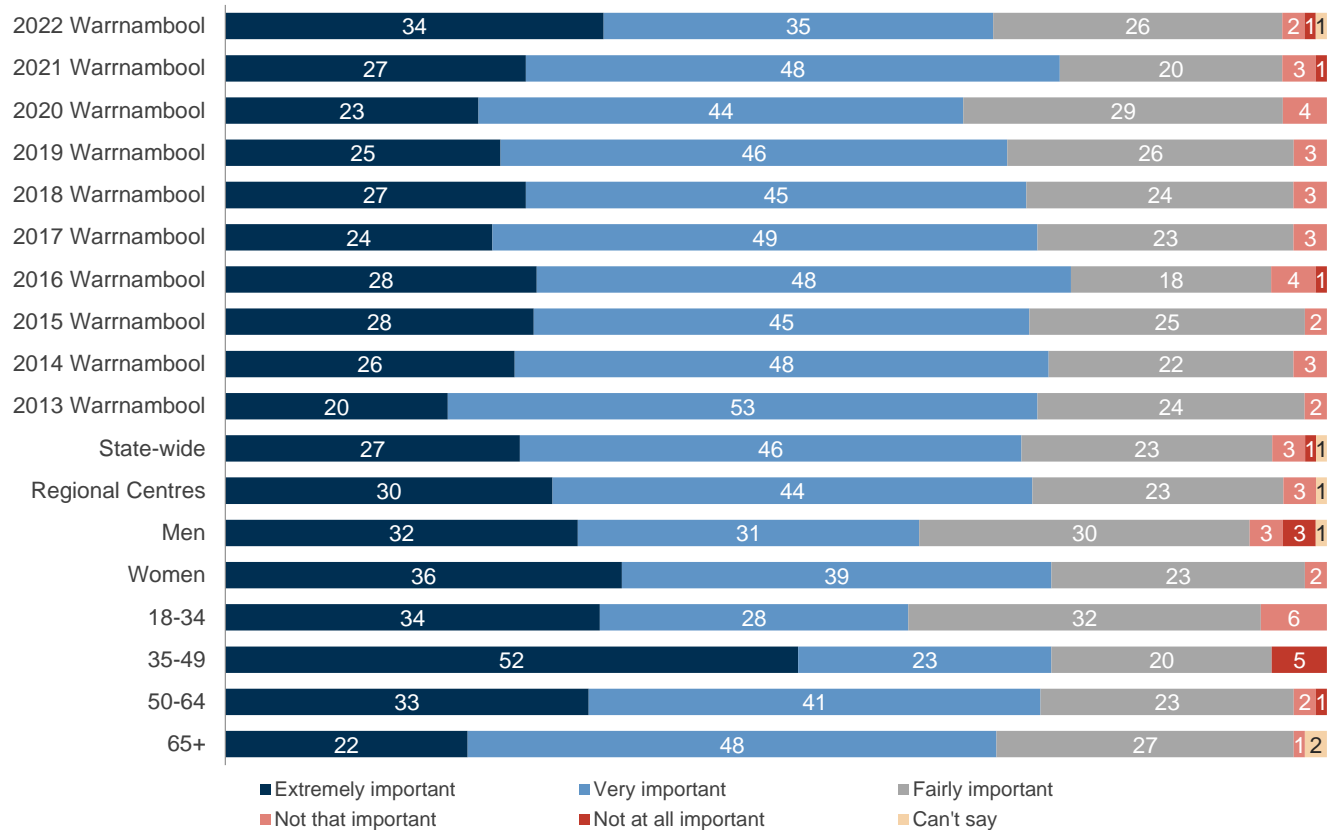
Q1. Firstly, how important should 'Recreational facilities' be as a responsibility for Council?
Base: All respondents. Councils asked State-wide: 33 Councils asked group: 5
Note: Please see Appendix A for explanation of significant differences.



Recreational facilities importance



2022 recreational facilities importance (%)



Q1. Firstly, how important should 'Recreational facilities' be as a responsibility for Council?
Base: All respondents. Councils asked State-wide: 33 Councils asked group: 5



Recreational facilities performance



2022 recreational facilities performance (index scores)

	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	
65+	77▲	76	68	71	72	75	74	76	78	78	n/a
35-49	73	64	66	70	69	71	72	72	72	73	n/a
Women	73	69	66	74	71	71	72	73	76	75	n/a
Regional Centres	72	74	70	71	70	69	70	69	n/a	n/a	n/a
Warrnambool	71	71	65	70	69	71	72	72	74	75	n/a
State-wide	69	71	70	70	69	70	69	70	71	70	70
50-64	69	70	62	69	64	71	73	71	70	76	n/a
Men	69	73	63	66	67	72	72	72	72	74	n/a
18-34	64▼	72	63	71	70	68	68	71	75	73	n/a

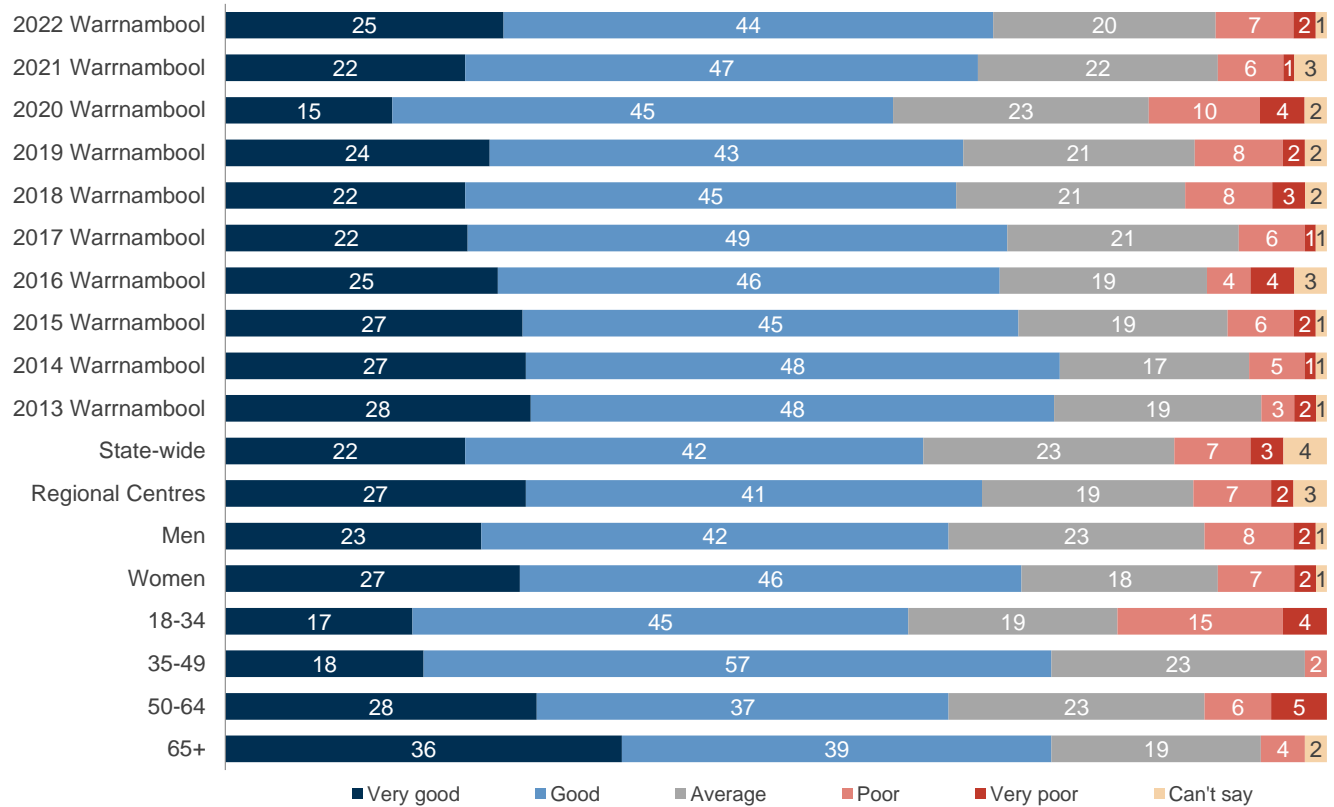
Q2. How has Council performed on 'Recreational facilities' over the last 12 months?
Base: All respondents. Councils asked State-wide: 43 Councils asked group: 6
Note: Please see Appendix A for explanation of significant differences.



Recreational facilities performance



2022 recreational facilities performance (%)



Q2. How has Council performed on 'Recreational facilities' over the last 12 months?
Base: All respondents. Councils asked State-wide: 43 Councils asked group: 6



The appearance of public areas importance



2022 public areas importance (index scores)

	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	
Women	79▲	76	73	76	79	75	78	75	79	76	n/a
50-64	77	78	80	76	75	74	76	74	78	75	n/a
18-34	76	77	64	74	76	65	80	72	74	70	n/a
65+	76	74	73	74	75	77	75	76	78	75	n/a
Warrnambool	76	76	71	74	76	73	77	76	77	74	n/a
Regional Centres	75	74	74	73	74	74	74	74	n/a	n/a	n/a
State-wide	75	75	74	73	74	74	74	73	73	74	73
35-49	74	76	71	73	78	76	77	80	80	77	n/a
Men	72▼	76	69	72	73	71	76	77	76	72	n/a

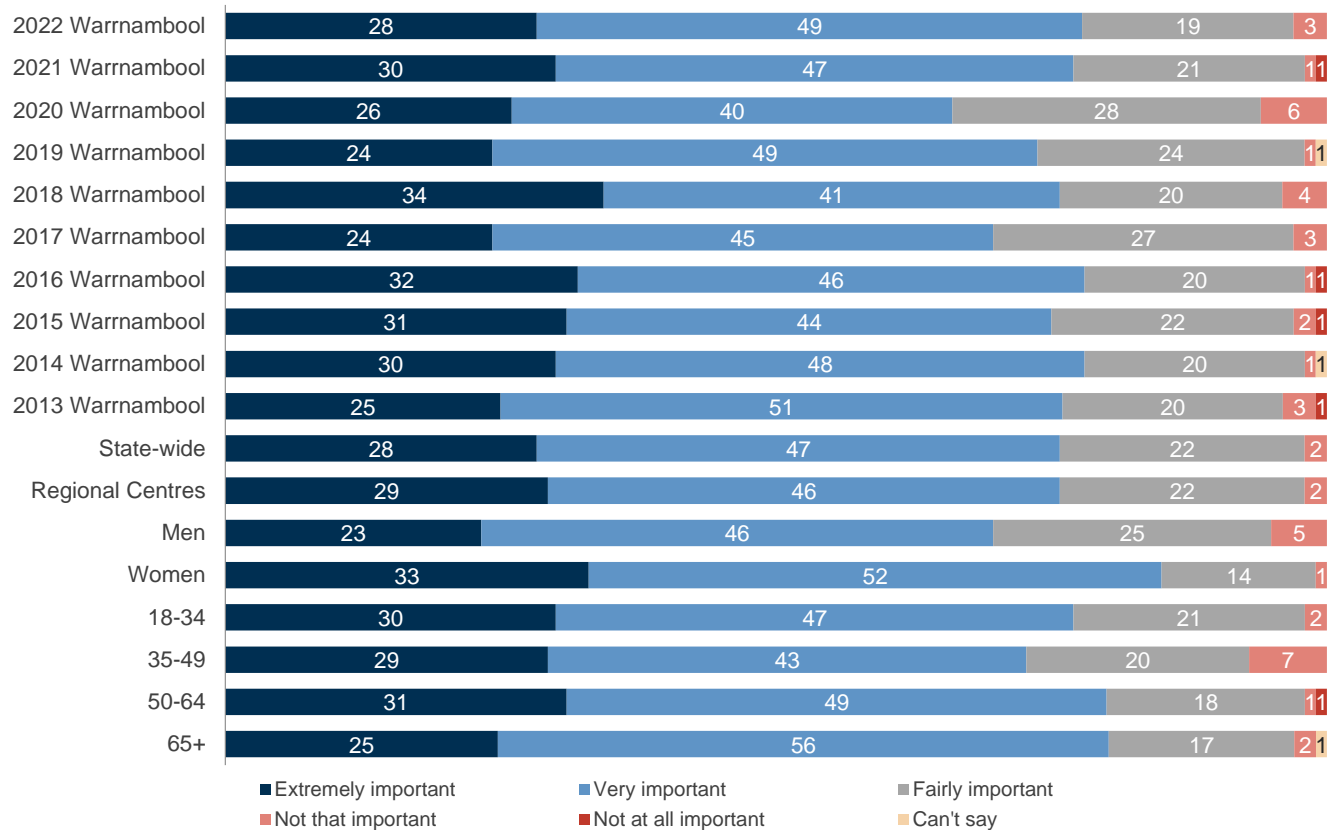
Q1. Firstly, how important should 'The appearance of public areas' be as a responsibility for Council?
Base: All respondents. Councils asked State-wide: 32 Councils asked group: 5
Note: Please see Appendix A for explanation of significant differences.



The appearance of public areas importance



2022 public areas importance (%)



Q1. Firstly, how important should 'The appearance of public areas' be as a responsibility for Council?
Base: All respondents. Councils asked State-wide: 32 Councils asked group: 5



The appearance of public areas performance



2022 public areas performance (index scores)

	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	
65+	79	78	75	80	77	78	78	78	79	83	n/a
35-49	78	73	74	76	76	76	81	79	77	82	n/a
Women	77	74	72	80	75	74	75	77	78	82	n/a
Warrnambool	76	76	71	79	74	74	76	77	77	82	n/a
50-64	76	76	72	77	73	74	76	75	78	80	n/a
Men	75	77	69	77	73	73	78	77	76	81	n/a
Regional Centres	73	75	72	74	73	73	73	72	n/a	n/a	n/a
18-34	71	75	63	81	70	68	72	78	76	81	n/a
State-wide	71	73	72	72	71	71	71	72	72	71	71

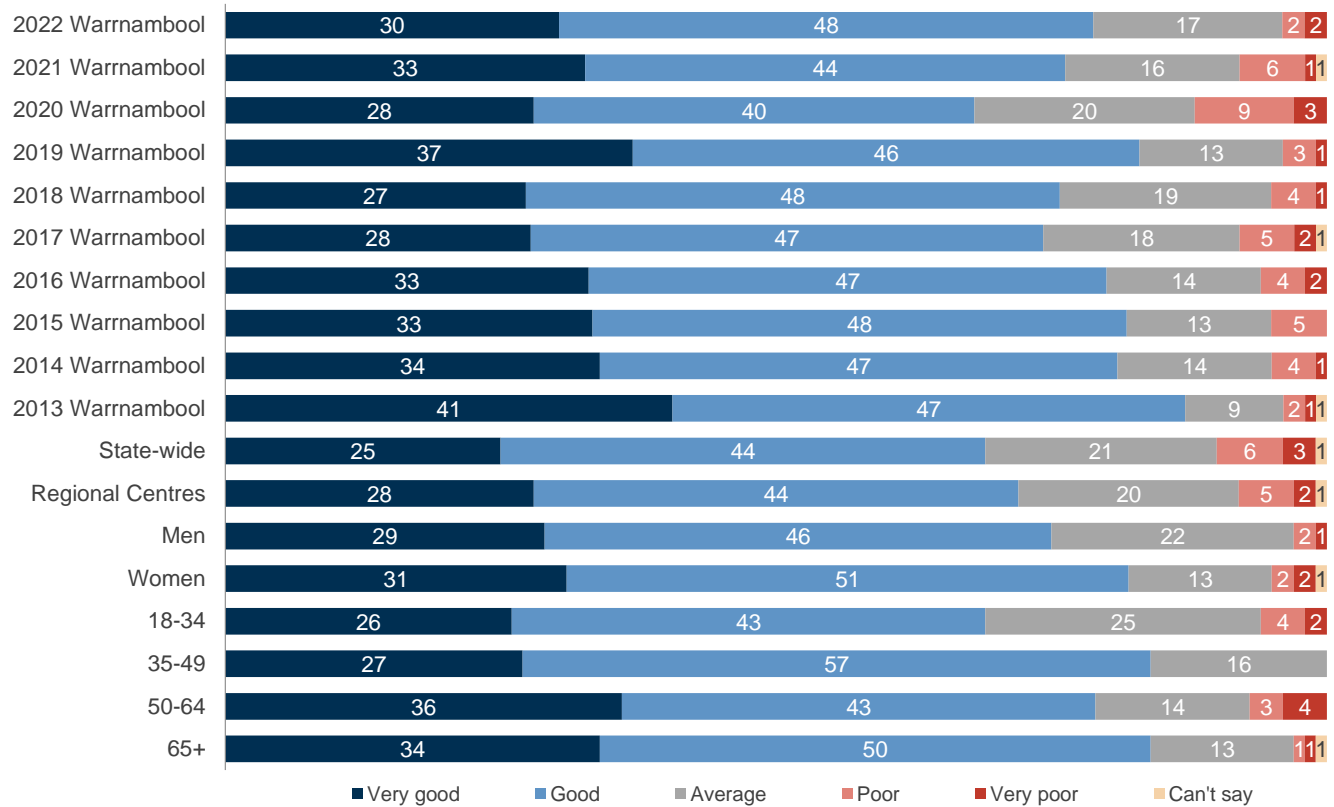
Q2. How has Council performed on 'The appearance of public areas' over the last 12 months?
Base: All respondents. Councils asked State-wide: 43 Councils asked group: 5
Note: Please see Appendix A for explanation of significant differences.



The appearance of public areas performance



2022 public areas performance (%)



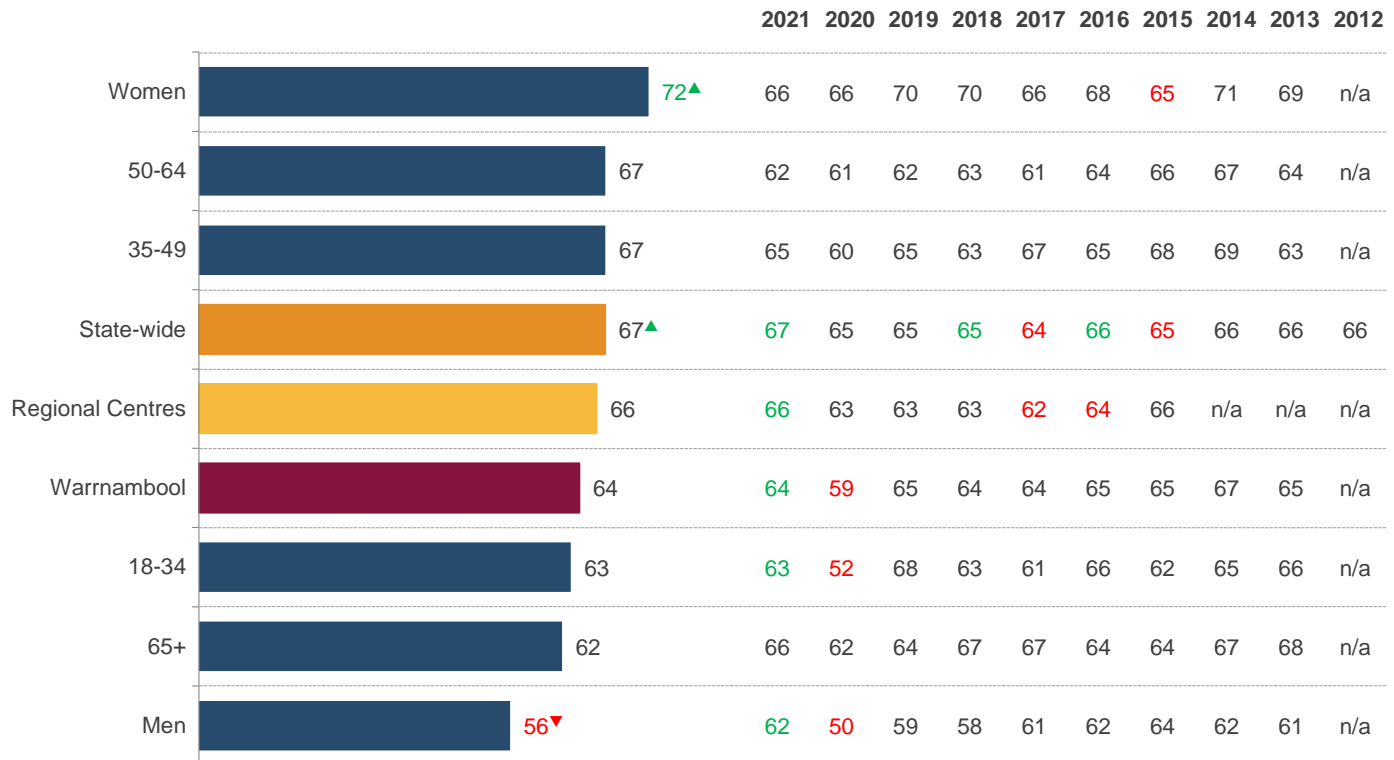
Q2. How has Council performed on 'The appearance of public areas' over the last 12 months?
Base: All respondents. Councils asked State-wide: 43 Councils asked group: 5



Art centres and libraries importance



2022 art centres and libraries importance (index scores)



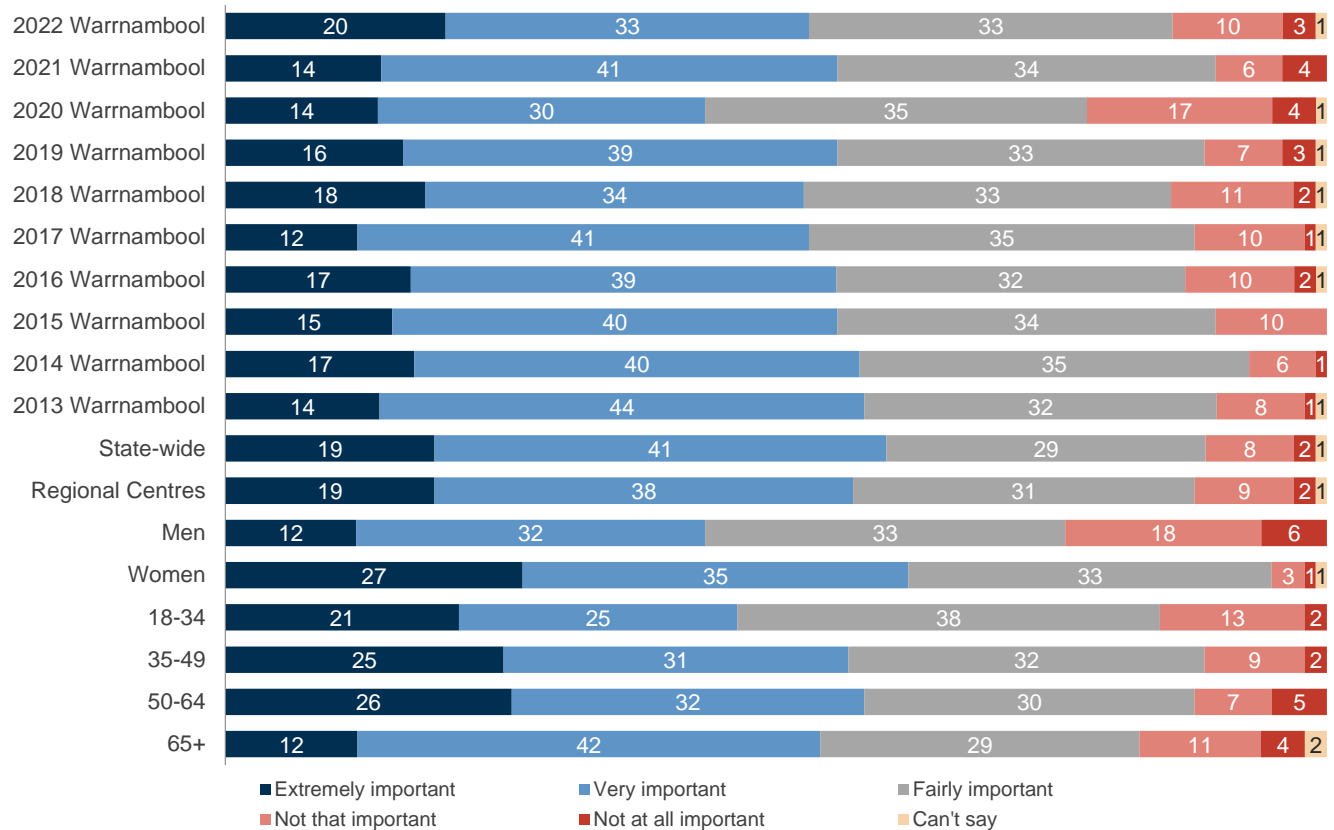
Q1. Firstly, how important should 'Art centres and libraries' be as a responsibility for Council?
Base: All respondents. Councils asked State-wide: 23 Councils asked group: 5
Note: Please see Appendix A for explanation of significant differences.



Art centres and libraries importance



2022 art centres and libraries importance (%)



Q1. Firstly, how important should 'Art centres and libraries' be as a responsibility for Council?
Base: All respondents. Councils asked State-wide: 23 Councils asked group: 5



Art centres and libraries performance



2022 art centres and libraries performance (index scores)

	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	
Regional Centres	76▲	75	74	74	76	75	75	75	n/a	n/a	n/a
Women	73	71	69	75	73	73	74	78	78	80	n/a
65+	73	73	71	72	72	75	75	77	78	79	n/a
State-wide	73▲	73	74	74	74	73	72	73	75	73	73
Warrnambool	70	68	69	73	72	72	74	76	77	78	n/a
35-49	69	66	66	72	75	76	77	76	81	80	n/a
50-64	69	69	67	70	72	69	74	74	75	77	n/a
18-34	67	65	69	77	70	68	73	77	74	78	n/a
Men	66▼	65	69	71	71	71	75	74	77	77	n/a

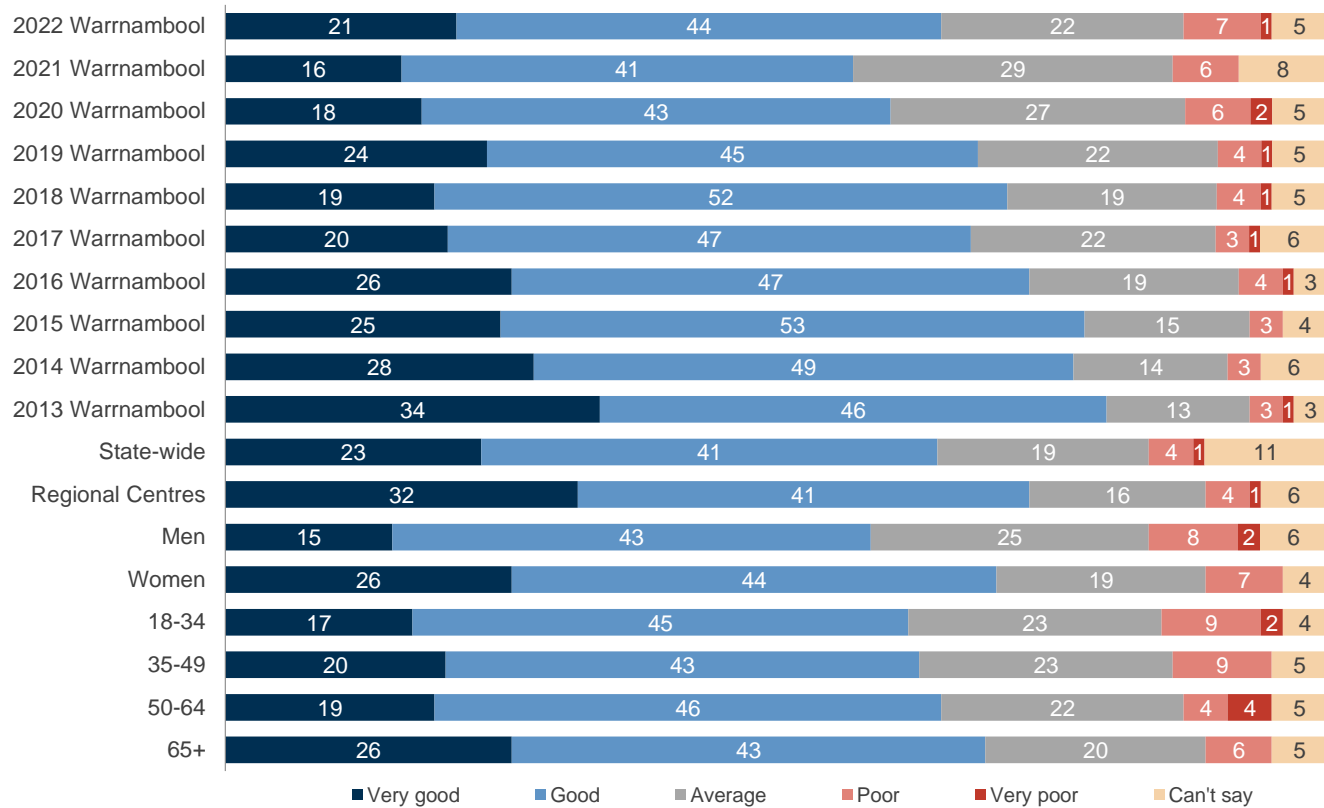
Q2. How has Council performed on 'Art centres and libraries' over the last 12 months?
Base: All respondents. Councils asked State-wide: 28 Councils asked group: 5
Note: Please see Appendix A for explanation of significant differences.



Art centres and libraries performance



2022 art centres and libraries performance (%)



Q2. How has Council performed on 'Art centres and libraries' over the last 12 months?
Base: All respondents. Councils asked State-wide: 28 Councils asked group: 5



Community and cultural activities importance



2022 community and cultural activities importance (index scores)

	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	
Women	70▲	71	67	67	69	66	68	65	68	65	n/a
18-34	69▲	72	57	68	66	59	67	66	64	64	n/a
50-64	66	66	64	61	64	63	60	61	66	59	n/a
Regional Centres	65	65	63	62	62	62	62	63	n/a	n/a	n/a
State-wide	64	64	62	61	61	61	62	62	62	62	62
Warrnambool	64	68	60	64	63	63	64	65	65	62	n/a
65+	62	64	60	61	63	65	61	62	63	63	n/a
35-49	59	68	62	66	59	65	66	70	65	61	n/a
Men	58▼	64	53	61	56	60	59	65	61	58	n/a

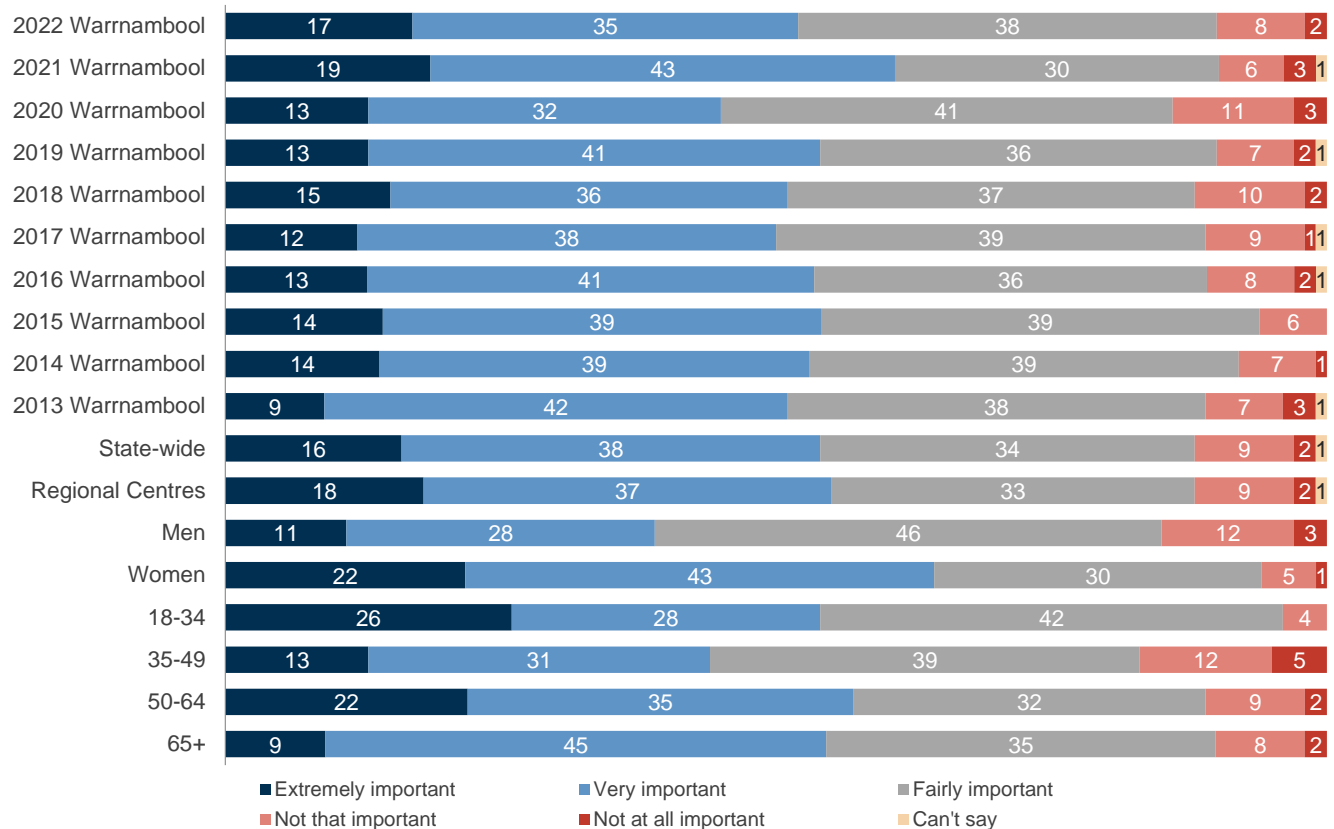
Q1. Firstly, how important should 'Community and cultural activities' be as a responsibility for Council?
Base: All respondents. Councils asked State-wide: 22 Councils asked group: 5
Note: Please see Appendix A for explanation of significant differences.



Community and cultural activities importance



2022 community and cultural activities importance (%)



Q1. Firstly, how important should 'Community and cultural activities' be as a responsibility for Council?
Base: All respondents. Councils asked State-wide: 22 Councils asked group: 5



Community and cultural activities performance



2022 community and cultural activities performance (index scores)

	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	
Women	69	64	64	72	69	69	71	71	77	76	n/a
65+	69	66	67	69	65	71	70	70	74	76	n/a
18-34	66	61	66	73	68	63	70	69	79	75	n/a
Warrnambool	66	64	65	70	66	68	71	70	76	75	n/a
Regional Centres	65	65	69	69	68	69	69	69	n/a	n/a	n/a
State-wide	65	65	68	69	69	69	69	69	70	69	68
35-49	65	63	66	68	66	72	75	74	76	76	n/a
Men	63	63	66	67	63	67	70	69	74	74	n/a
50-64	63	65	60	70	65	66	67	67	73	72	n/a

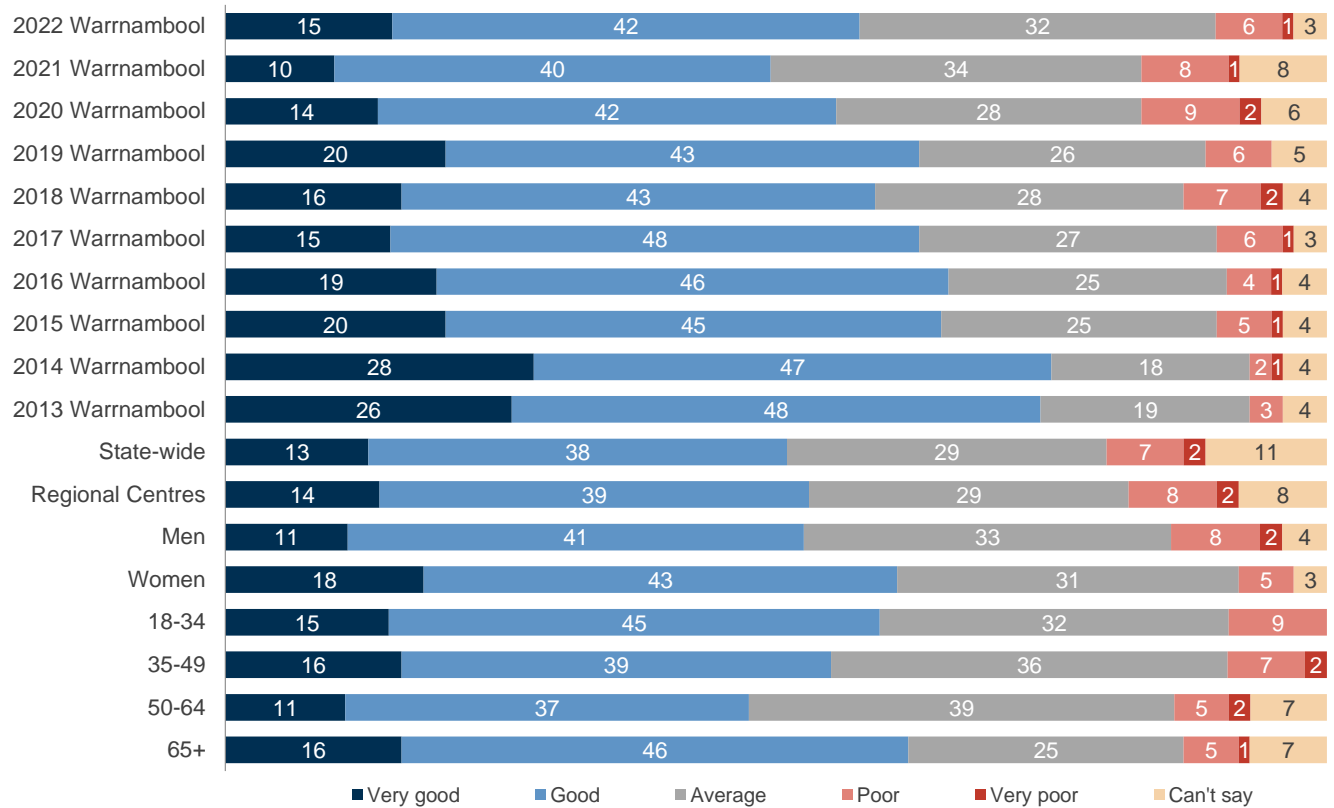
Q2. How has Council performed on 'Community and cultural activities' over the last 12 months?
Base: All respondents. Councils asked State-wide: 30 Councils asked group: 6
Note: Please see Appendix A for explanation of significant differences.



Community and cultural activities performance



2022 community and cultural activities performance (%)



Q2. How has Council performed on 'Community and cultural activities' over the last 12 months?
Base: All respondents. Councils asked State-wide: 30 Councils asked group: 6



Waste management importance



2022 waste management importance (index scores)

	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	
35-49	85▲	82	78	83	78	79	75	80	82	77	n/a
Regional Centres	83▲	82	82	80	81	79	79	80	n/a	n/a	n/a
50-64	82	84	85	80	82	80	78	77	82	79	n/a
State-wide	82	82	82	81	81	79	80	79	79	79	78
Women	82	82	82	83	83	81	81	78	83	80	n/a
65+	82	83	78	81	83	81	78	80	81	81	n/a
Warrnambool	80	82	79	81	80	77	77	78	80	78	n/a
Men	79	83	76	78	77	73	74	78	77	77	n/a
18-34	74▼	80	76	80	78	70	78	77	76	77	n/a

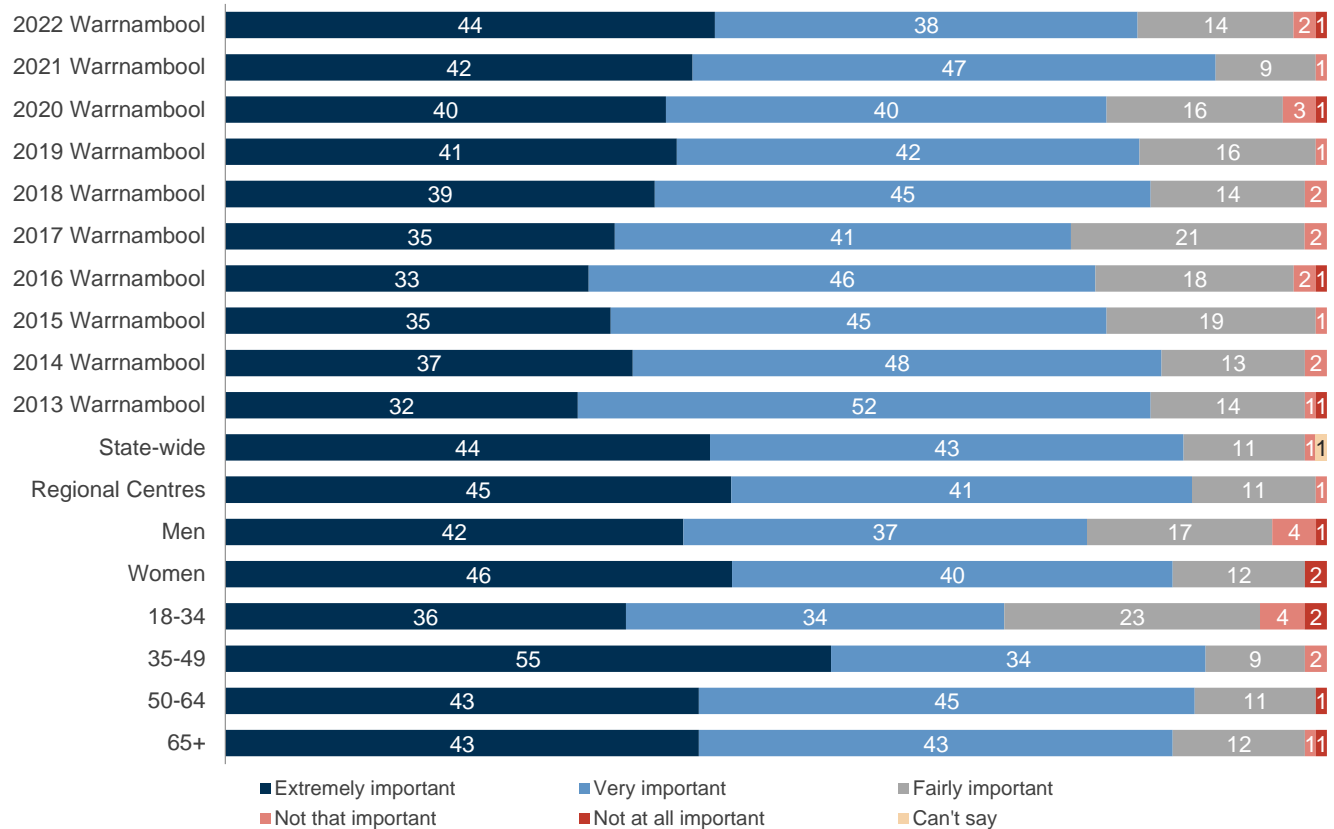
Q1. Firstly, how important should 'Waste management' be as a responsibility for Council?
Base: All respondents. Councils asked State-wide: 32 Councils asked group: 5
Note: Please see Appendix A for explanation of significant differences.



Waste management importance



2022 waste management importance (%)



Q1. Firstly, how important should 'Waste management' be as a responsibility for Council?
Base: All respondents. Councils asked State-wide: 32 Councils asked group: 5



Waste management performance



2022 waste management performance (index scores)

	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	
35-49	75	67	64	63	64	72	70	73	69	72	n/a
65+	75	75	71	70	69	73	76	75	78	74	n/a
Women	75	71	65	69	68	70	70	74	71	73	n/a
Warrnambool	73	71	66	68	67	70	70	74	71	73	n/a
Men	72	72	67	66	65	70	71	75	72	73	n/a
50-64	72	69	65	64	66	63	69	70	68	69	n/a
18-34	71	71	63	72	66	69	66	78	70	75	n/a
Regional Centres	68▼	69	66	68	70	69	69	71	n/a	n/a	n/a
State-wide	68▼	69	65	68	70	71	70	72	73	71	72

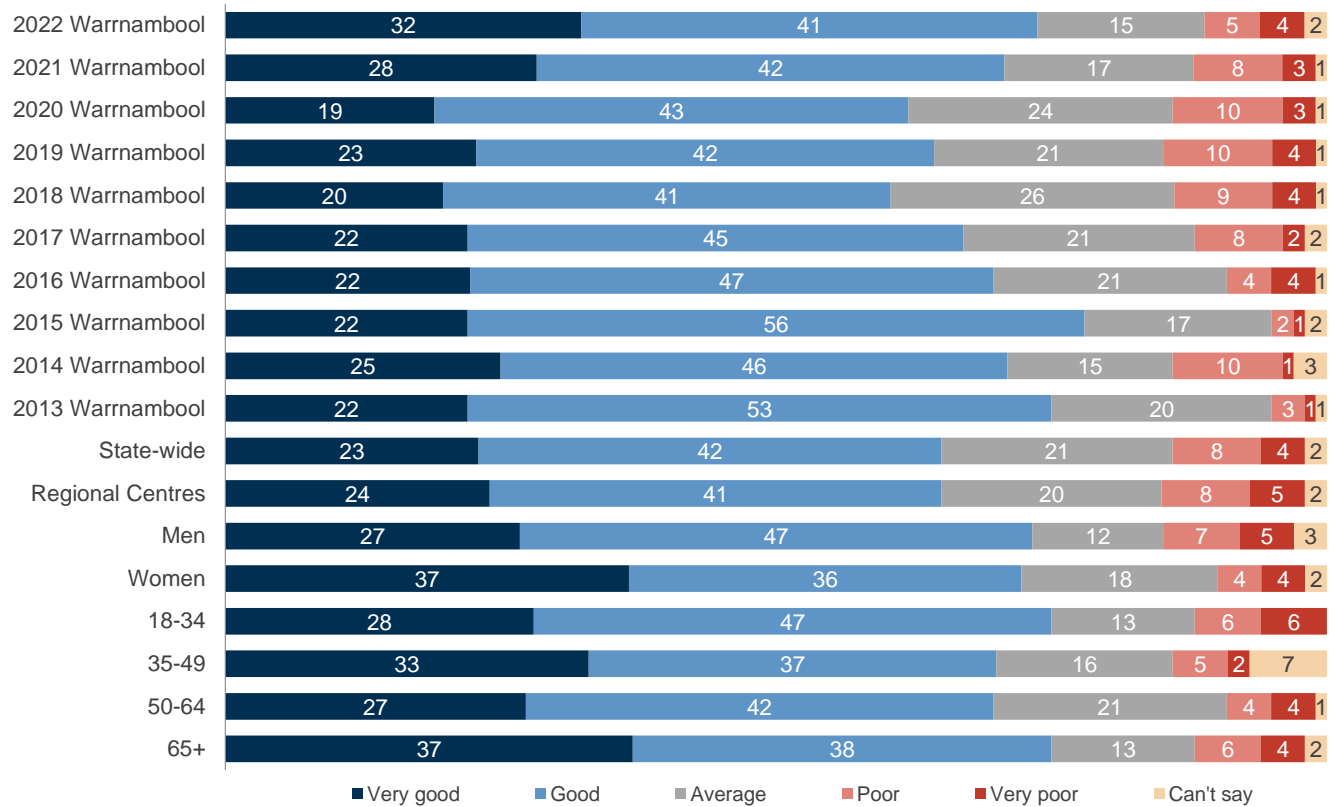
Q2. How has Council performed on 'Waste management' over the last 12 months?
Base: All respondents. Councils asked State-wide: 67 Councils asked group: 9
Note: Please see Appendix A for explanation of significant differences.



Waste management performance



2022 waste management performance (%)



Q2. How has Council performed on 'Waste management' over the last 12 months?
Base: All respondents. Councils asked State-wide: 67 Councils asked group: 9

Business and community development and tourism importance



2022 business/development/tourism importance (index scores)

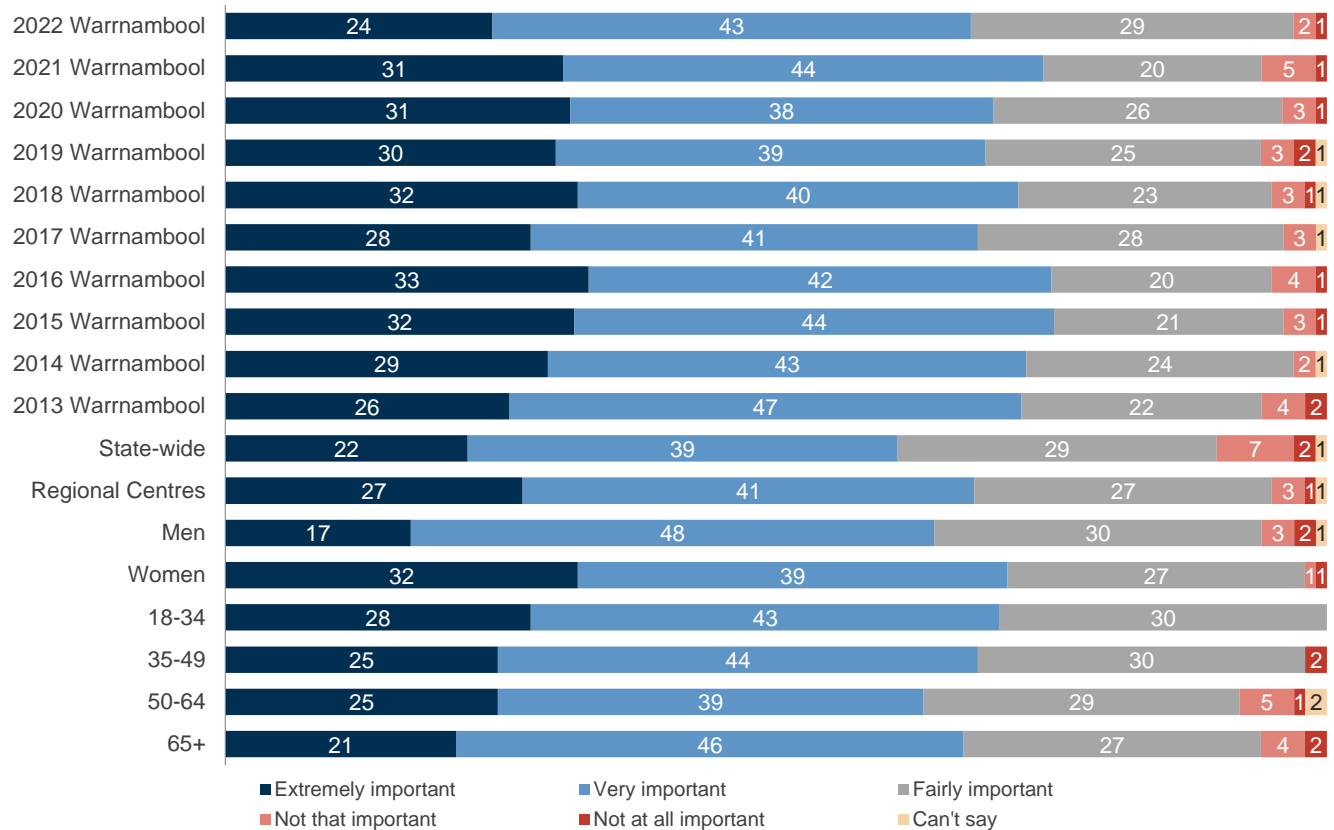
		2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
Women	75	75	76	76	75	74	78	76	77	74	n/a
18-34	75	77	77	75	76	71	77	77	73	68	n/a
Regional Centres	73	73	73	73	74	74	73	73	n/a	n/a	n/a
35-49	72	74	73	75	73	73	76	78	77	73	n/a
Warrnambool	72	75	74	73	75	73	76	76	75	73	n/a
50-64	71	78	75	71	75	73	75	75	78	74	n/a
65+	70	72	71	71	74	76	74	74	74	76	n/a
Men	69	75	72	71	74	73	73	76	73	71	n/a
State-wide	69▼	70	67	65	66	67	67	67	67	67	66

Q1. Firstly, how important should 'Business and community development and tourism' be as a responsibility for Council?
Base: All respondents. Councils asked State-wide: 23 Councils asked group: 4
Note: Please see Appendix A for explanation of significant differences.

Business and community development and tourism importance



2022 business/development/tourism importance (%)

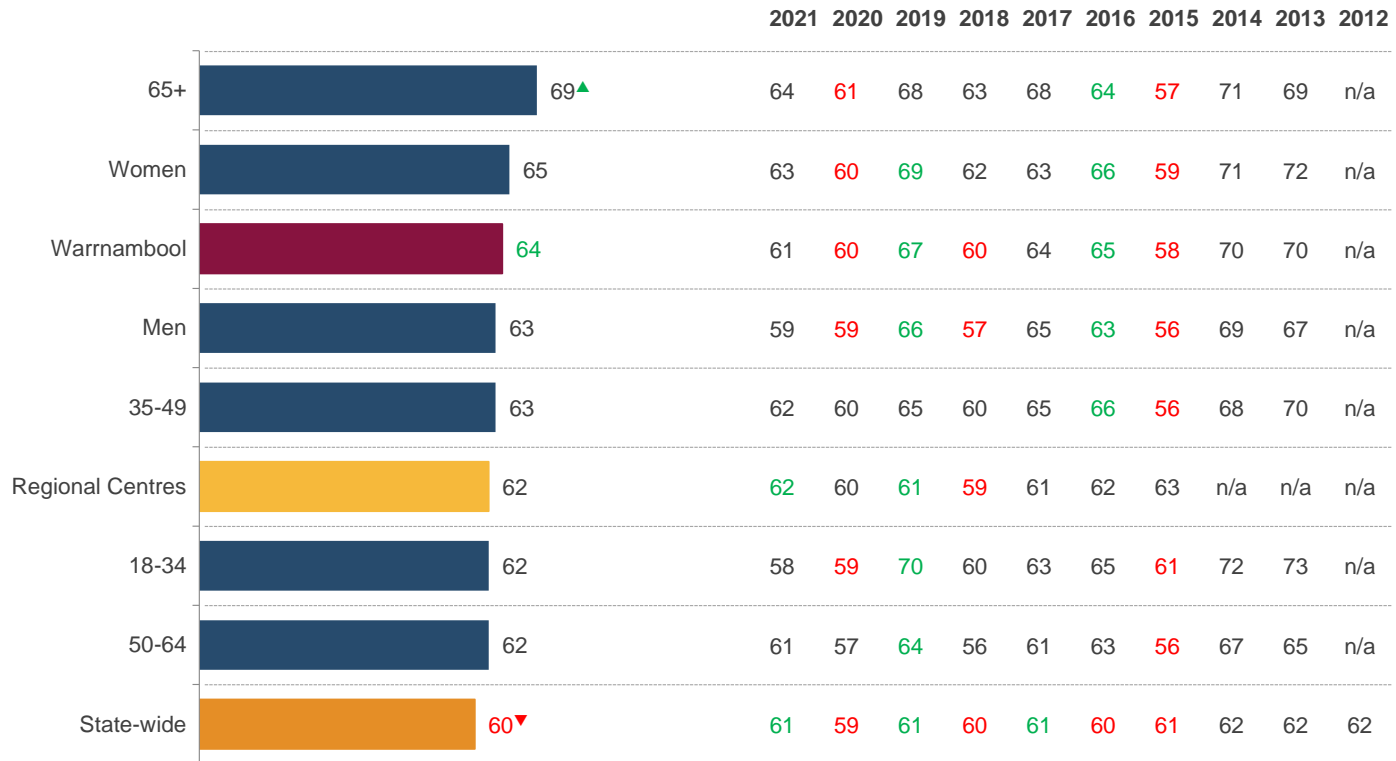


Q1. Firstly, how important should 'Business and community development and tourism' be as a responsibility for Council?
Base: All respondents. Councils asked State-wide: 23 Councils asked group: 4

Business and community development and tourism performance



2022 business/development/tourism performance (index scores)

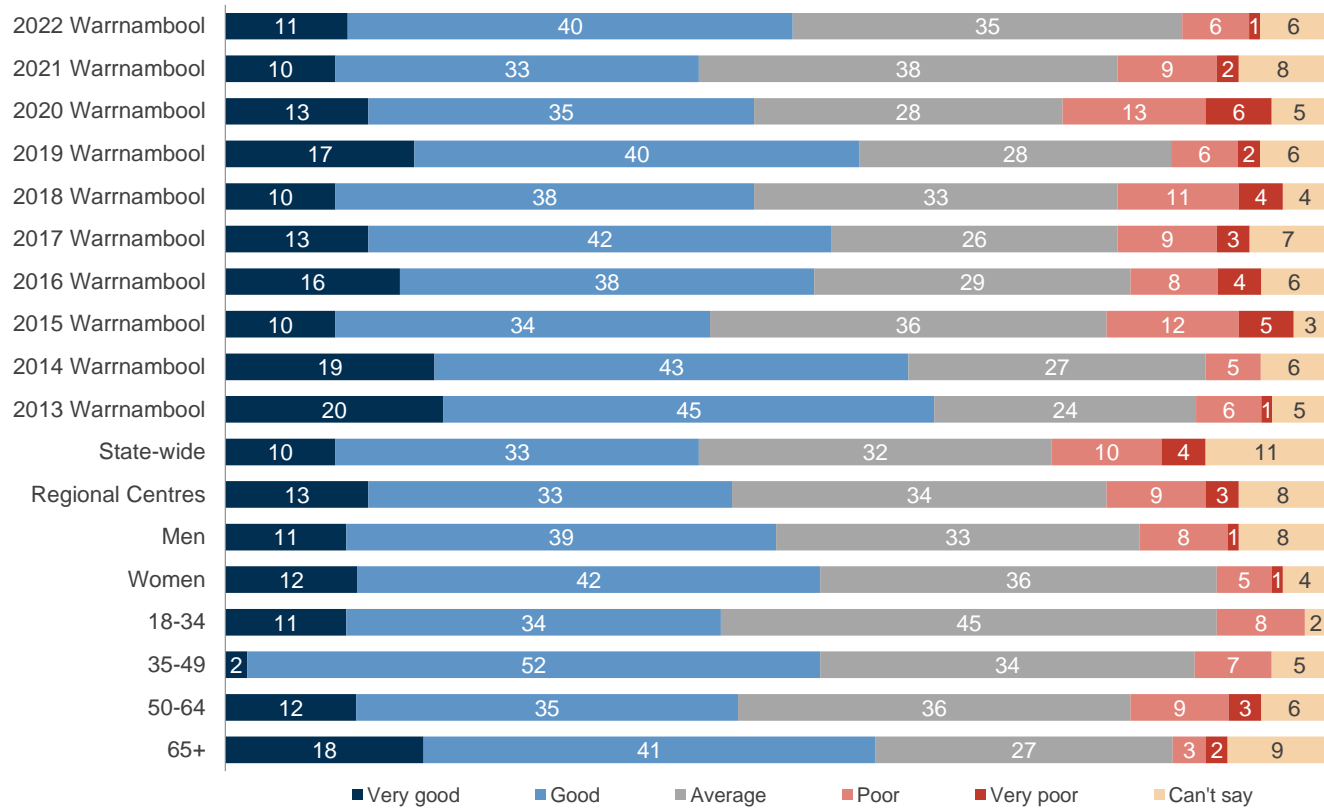


Q2. How has Council performed on 'Business and community development and tourism' over the last 12 months?
Base: All respondents. Councils asked State-wide: 30 Councils asked group: 4
Note: Please see Appendix A for explanation of significant differences.

Business and community development and tourism performance



2022 business/development/tourism performance (%)



Q2. How has Council performed on 'Business and community development and tourism' over the last 12 months?
Base: All respondents. Councils asked State-wide: 30 Councils asked group: 4



Council's general town planning policy importance



2022 town planning importance (index scores)

	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	
50-64	79▲	78	76	73	77	74	77	75	79	78	n/a
Women	77▲	75	69	74	74	72	74	75	75	74	n/a
65+	76	78	74	75	77	73	73	77	76	76	n/a
State-wide	74	74	72	73	73	72	73	72	72	73	72
Warrnambool	73	76	70	72	74	71	72	75	73	72	n/a
Regional Centres	73	74	72	71	72	71	72	73	n/a	n/a	n/a
35-49	72	75	70	71	72	75	72	76	74	71	n/a
Men	69	77	71	70	73	70	71	75	71	70	n/a
18-34	68	73	61	69	70	64	69	72	67	66	n/a

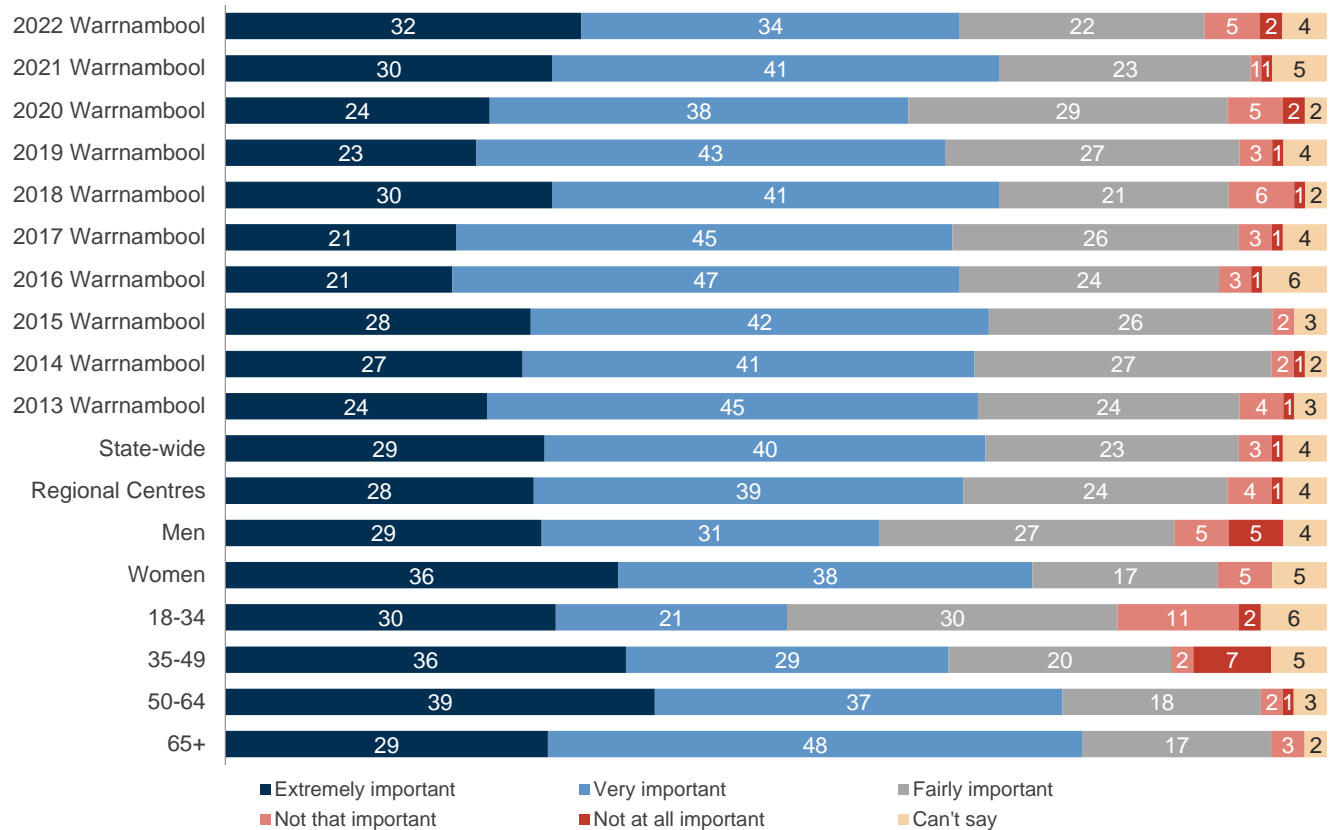
Q1. Firstly, how important should 'Council's general town planning policy' be as a responsibility for Council?
Base: All respondents. Councils asked State-wide: 14 Councils asked group: 3
Note: Please see Appendix A for explanation of significant differences.



Council's general town planning policy importance



2022 town planning importance (%)



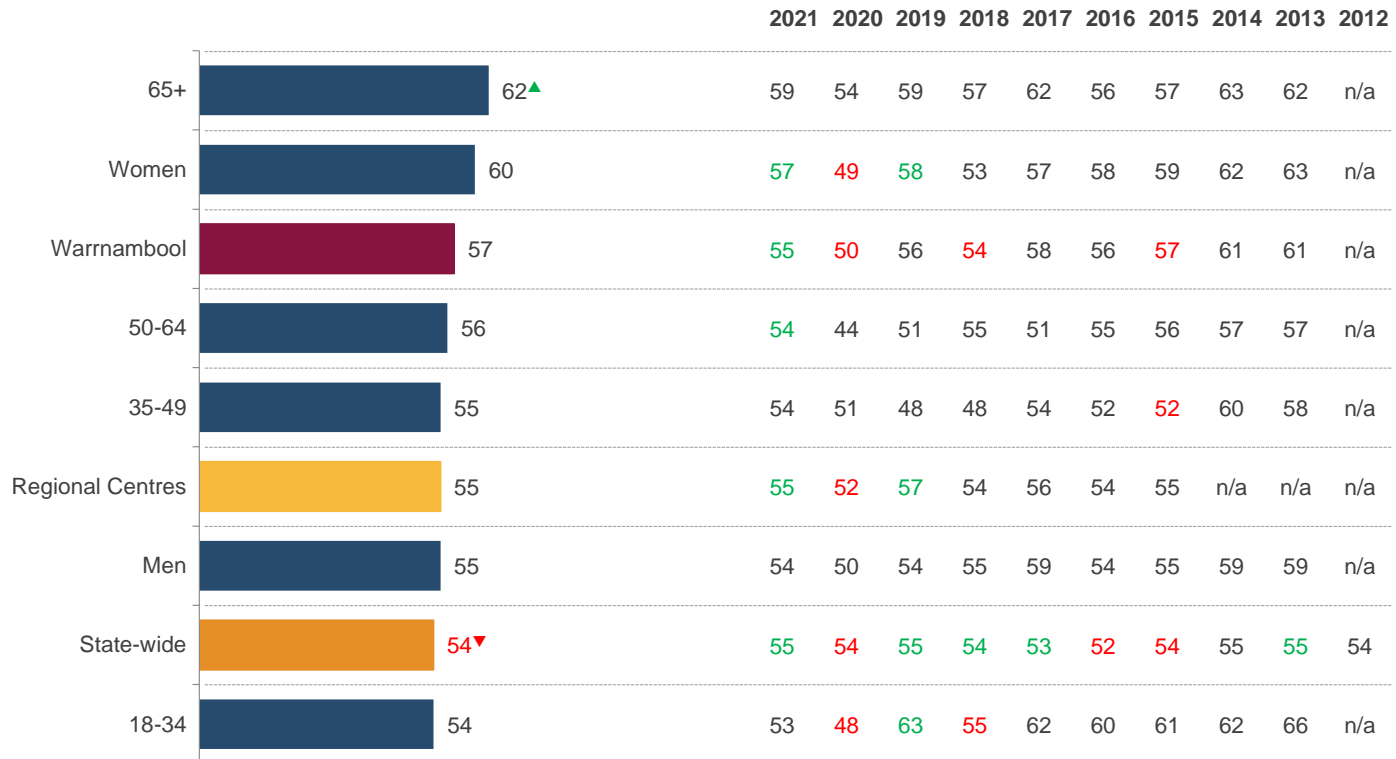
Q1. Firstly, how important should 'Council's general town planning policy' be as a responsibility for Council?
Base: All respondents. Councils asked State-wide: 14 Councils asked group: 3



Council's general town planning policy performance



2022 town planning performance (index scores)



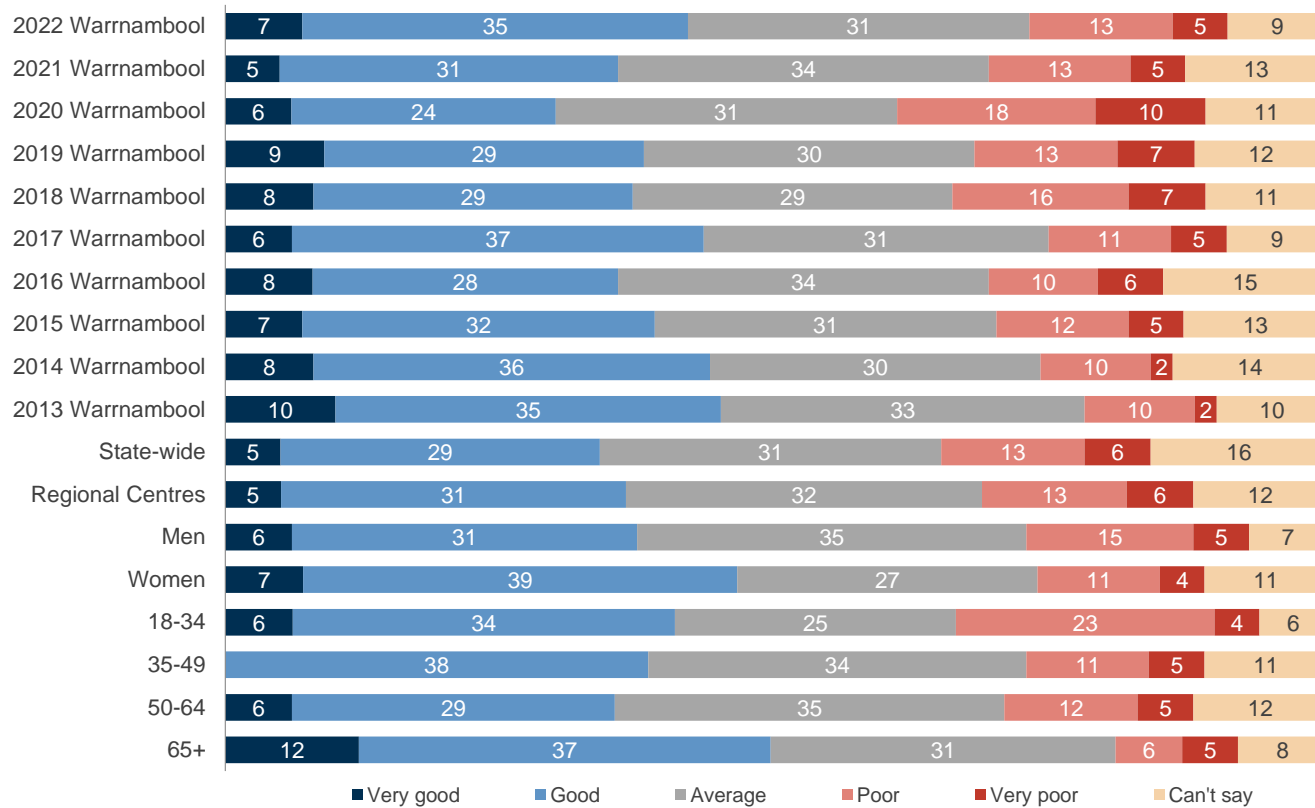
Q2. How has Council performed on 'Council's general town planning policy' over the last 12 months?
Base: All respondents. Councils asked State-wide: 22 Councils asked group: 3
Note: Please see Appendix A for explanation of significant differences.



Council's general town planning policy performance



2022 town planning performance (%)



Q2. How has Council performed on 'Council's general town planning policy' over the last 12 months?
Base: All respondents. Councils asked State-wide: 22 Councils asked group: 3



Planning and building permits importance



2022 planning and building permits importance (index scores)

	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
65+	76	77	72	75	76	74	75	75	77	n/a
Women	75	70	71	73	69	72	71	76	72	n/a
18-34	74	59	66	67	55	63	62	68	62	n/a
50-64	74	77	73	74	74	72	73	79	76	n/a
State-wide	73	71	71	71	72	71	71	71	71	71
Regional Centres	73	70	71	71	69	69	70	n/a	n/a	n/a
Warrnambool	72	69	70	72	68	69	70	74	71	n/a
Men	70	68	69	71	67	66	70	72	69	n/a
35-49	64▼	65	68	73	69	69	74	76	71	n/a

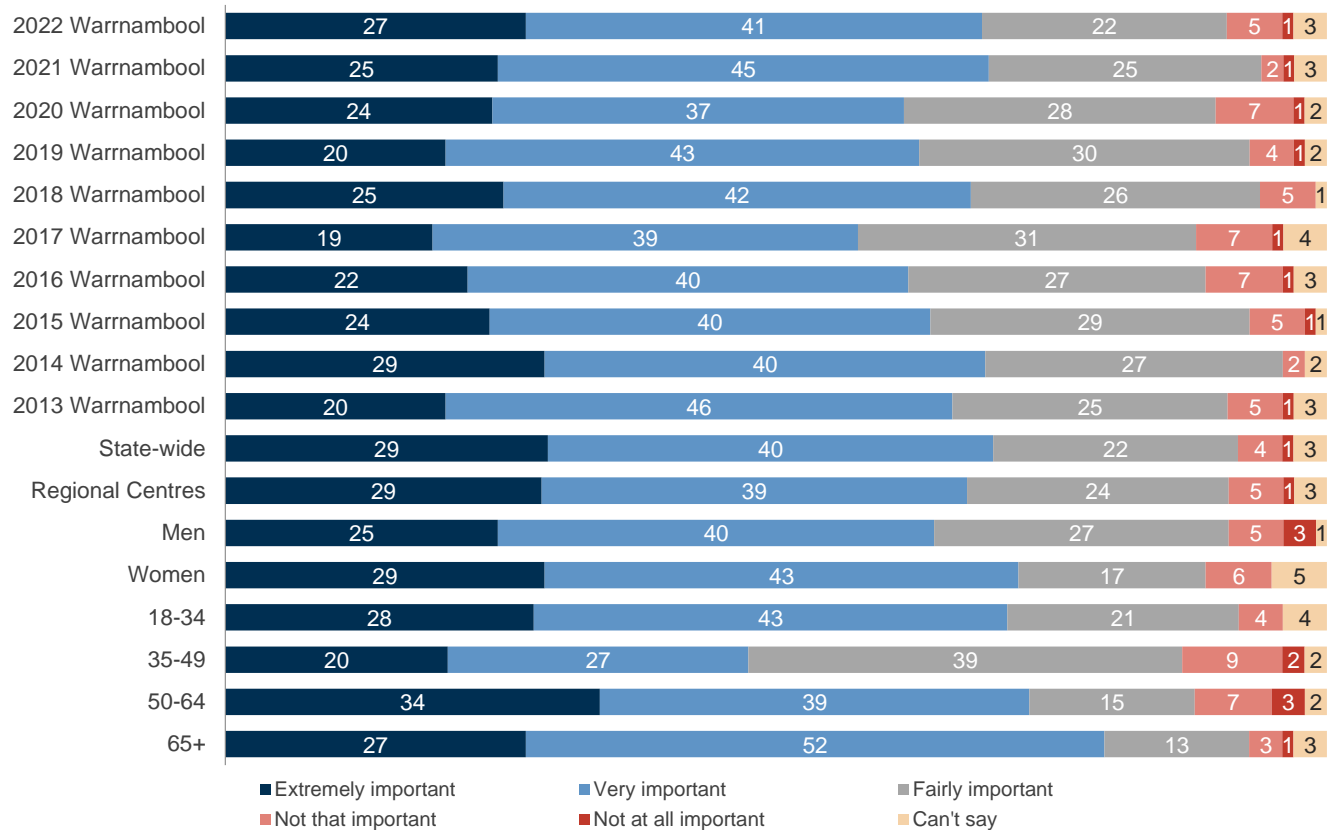
Q1. Firstly, how important should 'Planning and building permits' be as a responsibility for Council?
Base: All respondents. Councils asked State-wide: 24 Councils asked group: 5
Note: Please see Appendix A for explanation of significant differences.



Planning and building permits importance



2022 planning and building permits importance (%)



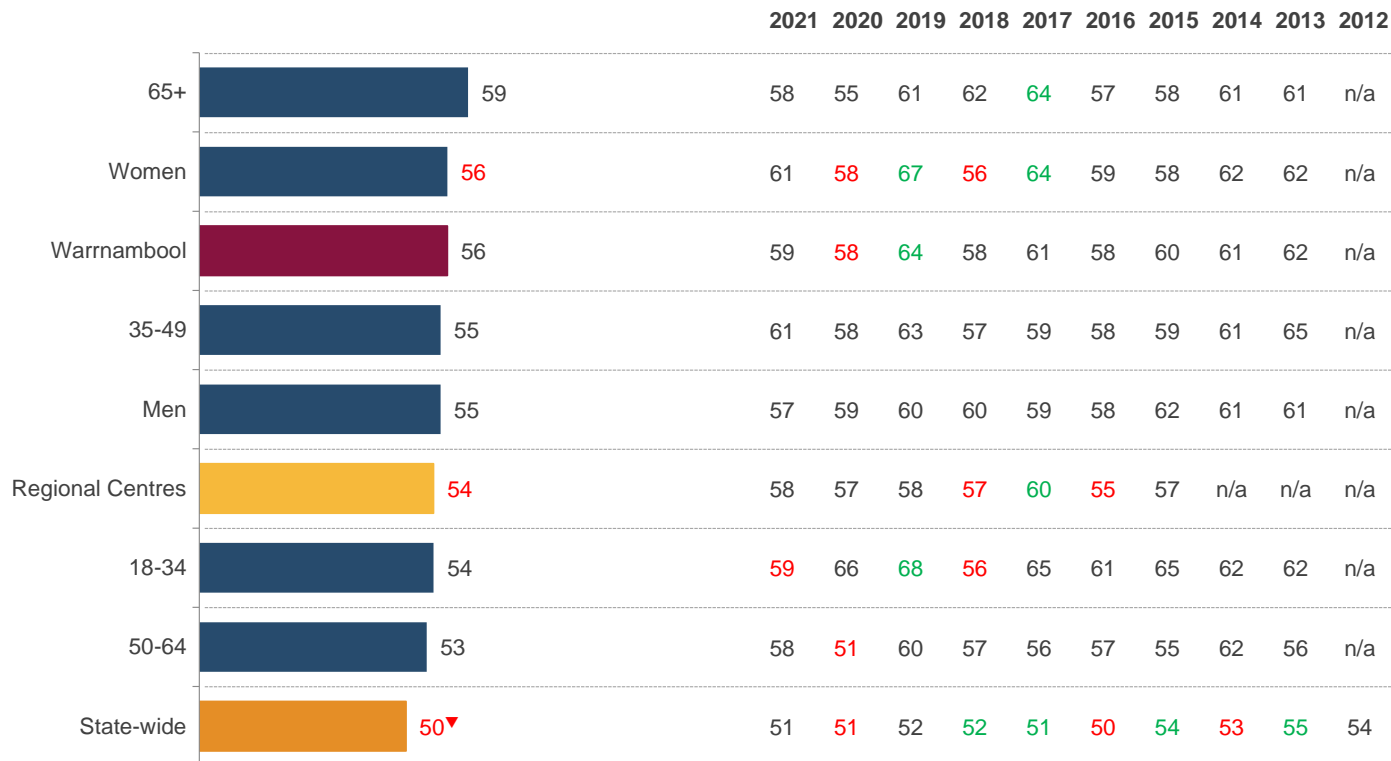
Q1. Firstly, how important should 'Planning and building permits' be as a responsibility for Council?
Base: All respondents. Councils asked State-wide: 24 Councils asked group: 5



Planning and building permits performance



2022 planning and building permits performance (index scores)



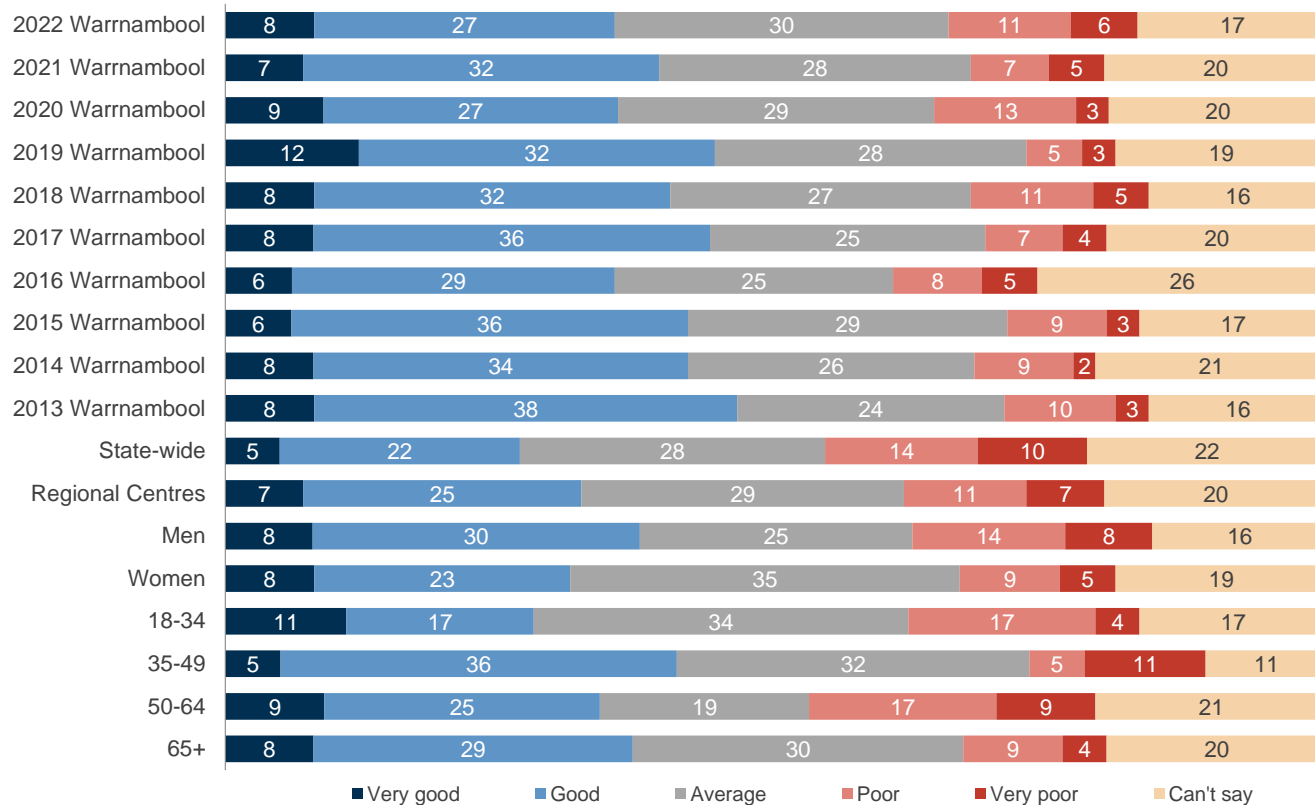
Q2. How has Council performed on 'Planning and building permits' over the last 12 months?
Base: All respondents. Councils asked State-wide: 30 Councils asked group: 5
Note: Please see Appendix A for explanation of significant differences.



Planning and building permits performance



2022 planning and building permits performance (%)



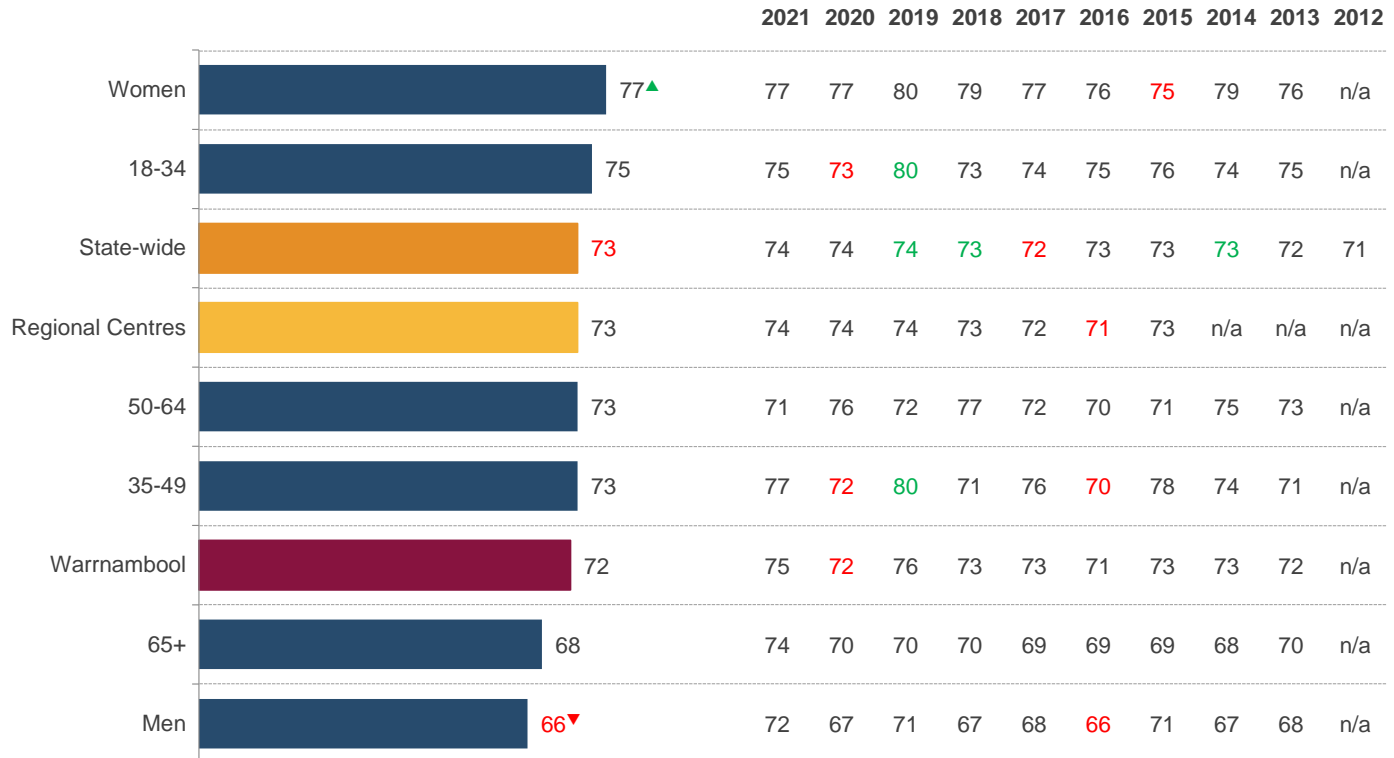
Q2. How has Council performed on 'Planning and building permits' over the last 12 months?
Base: All respondents. Councils asked State-wide: 30 Councils asked group: 5



Environmental sustainability importance



2022 environmental sustainability importance (index scores)



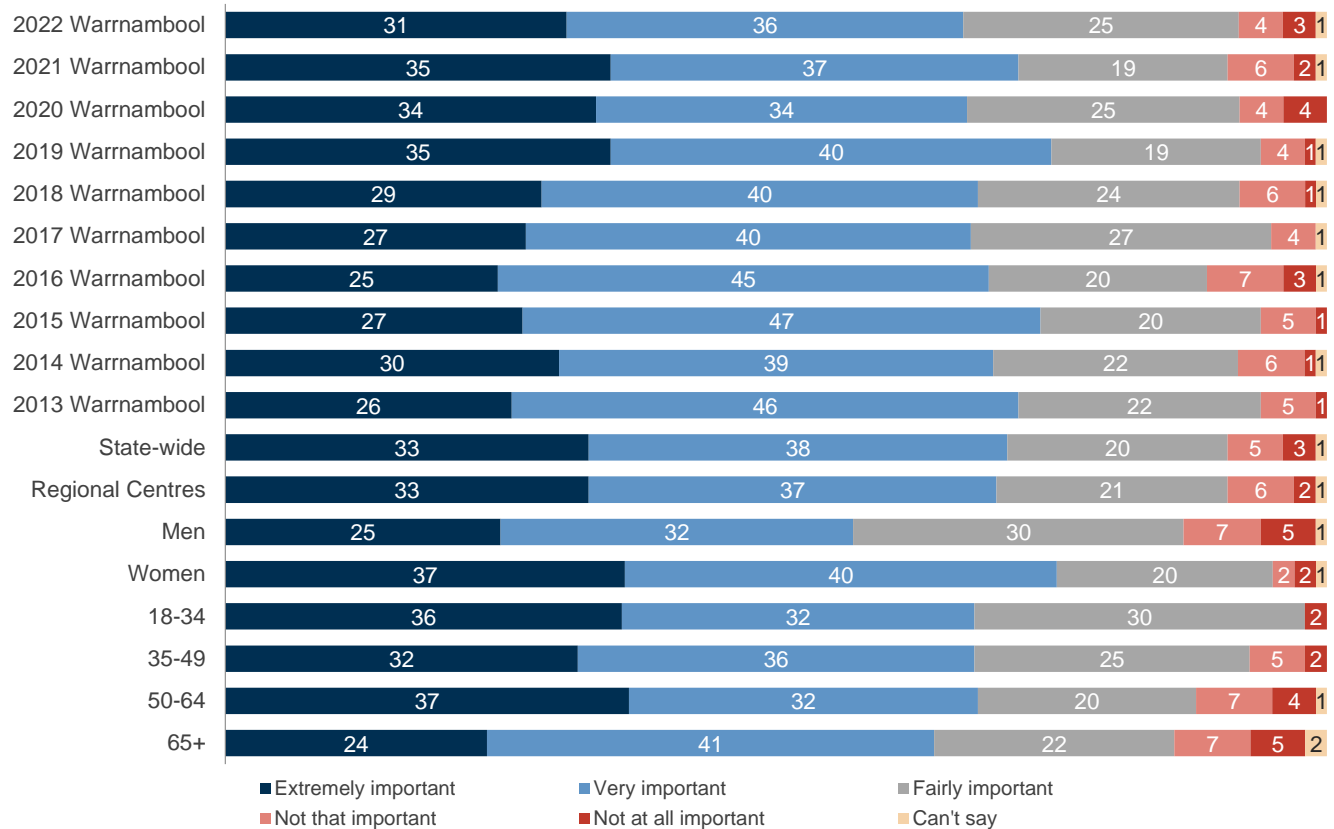
Q1. Firstly, how important should 'Environmental sustainability' be as a responsibility for Council?
Base: All respondents. Councils asked State-wide: 27 Councils asked group: 5
Note: Please see Appendix A for explanation of significant differences.



Environmental sustainability importance



2022 environmental sustainability importance (%)



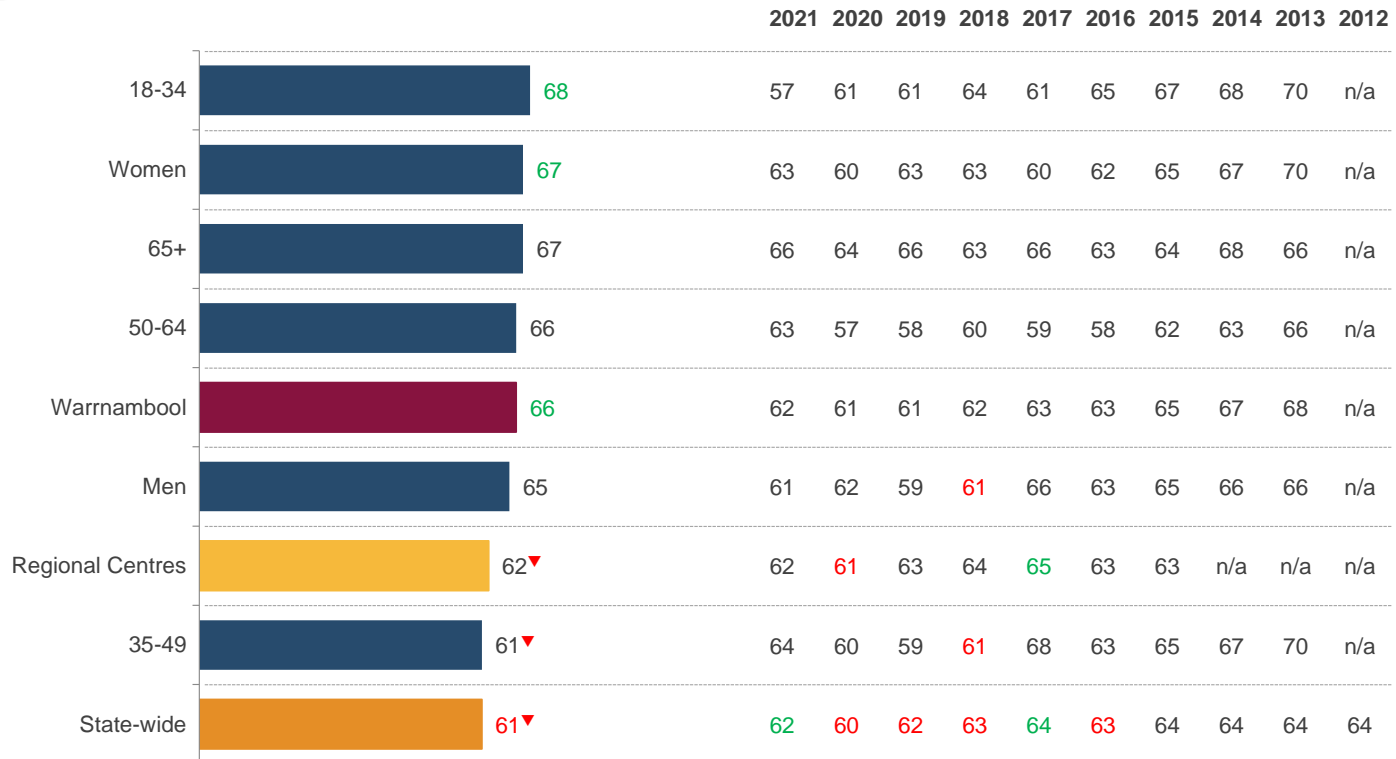
Q1. Firstly, how important should 'Environmental sustainability' be as a responsibility for Council?
Base: All respondents. Councils asked State-wide: 27 Councils asked group: 5



Environmental sustainability performance



2022 environmental sustainability performance (index scores)



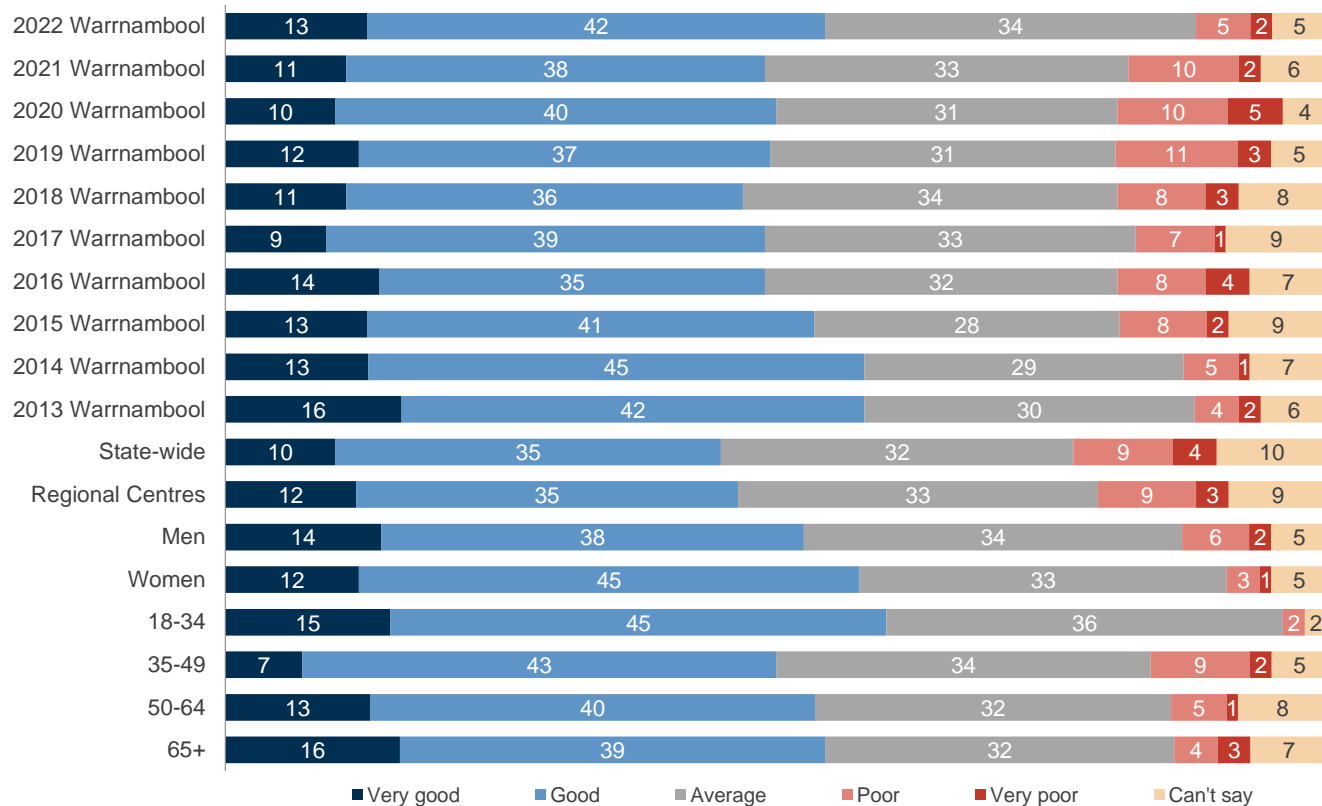
Q2. How has Council performed on 'Environmental sustainability' over the last 12 months?
Base: All respondents. Councils asked State-wide: 38 Councils asked group: 6
Note: Please see Appendix A for explanation of significant differences.



Environmental sustainability performance



2022 environmental sustainability performance (%)



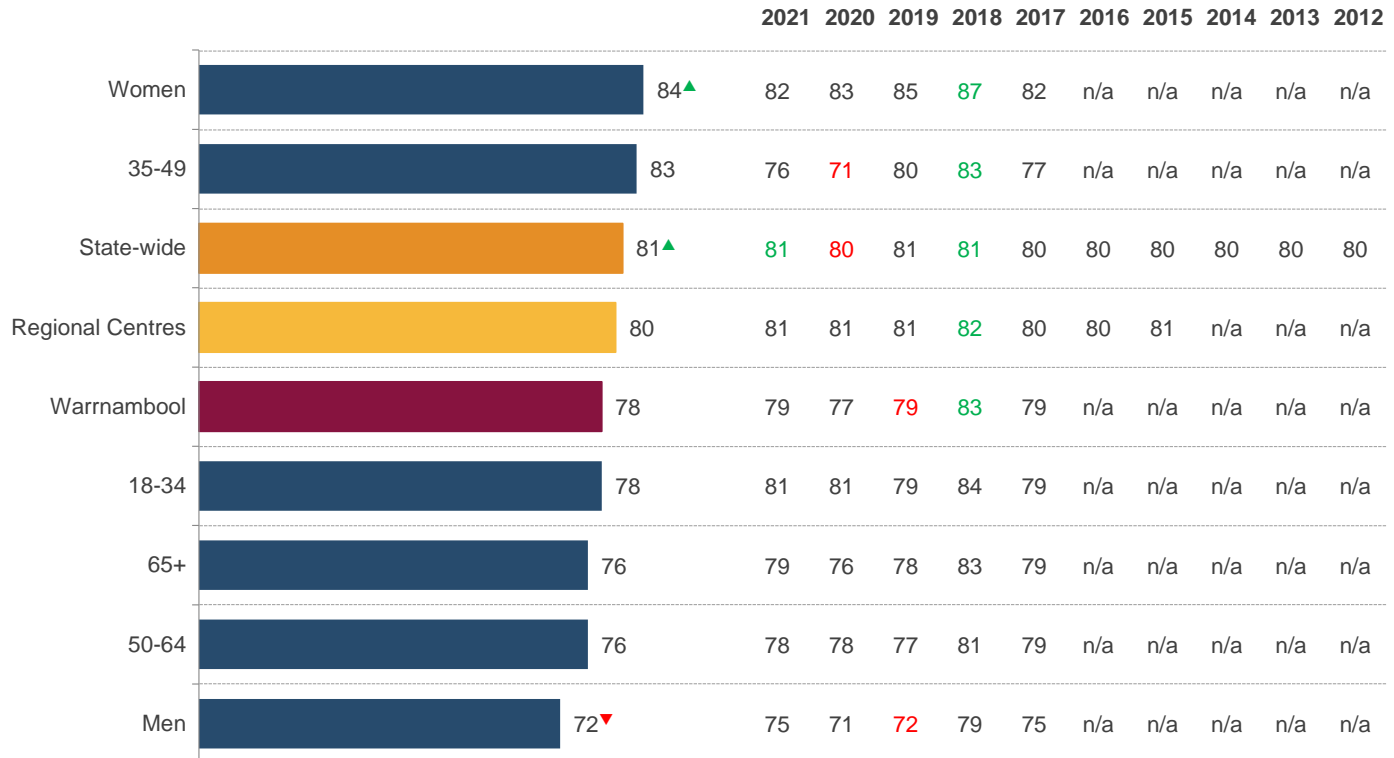
Q2. How has Council performed on 'Environmental sustainability' over the last 12 months?
Base: All respondents. Councils asked State-wide: 38 Councils asked group: 6



Emergency and disaster management importance



2022 emergency and disaster management importance (index scores)



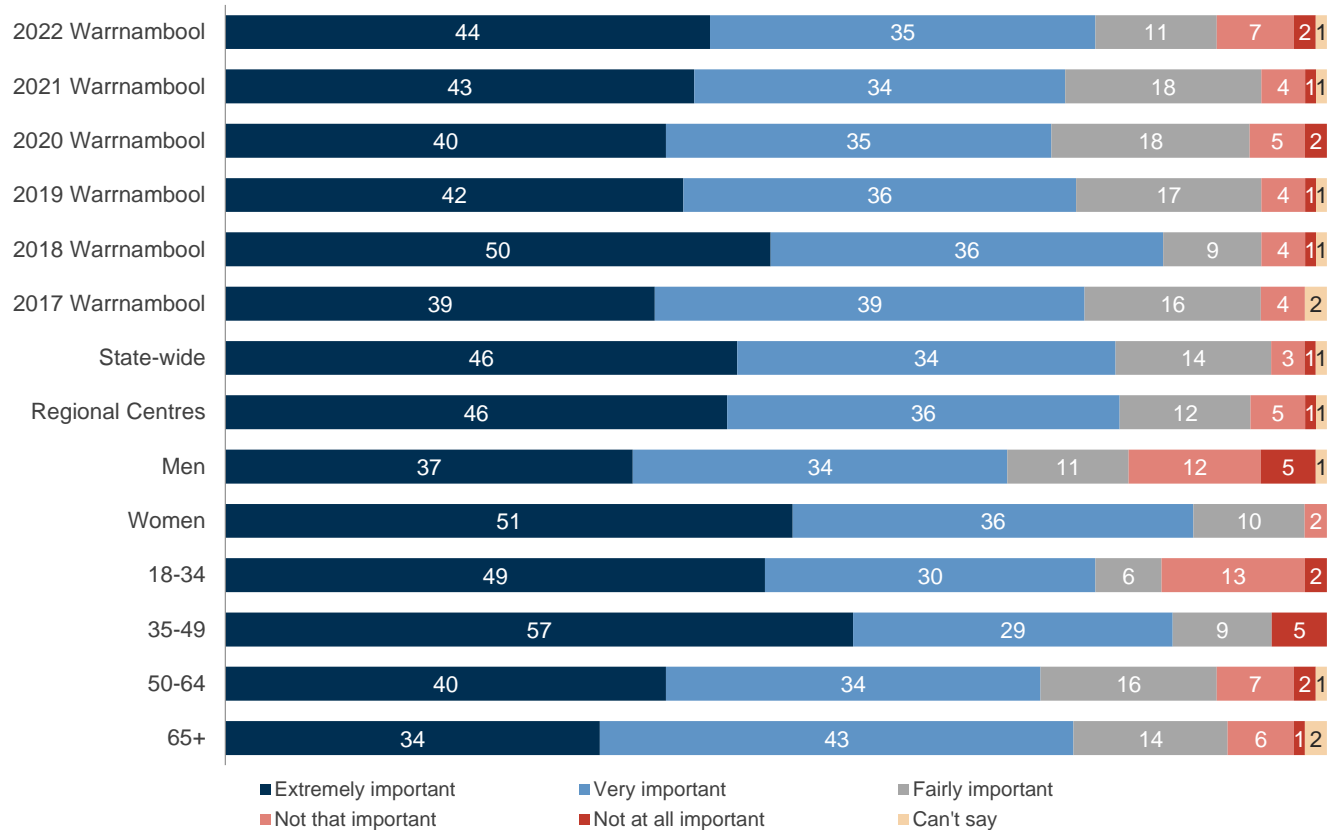
Q1. Firstly, how important should 'Emergency and disaster management' be as a responsibility for Council?
Base: All respondents. Councils asked State-wide: 19 Councils asked group: 3
Note: Please see Appendix A for explanation of significant differences.



Emergency and disaster management importance



2022 emergency and disaster management importance (%)



Q1. Firstly, how important should 'Emergency and disaster management' be as a responsibility for Council?
Base: All respondents. Councils asked State-wide: 19 Councils asked group: 3



Emergency and disaster management performance



2022 emergency and disaster management performance (index scores)

	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
35-49	73	67	75	79	72	66	71	71	72	n/a
Women	73	71	78	79	73	72	73	75	76	n/a
65+	71	72	71	75	73	76	73	71	75	76
Warrnambool	71	70	67	74	75	73	70	72	74	73
18-34	70	72	64	73	78	73	69	76	77	75
Men	69	70	68	70	71	73	67	72	72	70
50-64	68	68	65	74	71	70	69	68	71	64
Regional Centres	67▼	72	70	75	73	70	68	68	n/a	n/a
State-wide	66▼	71	68	72	71	70	69	70	71	70

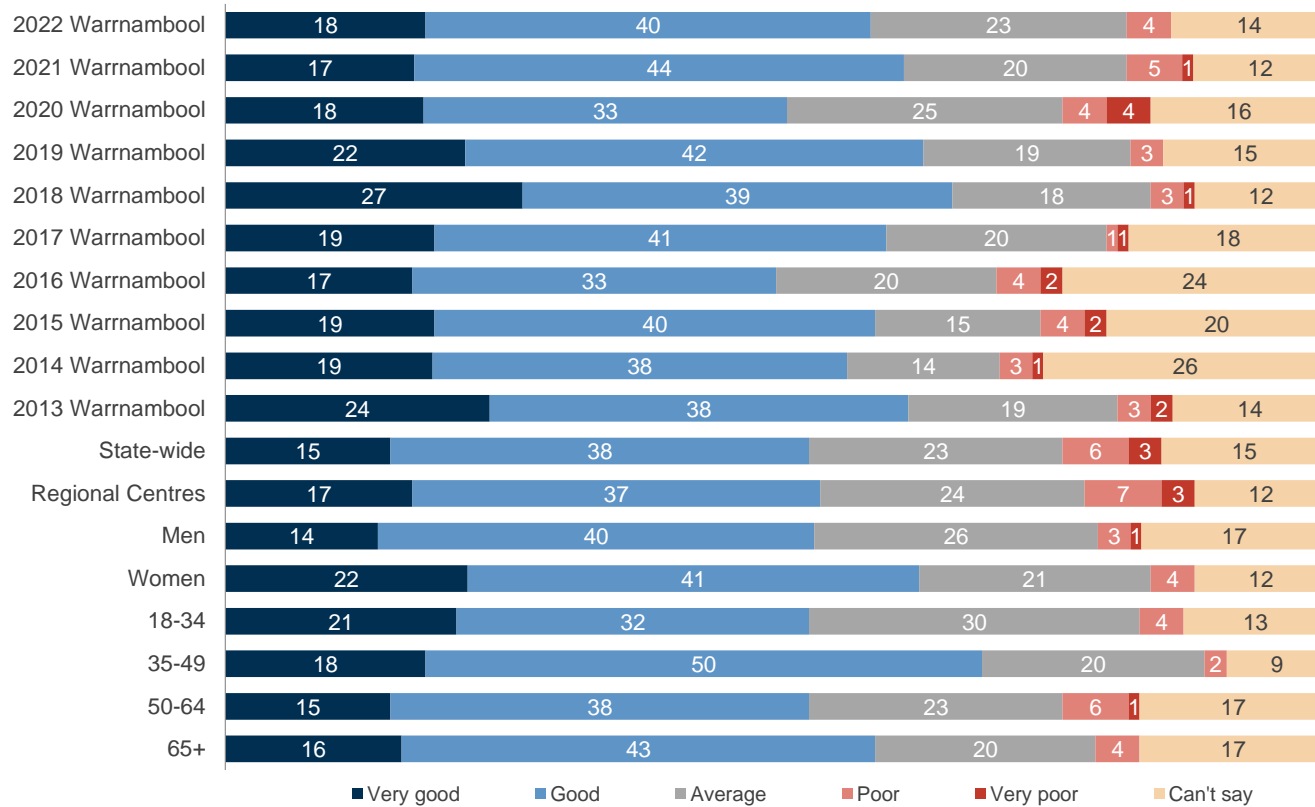
Q2. How has Council performed on 'Emergency and disaster management' over the last 12 months?
Base: All respondents. Councils asked State-wide: 25 Councils asked group: 4
Note: Please see Appendix A for explanation of significant differences.



Emergency and disaster management performance



2022 emergency and disaster management performance (%)



Q2. How has Council performed on 'Emergency and disaster management' over the last 12 months?
Base: All respondents. Councils asked State-wide: 25 Councils asked group: 4



Planning for population growth in the area importance



2022 population growth importance (index scores)

	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	
35-49	82	76	75	78	77	79	73	79	80	79	n/a
Women	80	75	78	78	75	77	76	76	78	78	n/a
Regional Centres	78	77	77	75	75	75	76	76	n/a	n/a	n/a
50-64	78	78	81	76	79	77	78	80	82	79	n/a
Warrnambool	78	77	75	76	76	76	76	75	77	77	n/a
65+	78	77	74	74	76	78	78	73	79	77	n/a
State-wide	77	76	76	77	77	76	76	75	75	75	75
Men	75	79	72	73	76	75	75	74	76	76	n/a
18-34	74	77	72	75	71	71	74	70	70	74	n/a

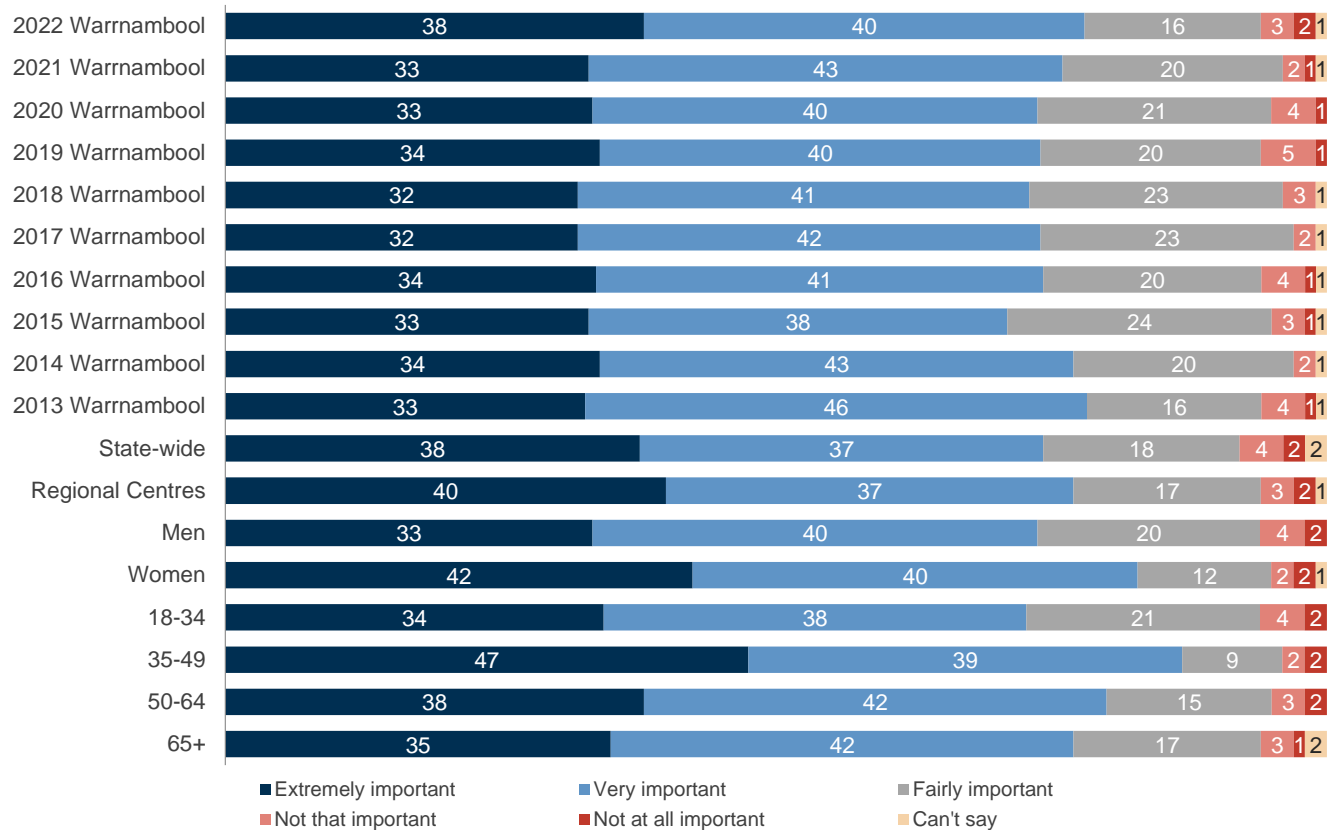
Q1. Firstly, how important should 'Planning for population growth in the area' be as a responsibility for Council?
Base: All respondents. Councils asked State-wide: 13 Councils asked group: 4
Note: Please see Appendix A for explanation of significant differences.



Planning for population growth in the area importance



2022 population growth importance (%)



Q1. Firstly, how important should 'Planning for population growth in the area' be as a responsibility for Council?
Base: All respondents. Councils asked State-wide: 13 Councils asked group: 4



Planning for population growth in the area performance



2022 population growth performance (index scores)

	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	
65+	62	63	58	66	63	69	63	65	70	68	n/a
Men	61	58	61	64	63	69	68	64	66	67	n/a
50-64	61	61	53	62	62	62	65	59	59	64	n/a
Warrnambool	59	60	57	64	63	67	66	64	66	67	n/a
35-49	58	54	58	60	60	62	63	60	64	64	n/a
Regional Centres	58	59	57	62	62	62	59	61	n/a	n/a	n/a
Women	58	62	53	65	62	65	64	65	67	66	n/a
18-34	57	59	57	69	66	73	71	70	71	69	n/a
State-wide	52	53	51	52	52	52	51	54	54	54	52

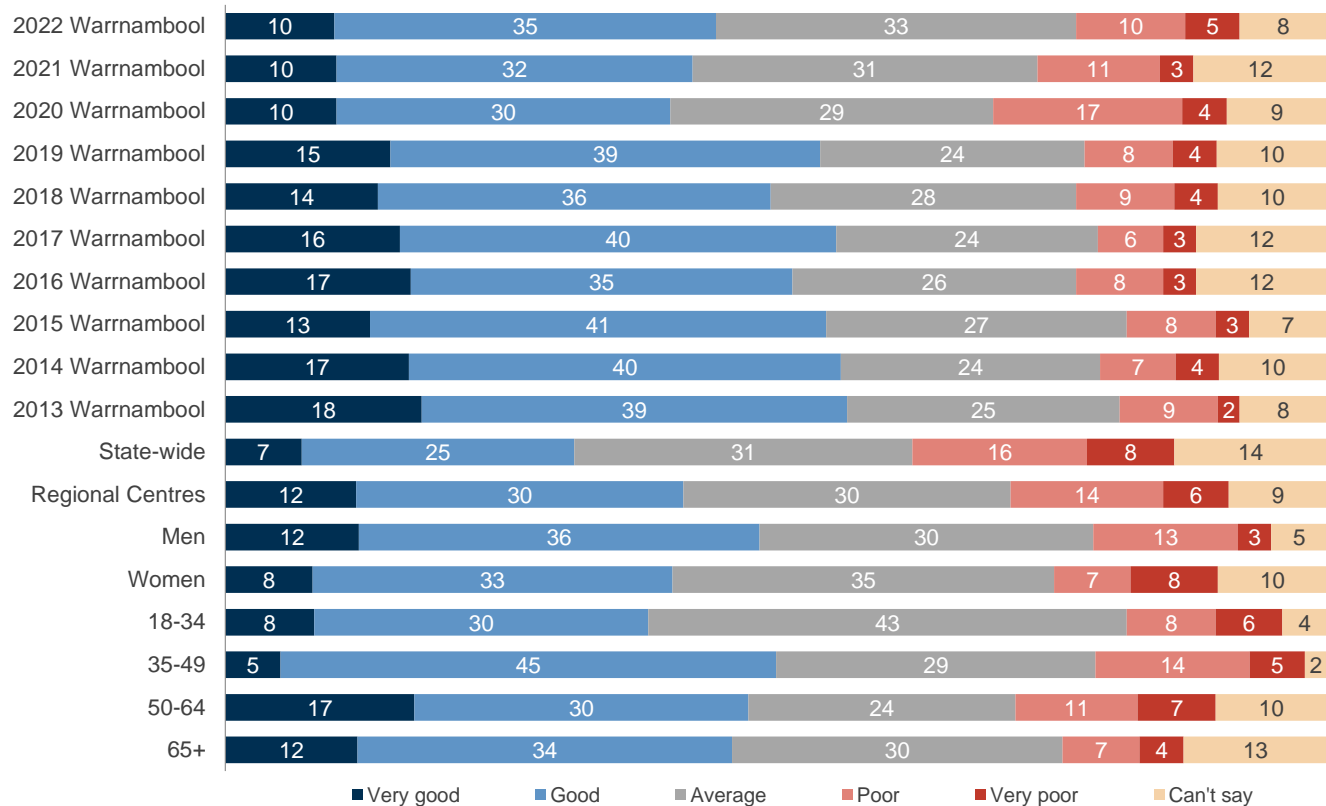
Q2. How has Council performed on 'Planning for population growth in the area' over the last 12 months?
Base: All respondents. Councils asked State-wide: 18 Councils asked group: 4
Note: Please see Appendix A for explanation of significant differences.



Planning for population growth in the area performance



2022 population growth performance (%)



Q2. How has Council performed on 'Planning for population growth in the area' over the last 12 months?
Base: All respondents. Councils asked State-wide: 18 Councils asked group: 4



Business and community development importance



2022 business/community development importance (index scores)

	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
Women	76▲	73	72	74	72	73	n/a	n/a	n/a	n/a
35-49	76	72	72	74	71	70	n/a	n/a	n/a	n/a
18-34	73	77	68	75	70	68	n/a	n/a	n/a	n/a
Warrnambool	72	74	70	72	71	71	n/a	n/a	n/a	n/a
Regional Centres	71	73	71	72	71	73	n/a	n/a	n/a	n/a
50-64	70	76	70	68	72	71	n/a	n/a	n/a	n/a
State-wide	70	70	69	69	69	70	70	69	69	n/a
65+	68	71	70	72	71	73	n/a	n/a	n/a	n/a
Men	68	74	68	70	70	68	n/a	n/a	n/a	n/a

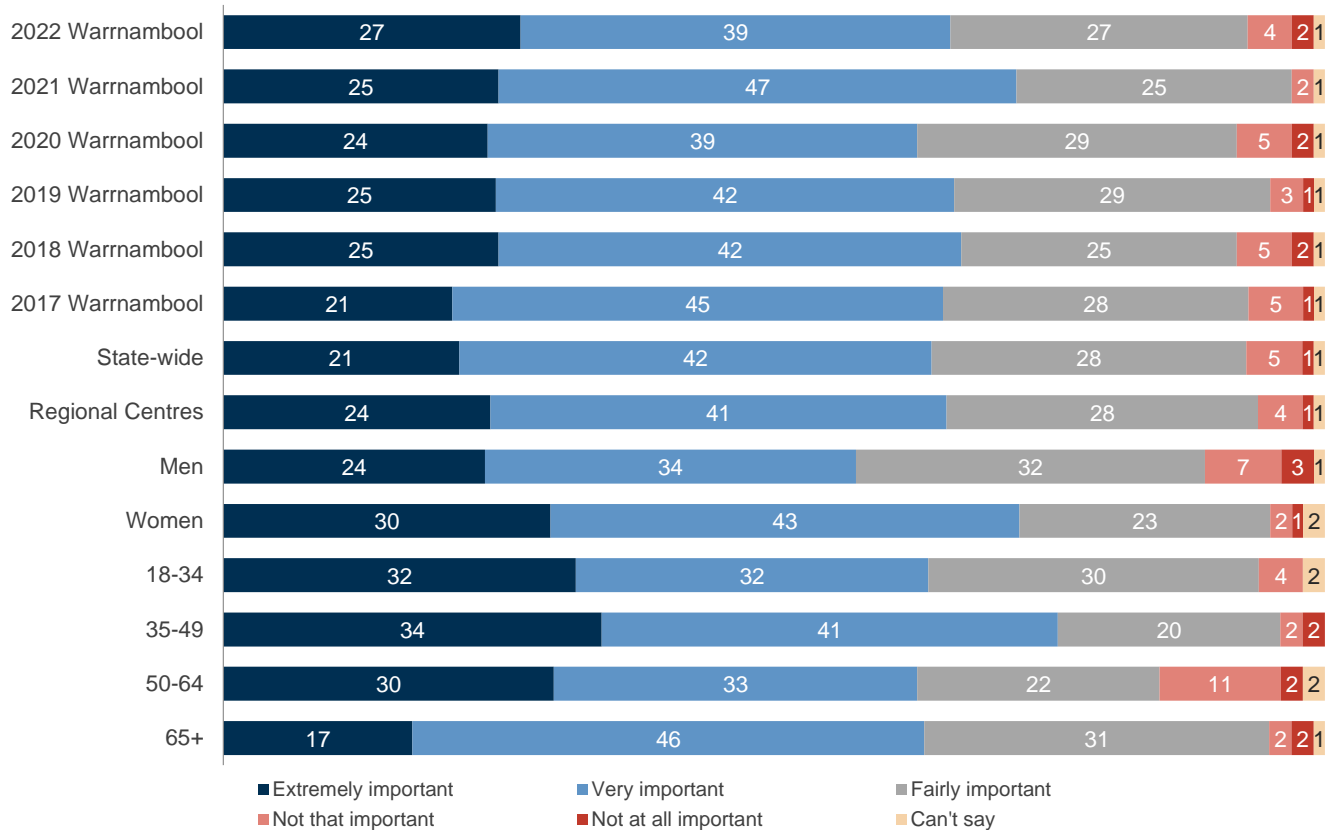
Q1. Firstly, how important should 'Business and community development' be as a responsibility for Council?
Base: All respondents. Councils asked State-wide: 9 Councils asked group: 3
Note: Please see Appendix A for explanation of significant differences.



Business and community development importance



2022 business/community development importance (%)



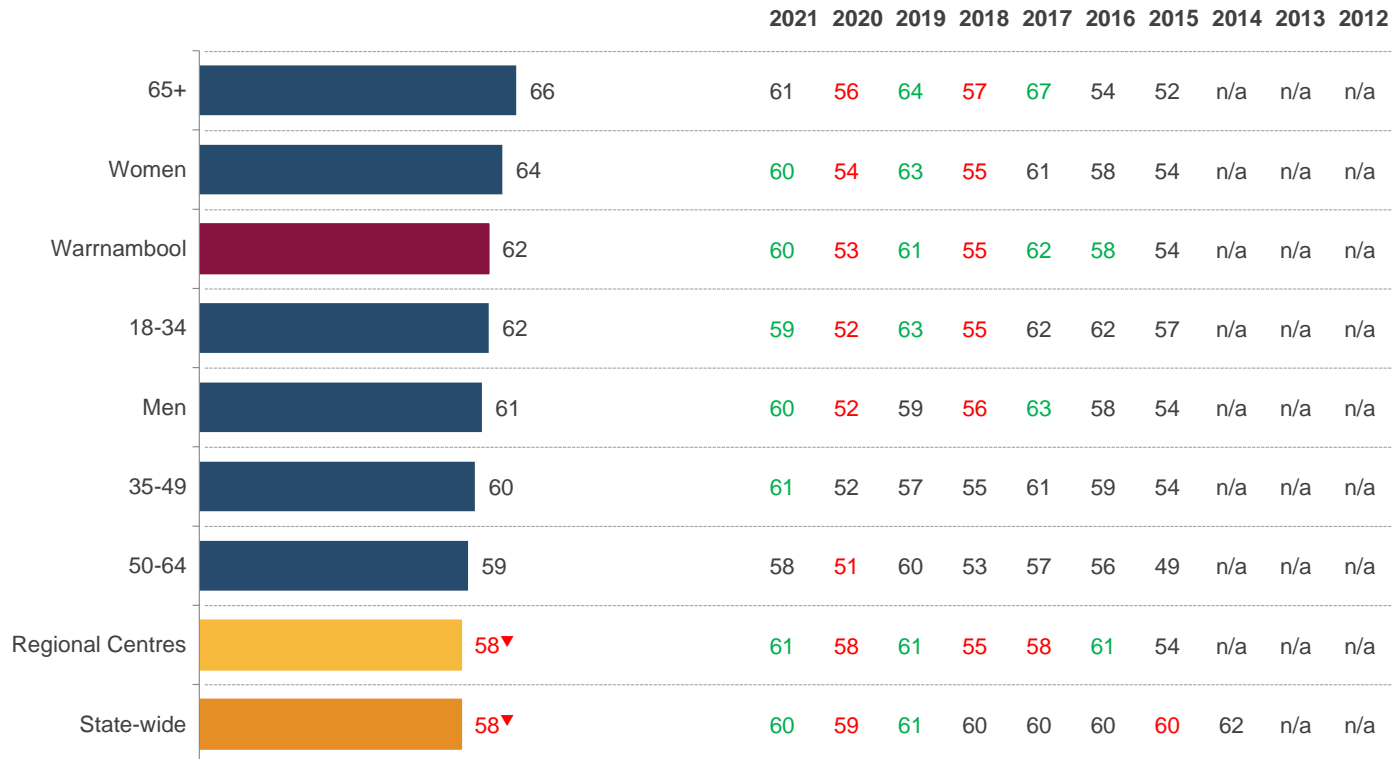
Q1. Firstly, how important should 'Business and community development' be as a responsibility for Council?
Base: All respondents. Councils asked State-wide: 9 Councils asked group: 3



Business and community development performance



2022 business/community development performance (index scores)



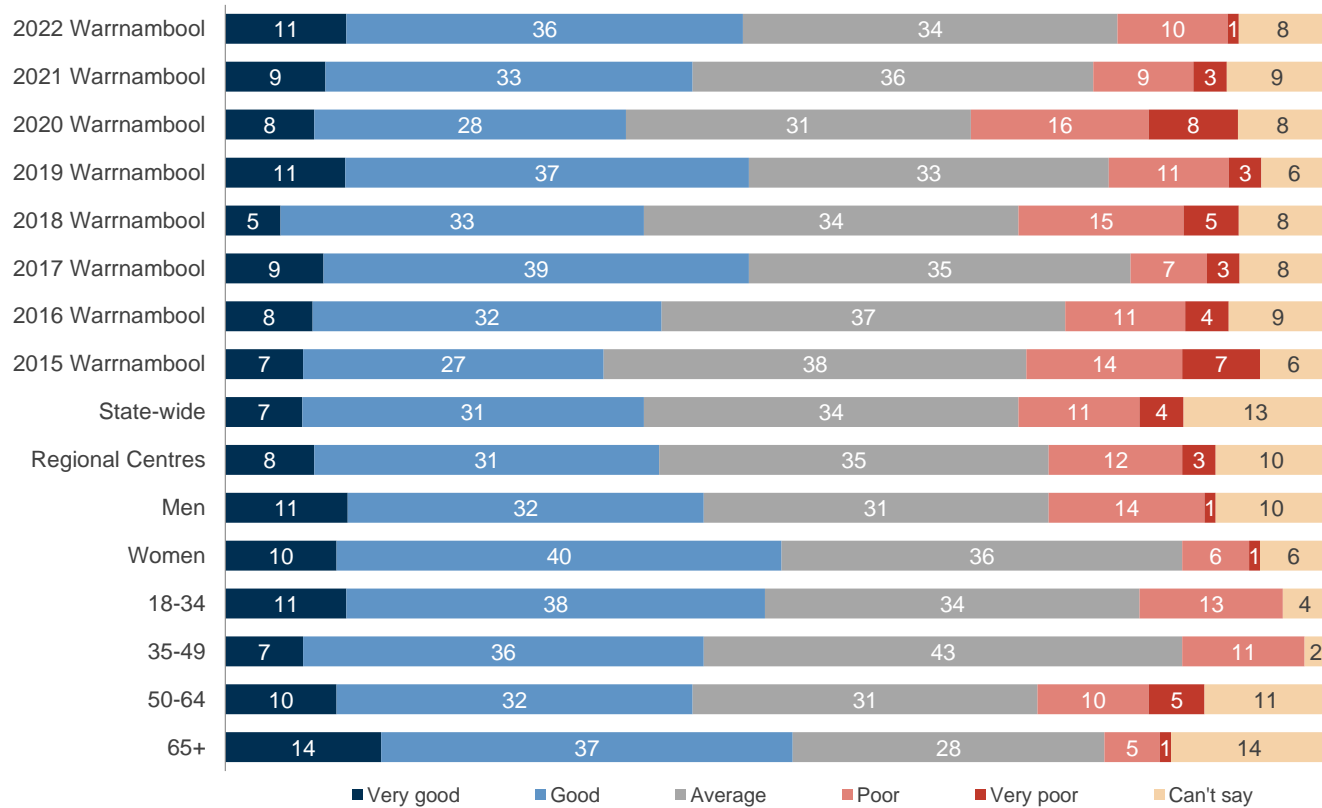
Q2. How has Council performed on 'Business and community development' over the last 12 months?
Base: All respondents. Councils asked State-wide: 13 Councils asked group: 4
Note: Please see Appendix A for explanation of significant differences.



Business and community development performance



2022 business/community development performance (%)



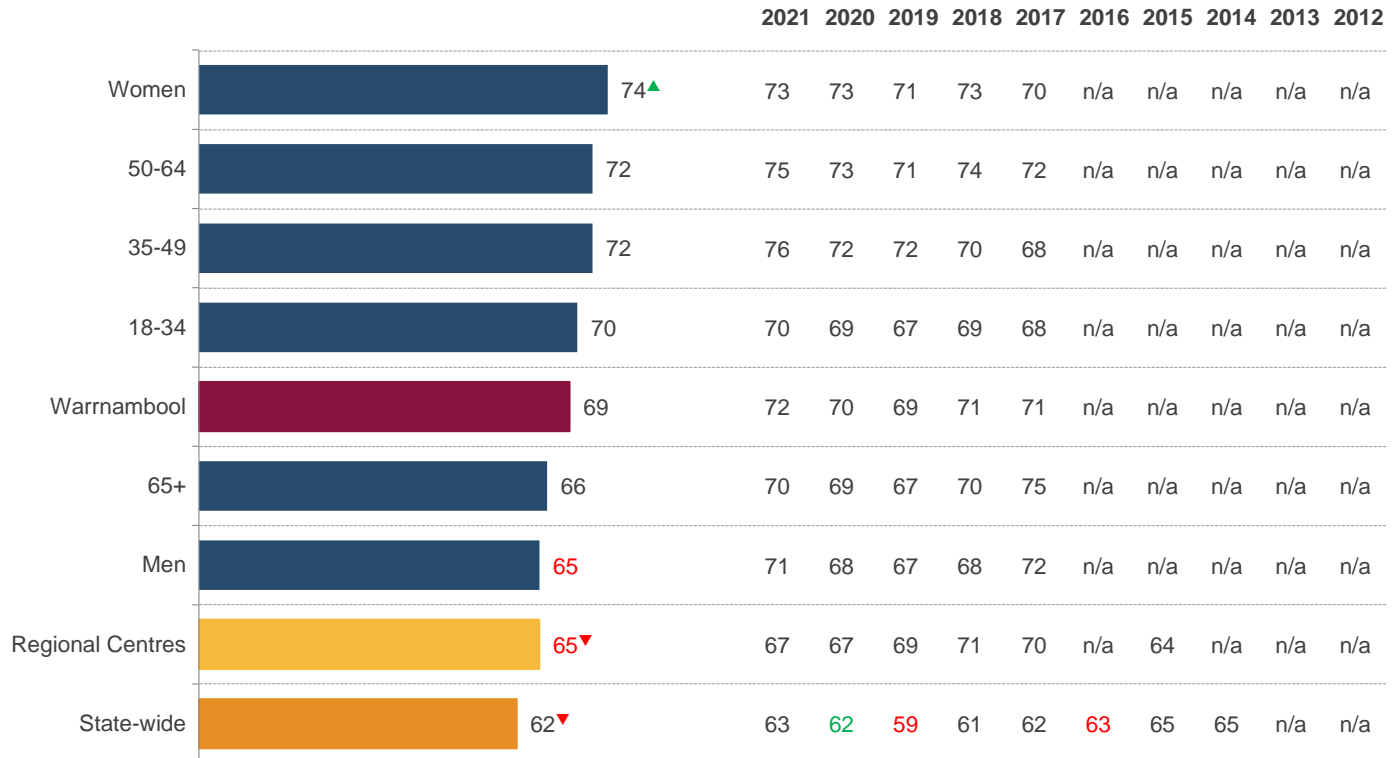
Q2. How has Council performed on 'Business and community development' over the last 12 months?
Base: All respondents. Councils asked State-wide: 13 Councils asked group: 4



Tourism development importance



2022 tourism development importance (index scores)



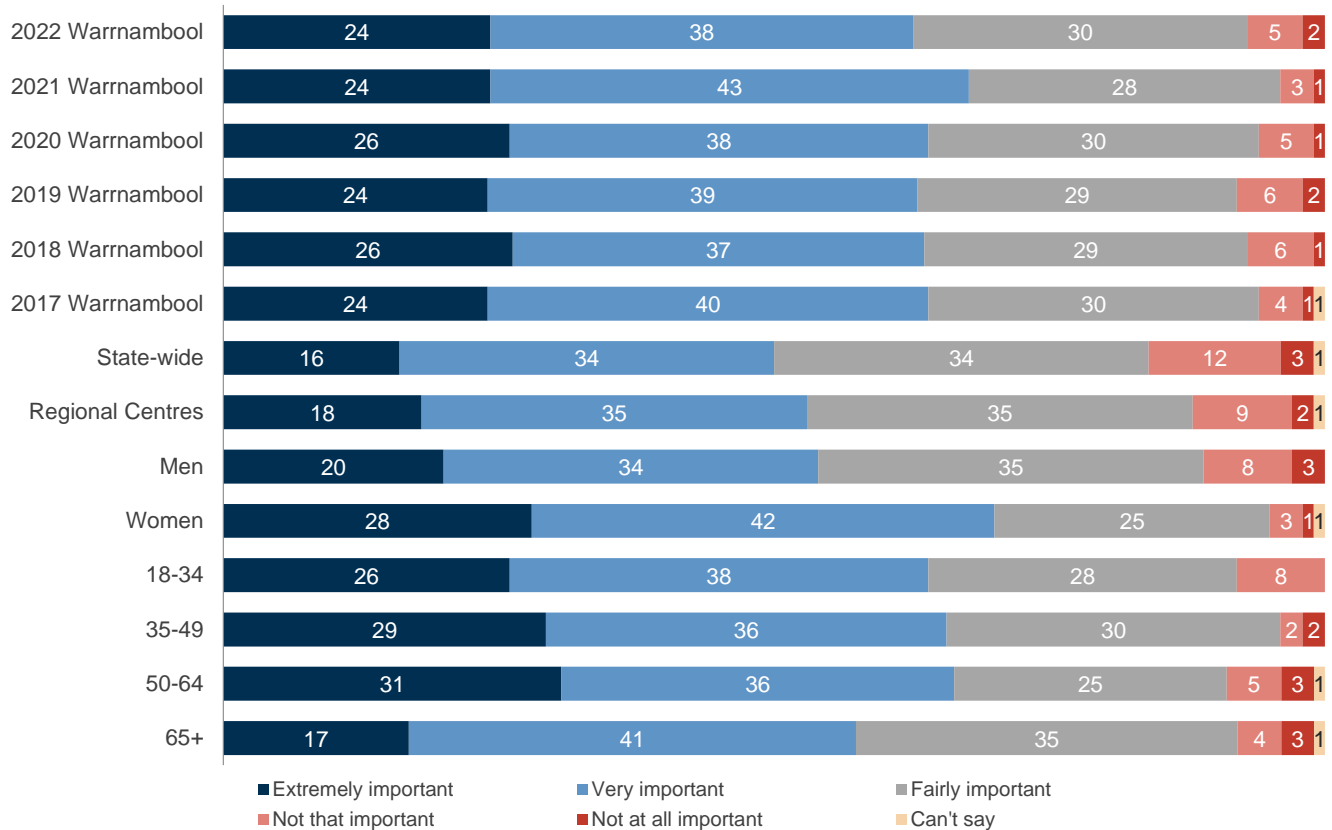
Q1. Firstly, how important should 'Tourism development' be as a responsibility for Council?
Base: All respondents. Councils asked State-wide: 9 Councils asked group: 3
Note: Please see Appendix A for explanation of significant differences.



Tourism development importance



2022 tourism development importance (%)



Q1. Firstly, how important should 'Tourism development' be as a responsibility for Council?
Base: All respondents. Councils asked State-wide: 9 Councils asked group: 3

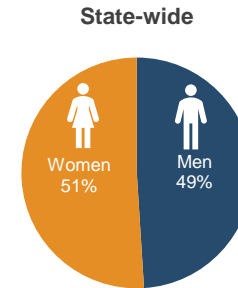
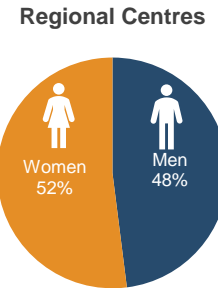
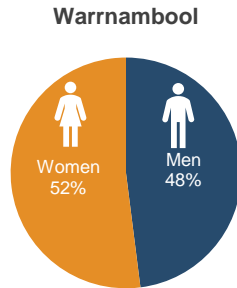
Detailed demographics



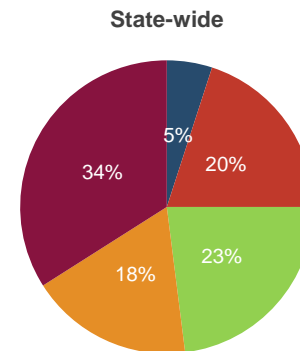
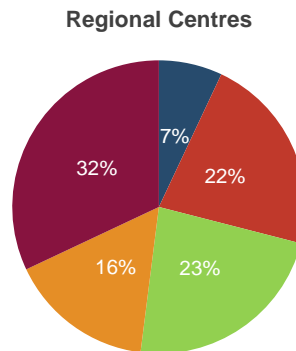
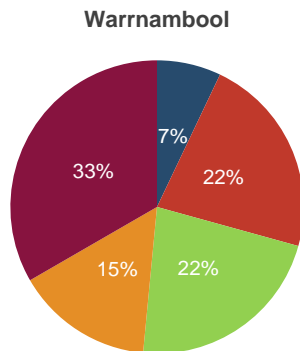


Gender and age profile

2022 gender



2022 age



■ 18-24 ■ 25-34 ■ 35-49 ■ 50-64 ■ 65+

■ 18-24 ■ 25-34 ■ 35-49 ■ 50-64 ■ 65+

■ 18-24 ■ 25-34 ■ 35-49 ■ 50-64 ■ 65+

S3. [Record gender] / S4. To which of the following age groups do you belong?

Base: All respondents. Councils asked State-wide: 67 Councils asked group: 9

Please note that for the reason of simplifying reporting, interlocking age and gender reporting has not been included in this report. Interlocking age and gender analysis is still available in the dashboard and data tables provided alongside this report.

Appendix A: Index scores, margins of error and significant differences

Appendix A: Index Scores



Index Scores

Many questions ask respondents to rate council performance on a five-point scale, for example, from ‘very good’ to ‘very poor’, with ‘can’t say’ also a possible response category. To facilitate ease of reporting and comparison of results over time, starting from the 2012 survey and measured against the state-wide result and the council group, an ‘Index Score’ has been calculated for such measures.

The Index Score is calculated and represented as a score out of 100 (on a 0 to 100 scale), with ‘can’t say’ responses excluded from the analysis. The ‘% RESULT’ for each scale category is multiplied by the ‘INDEX FACTOR’. This produces an ‘INDEX VALUE’ for each category, which are then summed to produce the ‘INDEX SCORE’, equating to ‘60’ in the following example.

Similarly, an Index Score has been calculated for the Core question ‘Performance direction in the last 12 months’, based on the following scale for each performance measure category, with ‘Can’t say’ responses excluded from the calculation.

SCALE CATEGORIES	% RESULT	INDEX FACTOR	INDEX VALUE
Very good	9%	100	9
Good	40%	75	30
Average	37%	50	19
Poor	9%	25	2
Very poor	4%	0	0
Can’t say	1%	--	INDEX SCORE 60

SCALE CATEGORIES	% RESULT	INDEX FACTOR	INDEX VALUE
Improved	36%	100	36
Stayed the same	40%	50	20
Deteriorated	23%	0	0
Can’t say	1%	--	INDEX SCORE 56

Appendix A: Margins of error



The sample size for the 2022 State-wide Local Government Community Satisfaction Survey for Warrnambool City Council was n=400. Unless otherwise noted, this is the total sample base for all reported charts and tables.

The maximum margin of error on a sample of approximately n=400 interviews is +/-4.9% at the 95% confidence level for results around 50%. Margins of error will be larger for any sub-samples. As an example, a result of 50% can be read confidently as falling midway in the range 45.1% - 54.9%.

Maximum margins of error are listed in the table below, based on a population of 27,700 people aged 18 years or over for Warrnambool City Council, according to ABS estimates.

Demographic	Actual survey sample size	Weighted base	Maximum margin of error at 95% confidence interval
Warrnambool City Council	400	400	+/-4.9
Men	199	192	+/-6.9
Women	201	208	+/-6.9
18-34 years	47	117	+/-14.4
35-49 years	44	90	+/-14.9
50-64 years	98	62	+/-9.9
65+ years	211	132	+/-6.7

Appendix A: Significant difference reporting notation



Within tables and index score charts throughout this report, statistically significant differences at the 95% confidence level are represented by upward directing green (▲) and downward directing red arrows (▼).

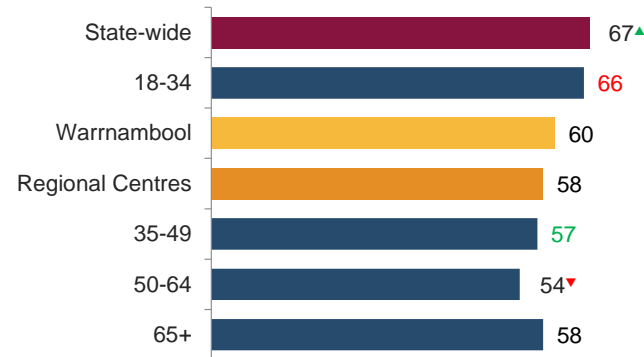
Significance when noted indicates a significantly higher or lower result for the analysis group in comparison to the 'Total' result for the council for that survey question for that year. Therefore in the example below:

- ▲ The state-wide result is significantly higher than the overall result for the council.
- ▼ The result among 50-64 year olds is significantly lower than for the overall result for the council.

Further, results shown in green and red indicate significantly higher or lower results than in 2021. Therefore in the example below:

- The result among 35-49 year olds in the council is **significantly higher** than the result achieved among this group in 2021.
- The result among 18-34 year olds in the council is **significantly lower** than the result achieved among this group in 2021.

2022 overall performance (index scores)
(example extract only)



Appendix A: Index score significant difference calculation



The test applied to the Indexes was an Independent Mean Test, as follows:

$$Z \text{ Score} = (\$1 - \$2) / \text{Sqrt} ((\$5^2 / \$3) + (\$6^2 / \$4))$$

Where:

- \$1 = Index Score 1
- \$2 = Index Score 2
- \$3 = unweighted sample count 1
- \$4 = unweighted sample count 2
- \$5 = standard deviation 1
- \$6 = standard deviation 2

All figures can be sourced from the detailed cross tabulations.

The test was applied at the 95% confidence interval, so if the Z Score was greater than +/- 1.954 the scores are significantly different.

Appendix B: Further project information

Appendix B: Further information



Further information about the report and explanations about the State-wide Local Government Community Satisfaction Survey can be found in this section including:

- Background and objectives
- Analysis and reporting
- Glossary of terms

Detailed survey tabulations

Detailed survey tabulations are available in supplied Excel file.

Contacts

For further queries about the conduct and reporting of the 2022 State-wide Local Government Community Satisfaction Survey, please contact JWS Research on

(03) 8685 8555 or via email:

admin@jwsresearch.com

Appendix B: Survey methodology and sampling



The 2022 results are compared with previous years, as detailed below:

- 2021, n=400 completed interviews, conducted in the period of 28th January – 18th March.
- 2020, n=400 completed interviews, conducted in the period of 30th January – 22nd March.
- 2019, n=400 completed interviews, conducted in the period of 1st February – 30th March.
- 2018, n=400 completed interviews, conducted in the period of 1st February – 30th March.
- 2017, n=400 completed interviews, conducted in the period of 1st February – 30th March.
- 2016, n=400 completed interviews, conducted in the period of 1st February – 30th March.
- 2015, n=400 completed interviews, conducted in the period of 1st February – 30th March.
- 2014, n=400 completed interviews, conducted in the period of 31st January – 11th March.
- 2013, n=401 completed interviews, conducted in the period of 1st February – 24th March.
- 2012, n=400 completed interviews, conducted in the period of 18th May – 30th June.

Minimum quotas of gender within age groups were applied during the fieldwork phase. Post-survey weighting was then conducted to ensure accurate representation of the age and gender profile of the Warrnambool City Council area.

Any variation of +/-1% between individual results and net scores in this report or the detailed survey tabulations is due to rounding. In reporting, '—' denotes not mentioned and '0%' denotes mentioned by less than 1% of respondents. 'Net' scores refer to two or more response categories being combined into one category for simplicity of reporting.

This survey was conducted by Computer Assisted Telephone Interviewing (CATI) as a representative random probability survey of residents aged 18+ years in Warrnambool City Council.

Survey sample matched to the demographic profile of Warrnambool City Council as determined by the most recent ABS population estimates was purchased from an accredited supplier of publicly available phone records, including up to 60% mobile phone numbers to cater to the diversity of residents within Warrnambool City Council, particularly younger people.

A total of n=400 completed interviews were achieved in Warrnambool City Council. Survey fieldwork was conducted in the period of 27th January – 24th March, 2022.

Appendix B: Analysis and reporting



All participating councils are listed in the State-wide report published on the DELWP website. In 2022, 67 of the 79 Councils throughout Victoria participated in this survey. For consistency of analysis and reporting across all projects, Local Government Victoria has aligned its presentation of data to use standard council groupings. Accordingly, the council reports for the community satisfaction survey provide analysis using these standard council groupings. Please note that councils participating across 2012-2022 vary slightly.

Council Groups

Warrnambool City Council is classified as a Regional Centres council according to the following classification list:

- Metropolitan, Interface, Regional Centres, Large Rural & Small Rural.

Councils participating in the Regional Centres group are:

- Ballarat, Greater Bendigo, Greater Geelong, Horsham, Latrobe, Mildura, Wangaratta, Warrnambool and Wodonga.

Wherever appropriate, results for Warrnambool City Council for this 2022 State-wide Local Government Community Satisfaction Survey have been compared against other participating councils in the Regional Centres group and on a state-wide basis. Please note that council groupings changed for 2015, and as such comparisons to council group results before that time can not be made within the reported charts.

Appendix B: 2012 survey revision



The survey was revised in 2012. As a result:

- The survey is now conducted as a representative random probability survey of residents aged 18 years or over in local councils, whereas previously it was conducted as a 'head of household' survey.
- As part of the change to a representative resident survey, results are now weighted post survey to the known population distribution of Warrnambool City Council according to the most recently available Australian Bureau of Statistics population estimates, whereas the results were previously not weighted.
- The service responsibility area performance measures have changed significantly and the rating scale used to assess performance has also changed.

As such, the results of the 2012 State-wide Local Government Community Satisfaction Survey should be considered as a benchmark. Please note that comparisons should not be made with the State-wide Local Government Community Satisfaction Survey results from 2011 and prior due to the methodological and sampling changes. Comparisons in the period 2012-2022 have been made throughout this report as appropriate.

Appendix B: Core, optional and tailored questions



Core, optional and tailored questions

Over and above necessary geographic and demographic questions required to ensure sample representativeness, a base set of questions for the 2022 State-wide Local Government Community Satisfaction Survey was designated as 'Core' and therefore compulsory inclusions for all participating Councils.

These core questions comprised:

- Overall performance last 12 months (Overall performance)
- Value for money in services and infrastructure (Value for money)
- Contact in last 12 months (Contact)
- Rating of contact (Customer service)
- Overall council direction last 12 months (Council direction)
- Community consultation and engagement (Consultation)
- Decisions made in the interest of the community (Making community decisions)
- Condition of sealed local roads (Sealed local roads)
- Waste management

Reporting of results for these core questions can always be compared against other participating councils in the council group and against all participating councils state-wide. Alternatively, some questions in the 2022 State-wide Local Government Community Satisfaction Survey were optional. Councils also had the ability to ask tailored questions specific only to their council.

Appendix B: Analysis and reporting



Reporting

Every council that participated in the 2022 State-wide Local Government Community Satisfaction Survey receives a customised report. In addition, the State government is supplied with this State-wide summary report of the aggregate results of 'Core' and 'Optional' questions asked across all council areas surveyed, which is available at:

<https://www.localgovernment.vic.gov.au/our-programs/council-community-satisfaction-survey>

Tailored questions commissioned by individual councils are reported only to the commissioning council and not otherwise shared unless by express written approval of the commissioning council.

Appendix B: Glossary of terms



Core questions: Compulsory inclusion questions for all councils participating in the CSS.

CSS: 2022 Victorian Local Government Community Satisfaction Survey.

Council group: One of five classified groups, comprising: metropolitan, interface, regional centres, large rural and small rural.

Council group average: The average result for all participating councils in the council group.

Highest / lowest: The result described is the highest or lowest result across a particular demographic sub-group e.g. men, for the specific question being reported. Reference to the result for a demographic sub-group being the highest or lowest does not imply that it is significantly higher or lower, unless this is specifically mentioned.

Index score: A score calculated and represented as a score out of 100 (on a 0 to 100 scale). This score is sometimes reported as a figure in brackets next to the category being described, e.g. men 50+ (60).

Optional questions: Questions which councils had an option to include or not.

Percentages: Also referred to as ‘detailed results’, meaning the proportion of responses, expressed as a percentage.

Sample: The number of completed interviews, e.g. for a council or within a demographic sub-group.

Significantly higher / lower: The result described is significantly higher or lower than the comparison result based on a statistical significance test at the 95% confidence limit. If the result referenced is statistically higher or lower then this will be specifically mentioned, however not all significantly higher or lower results are referenced in summary reporting.

State-wide average: The average result for all participating councils in the State.

Tailored questions: Individual questions tailored by and only reported to the commissioning council.

Weighting: Weighting factors are applied to the sample for each council based on available age and gender proportions from ABS census information to ensure reported results are proportionate to the actual population of the council, rather than the achieved survey sample.

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Managing Director
mzucker@jwsresearch.com

Katrina Cox
Director of Client Services
kcox@jwsresearch.com



7.2. AUDIT & RISK COMMITTEE - BIENNIAL REPORT OF ACTIVITIES

DIRECTORATE : Corporate Strategies

PURPOSE:

To present the Audit and Risk Committee biennial report.

EXECUTIVE SUMMARY

- Council is required by the Local Government Act 2020 (the Act) to establish an Audit and Risk Committee (the Committee) as an advisory committee of Council.
- Under the Act, and as captured in the updated Audit and Risk Committee Charter endorsed by Council on the 6 July 2020, the Audit and Risk Committee must prepare a biennial report on activities to Council. This paper satisfies this reporting requirement.

MOVED: CR BEN BLAIN
SECONDED: CR ANGIE PASPALIARIS

That Council notes the Audit and Risk Committee biennial report which details activities of the Committee covering the meetings held on the 01 January and 30 June 2022.

CARRIED - 7:0

BACKGROUND

The Audit and Risk Committee (the Committee) is an independent advisory committee to Council established under section 54 of the Local Government Act 2020.

The purpose of the Committee is to advise Council on the effectiveness of the organisation's systems, processes and culture for complying with its legal and financial obligations and the management of risk. In fulfilling this role, the Committee is to aid in the implementation of the Council Plan.

The Committee is accountable to and reports directly to Council.

The Committee's work is to be informed by the requirements of the Act and best practice in audit, risk and governance principles and processes.

FINANCIAL IMPACT

There are no direct financial or resource impacts arising from this report.

LEGISLATION/POLICY/COUNCIL PLAN CONTEXT

5 Practice good governance through openness and accountability while balancing aspirations with sound financial management

5.2 Develop policies, strategic plans and processes to address local and regional issues, guide service provision and ensure operational effectiveness

5.3 Ensure financial sustainability through effective use of Council's resources and assets and prudent management of risk

COMMUNITY IMPACT/CONSULTATION

Given the nature of this internal report, no external stakeholder consultation with the community has been undertaken in the preparation of the report.

LEGAL RISK/IMPACT

The Audit and Risk Committee has an oversight role in the identification and mitigation of risks.

OFFICERS' DECLARATION OF INTEREST

No officer's declaration of interest noted.

CONCLUSION

That Council notes the Audit and Risk Committee biannual report.

ATTACHMENTS

1. Report of Activities 1st Half 2022 [7.2.1 - 7 pages]



Warrnambool City Council Audit and Risk Committee

2022 Biannual Report of Activities
January to June 2022

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1. Introduction

The Audit and Risk Committee (*the Committee*) is an independent advisory committee to Council established under section 54 of the Local Government Act 2020.

The purpose of *the Committee* is to advise Council on the effectiveness of the organisation's systems, processes and culture for complying with its legal and financial obligations and the management of risk. In fulfilling this role, *the Committee* is to aid in the implementation of the Council Plan.

The Committee is accountable to and reports directly to Council.

The Committee's work is to be informed by the requirements of *the Act* and best practice in audit, risk and governance principles and processes.

2. Authority

The Committee does not have executive powers or authority to implement actions in areas over which management has responsibility and does not have any delegated financial responsibility. The Committee does not have any management functions and is therefore independent of management.

The Committee's role is to report to Council and provide appropriate advice and recommendations on matters relevant to this Charter in order to facilitate decision-making by Council in relation to the discharge of its responsibilities.

The Committee has the authority to:

- Seek resolution on any disagreements between management and the external auditors on financial reports;
- Review all auditing, planning and outcomes;
- Seek any information it requires from Council members, officers and external parties via the Chief Executive.
- Formally meet with Council officers, internal and external auditors as necessary.
- Address issues brought to the attention of the Committee, including responding to requests from Council for advice which is within the parameters of the Committee's terms of reference.
- The Chair has no executive authority on behalf of Council but can be consulted as required, as a sounding board by the Chief Executive or his/her delegate on matters that arise regarding audit, risk management or governance related issues.

3. Key Activities and Recommendations

To achieve its objectives, the key activities undertaken by the Committee in the second half of the year included:

- Approve the annual strategic internal audit plan with the high-level specifications for the 5 reviews to be completed in 2022. There is also capacity within the plan for a 6th review on the discretion of the committee.
- Provided oversight of the CCTV system annual reporting.

- Noted changes in significant accounting policies and the Local Government Performance Reporting Framework.
- Reviewed and noted the asset valuation methodology which will be used to revalue assets as part of the 2021/22 financial statements.
- Review and approval of the annual external Audit Strategy provided by the Agent of the Auditor General identifying the audit approach, deliverables and audit plan.
- Were provided updates on the VAGO Performance Audit relating to Fraud Controls over Local Government grants which Council was a participant.
- Received and reviewed the following internal audit reports:
 - Project Management
 - Human Resources – Workforce Development
- Received and approved the outcomes of the Audit and Risk Committee self-assessment tool that was completed by members.
- Approved the updated audit and risk committee charter.
- Acknowledged the amendments to the Fraud and Corruption control procedure which were consistent with the findings from Ombudsman.
- Received updates on Council's Workplace Health and Safety, including specific reports on relevant issues as they arose.
- Review of the Annual Risk Management Report analysing claims and premium history for all classes of insurance including Workcover as part of the regular Risk Adherence Report.
- Tabled and noted quarterly financial reports in accordance with statutory requirements.
- Noted CEO expenditure on a quarterly basis.
- Noted Councillor reimbursements on a biannual basis.
- Reviewed the findings of examinations by regulatory agencies (e.g. VAGO, IBAC), and any auditor (internal or external auditors) observations.
- Received updates from the VAGO sector director.

4. Audit and Risk Committee Membership

The composition of the Committee according to its charter is three independent members and two Council representatives.

The membership of the Committee is set out below:

4.1 Independent Members

Mr Dennis Farley (Chairman – March 2022 meeting). Retired from the committee following the March 2022 meeting.

Mr Leon Fitzgerald (Chairman – May 2022 meeting)

Mr Aswin Kumar

Ms Donna Porritt

4.2 Council Representatives

Cr Angie Paspaliaris

Cr Ben Blain

5. Meetings and Attendance

There are a minimum of four scheduled meetings of the Audit and Risk which occur in March, May, August and November. If required special meetings will be conducted in addition to the scheduled quarterly meetings. At the August meeting the Committee will consider the Annual Financial Report and the Annual Performance Statement.

A summary of meeting dates and attendance is shown in the table below.

Attendee	Role	8/3/2022 Quarterly	17/5/2022 Quarterly	30/8/2022 Quarterly	15/11/2022 Quarterly
Mr Dennis Farley	Chairperson	Attended	N/A	N/A	N/A
Mr Leon Fitzgerald	Chairperson	Attended (as a non-voting member)	Attended		
Ms Donna Porritt	Member	Attended	Attended		
Mr Ashwin Kumar	Member	Attended	Did Not Attend		
Cr Angie Paspaliaris	Councillor	Attended	Attended		
Cr Ben Blain	Councillor	Attended	Attended		

6. Internal Audit

6.1 Internal Audit Service Provider

The internal audit service providers, Crowe, continued to provide such services to Council in the 2022 calendar year. The internal audit contract will conclude at the 31st December 2023 following the take-up of a two year option at the end of 2021 calendar year.

Representatives from Crowe attend the Committee meetings and present the outcomes of the audits they had undertaken, engaging fully with the Committee in discussions arising from those audits.

The Internal Auditors also met out of session with the Chair to discuss matters relevant to the Committee's activities.

6.2 Strategic Internal Audit Plan

The 2022 strategic internal audit plan was presented to the Audit and Risk committee at the March meeting. The table below sets out the planned internal reviews for the year.

Internal Review Area	Planned Presentation to Audit Committee	Completed	Recommendations		
			High Risks	Medium Risks	Low Risk
Human Resources – Workforce Development	March 2022	Yes	0	16	1
Project Management	March 2022	Yes	0	6	3
Delegations (Instruments of Delegation)	August 2022	No			
Governance Framework	August 2022	No			
Fleet Management (passenger fleet)	August 2022	No			
Leisure Centres	November 2022	No			

Tendering Processes	November 2022	No			
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Final internal audit reports are reviewed and discussed by the Committee at each of the scheduled meetings. The status of Internal Audit recommendations are reported to the Committee on a quarterly basis and the Committee discuss management progress in closing out open recommendations.

6.3 Oversight of Internal Audit Performance

An assessment tool has been established to enable Council officers to provide feedback on the performance of the internal audit function. This has been completed by the relevant Council officers and the results from the assessment are as follows:

Overall, the results reflect a positive relationship with an acknowledgement that the reviews have added value to the organisation.

The areas that scored comparatively lowest were, was the audit conducted at the best time (2.71) and was there minimal disruption to the department (2.43). This is a reflection that the audit is generally in addition to the normal workload and most departments are thinly resourced. A possible way to help mitigate this is to discuss with timing of reviews with the relevant departments during the development of the Strategic Internal Audit Plan.

There were some comments made about the level of detail that the internal audits went into with some managers feeling that there should be a deeper dive into processes and compliance. This could be achieved during the planning stage of the audit with testing of specific processes included in the review.

6.4 Implementation of Audit Recommendations

The Committee continued to encourage management to implement Internal Audit recommendations in a timely manner to ensure that better practices and controls in council's services are achieved.

A particularly focus of these reviews is to ensure that the high risk recommendations are closed out within appropriate timeframes. There are currently 5 high risk recommendations with 3 complete and 2 progressing, with all recommendations within the appropriate timeline.

7. External Audit

The Victorian Auditor General's Office (VAGO) has appointed a representative to conduct the 2021/22 external audit of Warrnambool City Council which is RSD Audit, with Nick Bell as a the lead partner.

RSD Audit presented the VAGO audit strategy at the March 2022 meeting which highlighted the areas of audit focus including valuation of property, infrastructure, plant and equipment, monetary and non-monetary contributions and the impact of COVID19 on the financial report.

The planning phase of the audit was completed in December 2021 and the interim audit was conducted during May 2022.

8. Duties and Responsibilities

The Committee's activities are focussed on discharging its responsibilities set out in its Charter. To ensure that the Committee completes its work, the Committee prepares an Annual Work Plan setting out the activities it needs to complete and the timing of each.

9. Audit and Risk Committee Performance Review

The Audit & Risk Committee has adopted the Local Government Victoria template for the self-assessment of the committee's performance. The template is very detailed and over time will allow for some benchmarking within the sector.

The self-assessment was completed by the members of the Committee and covered the 2021 calendar year.

Overall, the responses showed that the committee was performing to a high standard and there was a good working relationship between the Committee and Council with support from the internal and external audit functions. The average score for the survey was 167.20 (out of 200) which equates to an 83.60% performance score. This performance score is slightly below the previous score in 2020 of 88.02%.

Some of the area's for improvement that were highlighted from the survey include:

- Council's identification and management of emerging business risks
- The efficient closing out of management actions
- Additional committee meeting to allow for more frequent updates
- Additional reporting into Council

10. Conclusion

In closing I am satisfied that the Audit and Risk Committee has met its obligations in line with its charter of assisting Council through independent review of financial, risk and system controls that facilitate the organisation's maintenance of management controls and further ethics development.

The high level of co-operative and detailed support from Council officers and our Internal Auditors, Crowe, in assisting the independent members and the Councillors on this Committee to complete their important task is noteworthy and very much appreciated. The Committee is satisfied that the systems and processes in place, do and will ensure ongoing compliance with accepted quality business practices that are expected of local government. Both Internal and External Auditors have informed the Chair they are very satisfied with the sound working relationships they have with management.

Mr Leon Fitzgerald
Audit and Risk Committee Chair
Warrnambool City Council

7.3. AUDIT & RISK COMMITTEE SELF-ASSESSMENT

DIRECTORATE : Corporate Strategies

PURPOSE:

To provide Council with the annual performance evaluation of the Audit and Risk Committee.

EXECUTIVE SUMMARY

- The Audit & Risk Committee charter under section 9 (c) sets out the requirement for the Chief Executive Officer to table the results of the annual performance evaluation at the next Council meeting.
- The performance evaluation is a self-assessment by the independent members of the committee and is based on a survey from Local Government Victoria.
- The three independent members and two Council representatives completed the survey and the results were consolidated by Council officers.
- Overall, the results were positive with an 84% satisfaction result.
- A number of areas have been identified for future improvement with the committee and the Council officers developing plans for these.

MOVED: CR RICHARD ZIEGELER
SECONDED: CR ANGIE PASPALIARIS

That the Audit and Risk Committee performance evaluation be received.

CARRIED - 7:0

BACKGROUND

Following the implementation of the Local Government Act 2020, Council is required under Section 54 (4) of the Act to provide a copy of the annual performance evaluation for tabling at the next Council meeting.

Council adopted a new Audit and Risk Committee charter in July 2020 that reflects the legislative requirements under section 9 (c).

ISSUES

The performance evaluation is a self-assessment by the independent members of the committee and is based on a survey from local Government Victoria.

The survey was completed by the three independent members and the two Council representatives of the committee and the results were consolidated by Council officers. Overall, the results were positive with an 84% satisfaction result, this performance score is slightly below the previous score in 2020 of 88%. The survey did highlight a number of areas for future improvement which included:

- Council's identification and management of emerging business risks
- The efficient closing out of management actions
- Additional committee meeting to allow for more frequent updates
- Additional reporting into Council

The committee and Council officers will work together to develop action plans to address these issues.

FINANCIAL IMPACT

No financial Impact.

LEGISLATION/POLICY/COUNCIL PLAN CONTEXT

5 Practice good governance through openness and accountability while balancing aspirations with sound financial management

5.3 Ensure financial sustainability through effective use of Council's resources and assets and prudent management of risk

TIMING

The performance evaluation is to be included in a Council meeting following it's presentation to the Audit and Risk Committee.

LEGAL RISK/IMPACT

No risks identified.

OFFICERS' DECLARATION OF INTEREST

No conflicts of interest were declared.

CONCLUSION

The Chief Executive is tabling the performance evaluation to Council as required under section 9 (c) of the Audit and Risk Committee charter.

ATTACHMENTS

1. 2021 Self Assessment [7.3.1 - 3 pages]

ID	Questions	Average Score
A. Audit Committee Charter		
1	The Charter clearly articulates the Committee's roles and responsibilities and provides it with the necessary authority to discharge them	4.80
2	The Charter facilitates and supports the effective operation of the Committee	4.40
3	During the past year, the Committee has adequately addressed all of its responsibilities as detailed in the Charter	4.40
4	The Charter ensures the Committee is sufficiently independent from the management of Council	4.20
Totals		17.80

89.00%

Comments / Suggestions for Improvement

- I believe the committee has fulfilled its duties and remained independent from the management of council

B. Skills and Experience		
5	The Committee has the desired mix of skills to allow it to effectively discharge its responsibilities	4.00
6	The Committee has been able to analyse and critically evaluate information presented to it by management	4.20
7	Committee members can access advice and /or training to improve their skills and knowledge	4.00
8	The Committee's collective skills are adequate in light of its responsibilities	4.00
9	The Committee has responded appropriately where significant risks and/or control breakdowns have been brought to its attention	4.40
10	The Committee has shown an openness to new ideas and different views in its deliberations	4.40
11	The Committee has been sufficiently probing and challenging in its deliberations.	4.00
Totals		29.00

82.86%

Comments / Suggestions for Improvement

- Improvement has happened this year with a training allowance for members
- Mix of skills and experience from committee has assisted my development as a committee member
- Actions taken by the committee I believe were proportional to control breakdowns

C. Understanding the Business		
12	The Committee has an adequate understanding of Council's:	
	Risk management framework and risk profile	4.00
	Internal control framework to mitigate significant risks	4.20
	Financial and statutory reporting requirements	4.20
	Legislative compliance requirements	4.00
13	The Committee receives appropriate briefings on:	
	Current and emerging business risks	3.80
	Changes in financial reporting requirements	4.20
	Changes in performance reporting requirements	3.80

	Integrity Body reports	4.00	
	Changes in the business/regulatory environment	4.20	
	Totals	36.40	80.89%

Comments / Suggestions for Improvement

- Not a lot information is detailed into the emerging business risks.

D. Meeting Administration and Conduct			
14	The Committee has had an appropriate number of meetings to properly discharge its responsibilities	4.20	
15	Agendas are structured to allow sufficient time to discuss all critical issues	4.00	
16	The Committee receives agendas and supporting papers in sufficient time prior to meetings	4.00	
17	Agendas and supporting papers are of sufficient clarity and quality to enable the Committee to make informed decisions	4.00	
18	Committee meetings are well run and productive	4.20	
19	Committee minutes are appropriately maintained and provided to Council on a timely basis	4.20	
	Totals	24.60	82.00%

Comments / Suggestions for improvement

- Be good to receive agendas a bit earlier
- I would support 1 extra meeting per year

E. Communications with Council			
20	Committee reports to Council on its activities are appropriate	4.00	
	Totals	4.00	80.00%

Comments / Suggestions for improvement

- The twice yearly updates work well, could be advantageous to have chair available to when breakdowns occur to brief council
- Would support a more comprehensive report from the Audit & Risk Committee to other Councillors (where allowed)

F. Management Commitment & Support			
21	Information and briefing papers presented by management meet the Committee's expectations in respect of:		
	Council's risk profile and mitigating actions for key risks	4.20	
	Maintenance of a strong internal control environment that is effective in mitigating key risks	4.20	
	Management of Council's compliance and regulatory obligations	4.00	
	Council's external reporting requirements	4.40	
22	The Committee has a positive attitude to continuous improvement in its dealings with management	4.40	
	Totals	21.20	84.80%

Comments / Suggestions for improvement

- Sometimes I think that mitigating actions are a little slow

G. Internal Audit		
23	The Committee reviewed and approved the internal audit plan	4.40
24	The Committee considered the adequacy of internal audit resources	4.00
25	The Committee reviewed and approved any significant changes to the internal audit plan	4.20
26	The Committee is satisfied with the performance of the internal audit function	4.40
27	The Committee reviewed all internal audit reports and monitored management responses to recommendations	4.40
28	The Committee reviewed the Internal Audit Charter to ensure that appropriate structures, authority, access and reporting arrangements are in place for the internal audit function	4.40
Totals		25.80

86.00%

Comments / Suggestions for improvement

- Willingness to change audit program and work with the committee is positive
- Could more closely monitor management responses

H. External Audit		
29	The Committee reviewed external audit reports and management letters and monitored management responses to findings and recommendations made by external audit	4.40
30	The Committee provided feedback on the performance of external audit	4.00
Totals		8.40

84.00%

Comments / Suggestions for improvement

-

I. Other Comments [Please phrase your comments as opportunities for improvement]		
<p>- It is important members of the ARC receive the VAGO sector director updates and have the opportunity to attend the annual VAGO workshop. Members perhaps need to be apprised of professional development activities that are available and these should be covered by Council, where appropriate and within reason. Maybe the ARC should have been involved in the renewal of the contract for the Internal Auditor – not that I disagree with the decision made.</p> <p>- A most satisfactory performance by all board members, a very good mix of skills and experience and a co-operative and pro-active approach by all members of the committee.</p> <p>- Improvement in Risk capabilities in terms of determining Council's risk appetite, risk of opportunities and risk reporting etc.</p> <p>- Efficient close out of management actions</p> <p>- Internal & external audits generally work well</p>		
Grand Totals for all Responses		167.20
		83.60%

7.4. AUDIT & RISK COMMITTEE CHARTER UPDATE

DIRECTORATE/DEPARTMENT : Governance

PURPOSE:

This Report is to provide Council with an opportunity to review and adopt the amended Audit and Risk Committee Charter (the Charter).

EXECUTIVE SUMMARY

The Audit and Risk Committee recommended a review of the Audit and Risk Committee Charter be undertaken by officers.

This review was undertaken in order to ensure clarity and consistency of the Committee's responsibilities under the Local Government Act 2020.

The review of the Charter has now been undertaken and was submitted to the Audit and Risk Committee's March meeting for the Committee's consideration. The Committee, at the March meeting endorsed the amendments to the Charter and recommend it to Council for their adoption.

MOVED: CR BEN BLAIN
SECONDED: CR ANGIE PASPALIARIS

That Council adopt the Audit and Risk Committee Charter as found at Attachment 1.

CARRIED - 7:0

BACKGROUND

With the introduction of the Local Government Act 2020, changes were included around the roles and responsibilities of the Audit and Risk Committee to align the role of the committee with the responsibilities of Council under the new Act. An example of this is the introduction of the overarching governance principles which were a new addition under the Local Government Act 2020 that had existed under the Local Government Act 1989. Now, under the 2020 Act, one of the responsibilities of the Audit and Risk Committee is to monitor the compliance of Council policies with the overarching governance principles.

At the request of the Committee, the Charter has been reviewed and updated to ensure clarity and consistency against the Committee's responsibilities under the Local Government Act 2020. This is the first time the Charter has been updated since the first iteration of the Charter was adopted as part of the Local Government Act 2020 implementation. As the Act has now been in operation for almost two years, it presented a good opportunity to reflect on whether the new Charter under the new Act was clear and specific in relation to the role of the Audit and Risk Committee under the new legislative requirements and to make improvements where these were able to be identified.

The draft Charter was submitted to the March Audit and Risk Committee for their review and endorsement. At that meeting, the Audit and Risk Committee endorsed the draft Charter and recommend it to Council for adoption.

ISSUES

The main amendments include the addition of section 3 regarding the role of the Audit and Risk Committee in relation to the functions and responsibilities set out in section 54(2) of the Local Government Act 2020. This provides a more detailed outline of how the committee will work to achieve their responsibilities as set out in section 54(2) of the Local Government Act 2020.

Also included is some further detail around the appointment of external members, their term of appointment and clarifies information about the Chairperson's appointment and role.

FINANCIAL IMPACT

Nil

LEGISLATION / POLICY / COUNCIL PLAN CONTEXT

5 An effective Council

5.5 Organisational and financial sustainability: Council will ensure organisational and financial sustainability through the effective and efficient use of Council's resources and assets.

5.6 Risk mitigation: Council will mitigate and manage organisational risks through sound management systems and processes.

TIMING

Although the Charter was not due for review until 2023, at the request of the Audit and Risk Committee the Charter has been reviewed and updated to support the new requirements outlined in the Local Government Act 2020.

COMMUNITY IMPACT / CONSULTATION

The Manager Governance, Property, Projects and Legal consulted with the Manager Finance to ensure the Charter appropriately detailed financial and audit matters in accordance with current Council practices.

The Audit and Risk Committee have reviewed and are recommending the amended Audit and Risk Committee Charter to Council for adoption.

LEGAL RISK / IMPACT

Nil.

OFFICERS' DECLARATION OF INTEREST

Nil

CONCLUSION

In accordance with the Audit and Risk Committee actions, the Audit and Risk Committee Charter has been reviewed and updated and has been issued to the Audit and Risk Committee for their consideration. The Audit and Risk Committee have endorsed the amended Charter and it is now presented to Council and recommended for adoption.

ATTACHMENTS

1. ARC Charter - Mar 2022 [7.4.1 - 10 pages]



WARRNAMBOOL
CITY COUNCIL

AUDIT & RISK COMMITTEE CHARTER

July 2022

www.warrnambool.vic.gov.au

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1. PURPOSE

The Audit and Risk Committee (*the Committee*) is an independent advisory committee to Council established under section 53 of the Local Government Act 2020 (the Act). Pursuant to section 54(2) of the Act, this section specifies the functions and responsibilities of the Committee.

The purpose of *the Committee* is to advise Council on the effectiveness of the organisation's governance, risk, and financial internal control systems, processes and compliance culture to provide the Council with assurance and confidence in the integrity of these activities.

The Committee is accountable to and reports directly to Council.

The Committee's work is to be informed by the requirements of the Act, and best practice in audit, risk and governance principles and processes.

2. AUTHORITY

The Committee acts in an advisory capacity only. Pursuant to section 53(2) of the Act, the Committee does not have and therefore cannot exercise any executive powers or management functions. The Committee does not have any delegated financial responsibility.

The Committee does not have any management functions and is therefore independent of management.

The Committee's role is to report to Council and provide appropriate advice and recommendations on matters relevant to this Charter in order to facilitate decision-making by Council in relation to the discharge of its responsibilities.

The Committee has the authority to:

- Seek resolution on any disagreements between management and the external auditors on financial reports;
- Review all strategic audit planning and audit outcomes;
- Seek any information it requires from Council members, officers and external parties via the Chief Executive Officer.
- Formally meet with Council officers, internal and external auditors as necessary.
- Address issues brought to the attention of the Committee, including responding to requests from Council for advice which is within the parameters of the Committee's Charter.
- The Chair has no executive authority on behalf of Council but can be consulted as required, as a sounding board by the Chief Executive Officer or their delegate on matters that arise regarding audit, risk management or governance related issues.

The Chief Executive Officer will determine the reasonability of any request made to officers by the Committee, in particular those not specifically stipulated in the Charter.

3. ROLE OF THE COMMITTEE

The Committee functions and responsibilities, as dictated by section 54(2) of the Act, are to:

- a) Monitor the compliance of Council policies and procedures with
 - a. The overarching governance principles; and
 - b. The Act and the regulations, and any Ministerial directions'
- b) Monitor Council financial and performance reporting;
- c) Monitor and provide advice on risk management and fraud prevention systems and controls;
- d) Oversee inter and external audit functions.

To achieve this, the Committee will review and advise Council on specific internal systems and procedures of Council through:

- Assessing relevant Council policies to monitor compliance with the Act, including the overarching governance principles as set out in section 9 of the Act;
- Ensuring the appropriate application of Council's accounting policies, including ensuring compliance with the financial management principles set out in section 101 of the Act;
- Assessing and ensuring reliable and complete financial and performance reporting;
- Appraising the level and effectiveness of business continuity plans and enterprise risk management practices, include risks and risk controls and mitigations recording the risk register;
- Assessing internal fraud and corruption controls and the results of any control testing undertaken;
- Ensuring that internal and external auditors provide independent and objective analysis and reporting on governance, risk management, fraud controls and financial management.

The Committee will do this through the adoption and actioning of an annual work plan which will assist in achieving the abovementioned.

4. MEMBERSHIP

The Committee will be comprised of five members:

- One (1) independent Chairperson;
- Two (2) independent members; and
- Two (2) Councillors

All members shall have full and equal voting rights unless a member is unable to vote due to a conflict of interest.

The following requirements will apply to members and the Committee Chairperson

- a) In accordance with section 53(4), the Chair can only be an independent member of the Committee. It cannot be a Councillor.
- b) Council will appoint Committee members and the Committee Chairperson by Council resolution;
- c) A quorum of any meeting will be a least two independent members (which may include the Chairperson) and at least one Councillor member.
- d) The Chairperson shall be an independent member of *the Committee* and shall have a casting vote on occasions where there is an equal tally of votes on a matter. In the absence of the appointed Chairperson from a meeting, the meeting will appoint an acting Chairperson from the independent members present.

5. APPOINTMENT, TERM & CHAIR

5.1 Appointment

- a) Applications for external membership shall be made by way of public notice inviting expressions of interest
- b) The evaluation of potential members will be undertaken initially by the Chair utilising officer input as required and subsequently by the Mayor and Chief Executive, taking into account the experience of applicants and their likely ability to apply appropriate analytical and strategic management skills, and a recommendation for appointment will be put to Council.
- c) The independent members will, collectively, have expertise in:
 - a. financial management and risk,
 - b. experience in public sector management; and
 - c. be conversant with the financial and other reporting requirements.
- d) Council members (councillors) shall be appointed annually at Council's Annual (Statutory) Meeting.
- e) Remuneration will be paid to each external member of the Committee on the basis of an annual fee, with an additional amount paid to the Chairperson. Annual increases in the remuneration of Committee members will be limited to increases in the Consumer Price Index (CPI All Groups Melbourne) and adjusted annually on July 1.

5.2 Term

- a) Appointments shall be for a maximum term of four years. Option for reappointment, subject to successful performance reviews, are also available and a maximum of one extension.
- b) Where possible, the terms of external members should be arranged to ensure an orderly rotation and of overlap appointment membership, relative to the elected Council's quadrennial terms.
- c) If the Council proposes to remove an external member of the Committee, it must give written notice to the external member of its intention to do so and provide that external member with the opportunity to be heard by the Council, if that external member so requests.

5.3 Chair

- a) The Chairperson shall be appointed by Council from the external members of the Committee.
- b) In the absence of the appointed Chairperson from a meeting, the meeting will appoint an acting Chairperson from the external members present.
- c) The role of the Chair includes:
 - a. Assisting in determining the Agenda for Committee meetings
 - b. Chairing meeting of the Committee in accordance with the meeting Agenda
 - c. Preparation of the biannual Audit and Risk Committee Report that is to be provided to the Chief Executive Officer for tabling at the next practicable Council meeting.

6. MEETINGS

The following requirements shall apply to meetings of the Committee:

- a) The Committee shall meet as required, but at least quarterly each year.
- b) The Chief Executive, Director Corporate Strategies, Manager Financial Services, Manager Governance, Property, Projects & Legal, Manager Organisational Development and the internal auditor (whether a member of staff or contractor) should attend all meetings, except when the Committee chooses to meet 'in camera'. Other members of Council or Council staff may be invited to attend at the discretion of the Committee in consultation with the CEO, to advise and provide information when required.
- c) The Committee, without management present, will meet separately with the internal auditor and the external auditor, at least annually, to discuss issues of relevant interest.
- e) Representatives of the external auditor will attend a meeting to consider the draft annual standard statements, financial statements and the results of the external audit and may be invited to attend other meetings at the discretion of the Committee.
- f) A schedule of meetings and annual work plan will be developed and agreed by members. As an indicative guide, meetings would be arranged to coincide with relevant Council reporting deadlines.
- g) Additional meetings shall be convened at the discretion of the Chairperson or at the written request of any two (2) members of the Committee, the Chief Executive, the internal or external auditor.
- h) The agenda for each meeting shall take a structured format to comply with the Act. In addition, the agenda format shall reflect the Committee's annual work plan or matters where regular reports should be presented or identified.
- i) The agenda and supporting documentation will be circulated to members of the Committee at least one (1) week in advance of each meeting.
- j) Minutes will be reported to the Council after every meeting inclusive of any report(s) to explain any specific recommendations and key outcomes.
- k) The Corporate Strategies directorate shall provide secretarial and administrative support to the Committee.

7. REPORTING

- a) The Committee will prepare a biannual (twice a year) audit and risk report that describes the activities of the Committee and includes its findings and recommendations and provide a copy of the report to the Chief Executive Officer for tabling at the next Council meeting.
- b) The Committee may report, at any time, to Council on any matters of significance as determined by the Committee.
- c) The Committee Chairperson, will attend a briefing meeting of Councillors annually (in the period late October-mid November each year) to:
 - Summarise the activities of the Committee during the previous financial year;
 - Provide any recommendations to councillors in relation to the functioning of the Committee; and
 - Brief Council on key aspects of the Committee's proposed annual work plan for the following calendar year; and
 - Draw councillors' attention to any other matters which the Chairperson or Committee see as appropriate
- d) The Chairperson is entitled to attend any briefing of Councillors' meeting at any other time to bring any particular matters to the attention to Council which the Chairperson or Committee sees fit. Such meetings may be held with or without management present at the election of the Chairperson following consultation with the Mayor.
- e) The Committee Charter and details of its members will be published on Council's website.
- f) Council's Annual Report will contain information on the makeup of the Committee, number of meetings held and attended by Committee members, audit processes, details of any

remuneration paid to independent members during the reporting period and a summary of work completed by the Internal and External Auditor during the year.

8. FUNCTIONS AND RESPONSIBILITIES

The functions and responsibilities of the Committee include:

8.1 External Reporting

- a) Review Council's draft annual financial report, focusing on:
 - a. Accounting policies and Approved Accounting Standards;
 - b. Changes to accounting policies and Approved Accounting Standards;
 - c. The process used in making significant accounting estimates;
 - d. Significant adjustments to the financial report (if any) arising from the audit process;
 - e. Compliance with accounting standards and other reporting requirements of financial and nonfinancial information; and
 - f. Significant variances (with explanations thereof) from prior year's figures.
- b) Review and recommend adoption of the Annual Financial and Performance Statements to Council and review any significant changes and the reasons for the changes that may arise subsequent to any such recommendation but before the financial report is signed.
- c) Review the completeness of management reporting on the legislative performance indicators and the governance and management checklist as prescribed in the Local Government (Planning and Reporting) Regulations 2014.

8.2 External Audit

The Committee will:

- a) Oversee the external audit function
- b) Be briefed by the external auditor on the audit engagement and the overall audit strategy of the Victorian Auditor General's Office (VAGO) at the commencement of each year's audit;
- c) Discuss and review with the external auditor the scope of the audit and the planning of the audit;
- d) Discuss and review with the external auditor issues arising from the audit, including all Management Letters issued by the auditor for completeness and appropriateness;
- e) Ensure significant findings and recommendations made by the external auditor and management's proposed responses are received, discussed and appropriately actioned by management;
- f) Review on an annual basis the performance of the external auditors; and
- g) Maintain an awareness of local government performance audits undertaken by VAGO and any other relevant reviews undertaken by bodies such as IBAC and consider recommendations for action or implementation where appropriate.

8.3 Internal Audit

The Committee will:

- a) Oversee the internal audit function
- b) Be kept informed by Council officers of any process to appoint or terminate Council's internal audit service provider and provide advice to Council with respect to appointment of internal auditor services;
- c) Review the level of resources allocated to internal audit and the scope of its authority;

- d) Review the scope of the internal audit plan and programme and the effectiveness of the function. This review should consider whether, over a period of 3 years the internal audit plan systematically addresses:
 - a. Internal controls over significant areas of risk, including non-financial management control systems;
 - b. Internal controls over revenue, expenditure, assets and liability processes;
 - c. The efficiency, effectiveness and economy of significant Council programmes; and
 - d. Compliance with regulations, policies, best practice guidelines, instructions and contractual arrangements;
- e) Review the appropriateness of special internal audit assignments undertaken by internal audit at the request of Council or the Chief Executive;
- f) Review internal audit reports and monitor the implementation by management of recommendations made by internal audit.
- g) Monitor the implementation of recommendations by management;
- h) Facilitate liaison between the internal and external auditors to promote compatibility, to the extent appropriate, between their audit programmes;
- i) Critically analyse and follow up any internal or external audit report that raises significant issues relating to risk management, internal control, financial reporting and other accountability or governance issues, and any other matters relevant under the Committee's Charter. Review management's response to, and actions taken as a result of, the issues raised; and
- j) Review on an annual basis the performance of the internal auditor, including adherence to appropriate professional and quality standards, and where performance is not considered satisfactory, report to Council and make recommendations, which may, in extreme cases, include a recommendation that Council terminate the internal audit contract and undertake a tender process for the appointment of a new internal auditor.

8.4 Risk Management and Fraud Prevention

The Committee will:

- a) Monitor the risk exposure of Council by determining if management has appropriate risk management frameworks, processes and adequate management information systems;
- b) Monitor reported breaches of ethical standards and related party transactions and monitor the implementation of recommendations arising from reports presented and review the effectiveness of Council's internal control systems.
- c) Monitor the progress of any major lawsuits facing the Council.
- d) Provide oversight of Council's risk management framework (including Council's health and safety management system) and activities conducted by the internal and external auditors and any other assurance providers, to give assurance over that framework;
- e) Escalate to Council when the Committee feels that management is not responding as it wishes/should on concerns about the risk management framework.
- f) Monitor and provide advice on fraud prevention systems and controls, including:
 - Reviewing processes in the prevention and management of fraudulent activity;
 - Reviewing reports of fraud from management, the status of ongoing investigations and recommendations to improve fraud controls;
 - Assessing the operational effectiveness of the fraud prevention controls; and
 - Ensuring that the internal audit program assists in identifying any potential fraud risks.

8.5 Ethical Behaviour

The Committee will:

- a) Receive updates from management of any suspected cases of fraud, corruption or serious misconduct impacting Council;

- b) Recommend any specific measures or investigations identified as necessary or desirable by the Committee to the Council;
- c) Identify and refer specific projects or investigations deemed necessary through the Chief Executive Officer, the internal auditor and the Council, if appropriate.
- d) Monitor any subsequent investigation, including the investigation of any suspected cases of fraud, corruption, serious misconduct or breaches of conflict of interest; and
- e) Review the findings of any examinations by regulatory agencies (eg VAGO), and any auditor (registered internal or external auditors) observations. Other audits/investigation may also be reviewed if relevant to this committee.
- f) Where a suspected fraud or corrupt behaviour is reported or detected and is deemed likely to have a material impact on Councils reputation or operations, in the opinion of the CEO, the CEO will inform the Chair of the Audit and Risk Committee of the incident subject to the limitations on disclosure that may be imposed by external integrity bodies, this may occur outside of the regular quarterly updates on ethical behaviour.

8.6 Financial Reporting and Financial Matters

- a) The Committee will monitor Council financial reporting and performance.
- b) The Committee will receive details of all reimbursements (for out-of-pocket expenses) for Councillors and delegated committee members
- c) The Committee will exercise an oversight function over compliance with Gifts Policy.

8.7 Council Policies and Procedures

The Committee will monitor the compliance of the Council's policies and procedures against the Local Government Act and regulations, including the overarching governance principles set out in s. 9 Local Government Act 2020, and any Ministerial directions by:

Completing an initial review of relevant established, or newly created Council policies and procedures

Assessing any amendments made to said policies against the principles;

Receiving reports from management on findings of any relevant examinations or investigations undertaken by integrity agencies and subsequent implications and amendments to Council policies and procedures.

8.8 Matters Referred to the Committee by Council

The Committee will address issues brought to its attention, including responding to requests from Council for advice.

8.9 CEO Employment and Remuneration Policy

The Committee will oversee adherence of Council to the CEO Employment and Remuneration Policy.

9. ANNUAL WORKS PROGRAM

The Committee must adopt an annual works program, by no later than 1 May each year.

10. PERFORMANCE EVALUATION

- a) The Committee, in conjunction with Council, and the Chief Executive Officer, should develop the Committee's performance indicators.
- b) The Committee will assess its own performance on an annual basis using a Self-Assessment tool which will be reviewed, adopted and completed by the Committee.
- c) The Committee provide a copy of the annual assessment to the Chief Executive Officer for tabling at the next Council meeting.

11. CONFLICT OF INTEREST AND REGISTER OF INTERESTS

- a) Sections 123 (misuse of position) and 125 (confidential information) and Division 2 of Part 6 (conflict of interest) of the Act apply to any member of the Committee who is not a Councillor as if the member were a member of a delegated committee.
- b) Members of the Committee must be fully aware of their responsibilities with regard to the management of interests in relation to the discharge of their duties as a member of the Committee.
- c) Management of interests includes the proper management of any conflicts of interest as and when they may arise.
- d) Members of the Committee must also be fully aware of the statutory definitions of direct and indirect interests which may give rise to a conflict of interest. These are set out in the Act.
- e) Failure to comply with the provisions of the Act with regard to conflicts of interest may result in prosecution and the member's appointment being terminated by the Council.

12. REVIEW OF THE COMMITTEE CHARTER

The Committee will review the Committee Charter on a biennial basis and recommend any changes to Council for approval.

The next review date will be: **May 2024**.

7.5. PLANNING PERMIT PP2021-0356 - 1-5 COOPER STREET

DIRECTORATE : City Growth

PURPOSE:

This report summarises the planning assessment that provides a recommendation for the application to use and develop the land for industry (laundry) and warehouse and reduce the parking requirement, and recommends that Council issue a Notice of Decision to grant a permit subject to conditions.

EXECUTIVE SUMMARY

Council has received an application to use and develop the land known as 1-5 Cooper Street for industry and a warehouse. The proposal is to construct a building of approximately 4800m² over two stories that will serve as the 'Regional Logistics Distribution Centre' for South West Healthcare, which will among other functions serve as a linen service to the Warrnambool Hospital.

The application triggers a planning permit under the zone to both use and develop the land. The proposal also falls short of the requirement to provide 89 car spaces by 60 spaces, therefore a permit is also required to allow the reduction.

The application was subject to internal and external referrals, and was subject to public notice. As a result of notification, 8 objections were received, where grounds were primarily in regards to parking.

The parking shortfall is considerable and should not be discounted, however on balance the proposal is considered to meet the requirements of the planning scheme and should be supported.

If the application is supported, a Notice of Decision would be required as all 8 objections have been sustained.

MOVED: CR MAX TAYLOR
SECONDED: CR RICHARD ZIEGELER

That Council, having caused notice of Planning Application No. PP2021-0356 to be given under Section 52 of the *Planning and Environment Act 1987* and or the planning scheme, and having considered all the matters required under Section 60 of the *Planning and Environment Act 1987* should decide to issue a Notice of Decision to grant a permit under the provisions of the Warrnambool Planning Scheme in respect of the land known and described as Lot 11 PS 434682 TSH WARR, 1-5 Cooper St WARRNAMBOOL VIC 3280, for the Use & development of the land for industry (laundry and warehouse) and reduction of car parking requirements in accordance with the endorsed plans, subject to the following conditions:

- 1. The layout of the site and size, design and location of the building and works as shown on the endorsed plans must not be altered without the prior written consent of the responsible authority.**
- 2. Air Quality/Noise Impact Plans**

The recommendations of the Air Quality Assessment (SLR Consulting, November 2021) and Noise Impact Assessment (SLR, December 2021) should be adopted subject to any requirements of the EPA.

- 3. Noise levels emanating from the premises must not exceed the recommended levels as set out in the Noise from Industry in Regional Victoria (NIRV; EPA Publication 1411, 2011) or as amended.**

4. Dangerous Goods

The recommendations of the Dangerous Goods Assessment (CETEC, December 2021) should be adopted subject to any requirements of the EPA.

5. Construction amenity

To safeguard the local amenity, reduce noise nuisance and to prevent environmental pollution during the construction period:

- a. Stockpiles of topsoil, sand, aggregate, spoil or other material must be stored clear of any drainage path or easement, natural watercourse, footpath, kerb or road surface and must have measures in place to prevent the movement of such material off site.
- b. Building operations such as brick cutting, washing tools, concreting and bricklaying must be undertaken on the building block. The pollutants from these building operations must be contained on site.
- c. Builders waste must not be burnt or buried on site. All waste must be contained and removed to a Waste Disposal Depot.

All works on the land must be undertaken in accordance with the endorsed Project/Construction Management Plan to the satisfaction of the Responsible Authority.

6. Industry Use

All waste material not required for further on-site processing must be regularly removed from the site. All vehicles removing waste must have fully secured and contained loads so that no wastes are spilled or dust or odour is created to the satisfaction of the responsible authority.

7. The loading and unloading of goods from vehicles must only be carried out on the land.

8. The use must be managed to the satisfaction of the Responsible Authority so as not to detrimentally affect the amenity of the neighbourhood, including through the:

- a. Transport of materials, goods or commodities to or from the land.
- b. Appearance of any building, works or materials.
- c. Emission of noise, artificial light, vibration, smell, fumes, smoke, vapour, steam, soot, ash, dust, waste water, waste products, grit or oil.

9. All buildings and works must be maintained in good order and appearance to the satisfaction of the Responsible Authority.

10. Landscape Plan

Prior to works commencing, a landscape plan to the satisfaction of the Responsible Authority must be submitted to and approved by the Responsible Authority. When approved, the plan will be endorsed and will then form part of the permit. The plan must be drawn to scale with dimensions, be generally in accordance with the landscape concept as shown on the site plan prepared by STH Architects (12/10/2021), but modified to show:

- a. a survey (including botanical names) of all existing vegetation to be retained and/or removed;
- b. buildings and trees (including botanical names) on neighbouring properties within at least three metres of the boundary, or where impacted;
- c. details of surface finishes of hardstand areas such as pathways and driveways;
- d. a planting schedule of all proposed trees, shrubs and ground covers, including botanical names, common names, pot sizes, sizes at maturity, and quantities of each plant;

e. continuous landscaping and planting along the McMeekin Road frontage so as to soften the appearance of built form

11. Unless otherwise approved in writing by the Responsible Authority, prior to the commencement of the use the landscaping works shown on the endorsed plans must be carried out and completed to the satisfaction of the responsible authority. The landscaping shown on the endorsed plans must be maintained to the satisfaction of the responsible authority, including that any dead, diseased or damaged plants are to be replaced.

12. Environmental Management Plan

Before the use starts, an Environmental Management Plan for the management and operation of the use which is to the satisfaction of the Responsible Authority must be submitted to and approved by the Responsible Authority. When approved, the plan will be endorsed and will then form part of the permit. The environmental management plan must include:

- a. overall environmental objectives for the operation of the use and techniques for their achievement**
- b. procedures to ensure that no significant adverse environmental impacts occur as a result of the use**
- c. proposed monitoring systems**
- d. identification of possible risks of operational failure and response measures to be implemented**
- e. day to day management requirements for the use**
- f. specific procedures for the management, storage, and disposal of waste.**

Unless agreed in writing with the Responsible Authority, the use must be conducted in accordance with the endorsed plan at all times.

13. Stormwater Management Plan

Before the commencement of any construction activity, a detailed Stormwater Management Plan is to be submitted to and endorsed by the Responsible Authority. The stormwater works must be designed in accordance with the current Responsible Authority's Design Guidelines, the endorsed application plans and the approved Development Plan and must include:

- a) Identification of any existing drainage on the site.**
- b) Details of how the works on the land are to be drained and/or retarded.**
- c) Computations in support of the proposed drainage.**
- d) A proposed Legal Point of Discharge for each lot.**
- e) An underground drainage system to convey minor flows (as defined by the IDM) to the drainage outfall for the development;**
- f) Details of how the storm water discharge from the development will be limited such that post development flows for the 10% and the 1% AEP do not exceed pre development flows;**
- g) Details and measures to enhance stormwater discharge quality from the site and protect downstream waterways and groundwater in accordance with Clause 56.07-4 of the Planning Scheme;**
- h) Where tank systems are included in the stormwater treatment train for the development, agreements to the satisfaction of Council for the provision and maintenance of these systems.**
- i) Evidence that storm water runoff resulting from a 1% AEP storm event is able to pass through the development via reserves and/or easements, or be retained within lots without causing damage or nuisance to adjoining lots.**

- j) **Where interim or temporary works are proposed, details on how these interim or temporary works will integrate with the ultimate drainage systems.**
- k) **Where drainage is required to be conveyed across privately owned land, easements to be created or, demonstration that the consent of the landholder has been provided.**
- l) **Maintenance schedules for treatment elements.**

14. Stormwater Works

The endorsed Stormwater Management Plan is to be implemented to the satisfaction of the Responsible Authority prior to the use or occupation of the development.

15. Vehicle Access

Before the use or occupation of the development, the applicant must provide vehicle access to the satisfaction of the Responsible Authority. This includes the removal of existing redundant vehicle crossings and reinstatement of affected kerb, nature strip and footpath. Satisfactory clearance is to be provided to any stormwater pit, power or telecommunications pole, manhole cover, marker, or street tree. Any relocation, alteration or replacement required shall be at the applicant's expense.

16. Heavy Vehicle Entry & Exit

Heavy vehicles are to enter the development from Robson Street and exit the development to Cooper Street in a forwards direction.

17. Parking and Operational Traffic Management Plan

Before the use starts, a Parking and Operational Traffic Management Plan to the satisfaction of the responsible authority must be submitted to and approved by the responsible authority. When approved, the plan will be endorsed and will then form part of the permit. Traffic and parking operations on and adjacent to the site must conform to this endorsed plan. The plan must be generally in accordance with the plan (specify any earlier submitted plan) but must include:

- a. **the location of all areas on- and/or off-site to be used for staff and patron parking, where a minimum of 15 on-street car spaces are provided**
- b. **owner's permission and any required planning permission for parking on other land**
- c. **specification of staff numbers adequate to enable efficient operation of car parking areas both on- and off-site**
- d. **the number and location of all on- and off-site security staff**
- e. **the means by which the direction of traffic and pedestrian flows to and from car parking areas will be controlled both on- and off-site**
- f. **measures to preclude staff parking in designated patron car parking areas**
- g. **Servicing of the drainage and maintenance of car parking areas.**
- h. **The heavy vehicle movements into and out of the site shall be demonstrated on a scale drawing to be achievable in a single forward movement by the use of current Austroads Vehicle Turning Templates. (The vehicle type, speed and radius information shall be included).**
- i. **The plan shall state the route for heavy vehicles to follow to arrive at the Robson Street site entrance and shall state how this information will be advised to the affected drivers.**
- j. **The operational traffic management plan is required to advise of any removal of existing redundant vehicle crossings and reinstatement of affected kerb, nature strip and footpath. Satisfactory clearance is to be provided to any stormwater pit, power or telecommunications pole, manhole cover, marker, or street tree. Any relocation, alteration or replacement required shall be at the applicant's expense.**

18. Car Parking

Before the use or occupation of the development, the internal traffic and parking areas must be constructed to the satisfaction of the Responsible Authority, and shall be:

- a. In accordance with endorsed plans;
- b. In accordance with Australian Standards;
- c. Finished with an all-weather sealed surface;
- d. Adequately drained;
- e. Provided with appropriate signage, lighting, line marking and traffic calming treatments.

19. Footpath Construction Requirements

Before the commencement of the use or occupation of the development, the applicant must provide a concrete footpath for the full width of the site frontage in Robson Street and Cooper Street to the satisfaction of the Responsible Authority. Before any works associated with the footpath start, Detailed Construction Plans must be provided in accordance with Council's current Design Guidelines and endorsed by the responsible authority.

20. Project Management Plan

Before the commencement of any works for each stage of the development (including any preliminary site preparation and establishment works, demolition or material removal) a Project Management Plan to the satisfaction of the Responsible Authority must be submitted for review. The Project Management Plan must include and address the following:

- a. **Health & Safety Management Plan**
 - i. **Description of Works**
 - ii. **Site Security / Signage**
 - iii. **Worksite Safety / Public Safety**
- b. **Environmental Management Plan (EMP) in accordance with the Environment Protection Authority document Environmental Guidelines for Major Construction Sites, February 1996 or its successor document, including:**
 - i. **Operating Hours, Noise and Vibration Controls;**
 - ii. **Air and Dust Management;**
 - iii. **Stormwater and Sediment Control; and**
 - iv. **Waste and Materials Reuse Management.**
 - v. **Amenity Considerations**
 - vi. **Protection Zones (Flora, Fauna, Weeds, Pests and Cultural Heritage)**
- c. **Construction Management Plan**
 - i. **Company Structure / Site Contacts**
 - ii. **Company Policies (if applicable)**
 - iii. **Responsible Authority Approvals**
 - iv. **Insurances**
 - v. **Asset Condition Report**
 - vi. **Quality Management**
 - vii. **Construction Program**
- d. **Traffic Management Plan.**
 - i. **Traffic Guidance Schemes**
 - ii. **Site Compound Map**
 - iii. **WCC Road Reserve Works Permit**
 - iv. **VicRoads MoA (if applicable)**

The Project Management Plan must be implemented to the satisfaction of the responsible authority for the duration of the works. The Warrnambool City Council template may be used if completed correctly and in full.

- 21. This permit will expire if one of the following circumstances applies:**
- a. the development and the use are not started within two (2) years of the date of this permit.**
 - b. the development is not completed within four (4) years of the date of this permit.**

The Responsible Authority may extend the periods referred to if a request is made in writing before the permit expires, or:

- a. Within six months afterwards for commencement, or**
- b. Within twelve months afterwards for completion.**

NOTES

Road Reserve Works Permit

Before the commencement of any works within a Road Reserve, the applicant must obtain a Road Reserve Works Permit from Council. All conditions on the Permit must be complied with.

Asset Protection Permit

Before the commencement of any physical works to the site, an Asset Protection Permit must be obtained from Council. This purpose of this permit is to protect Council assets from damage which can result from the works and from the movement of heavy equipment and materials on and off the site. All conditions on the Permit must be complied with.

Discharge of Polluted Water

Polluted drainage must be treated and/or absorbed on the lot from which it emanates to the satisfaction of the Responsible Authority.

Polluted drainage must not be discharged beyond the boundaries of the lot from which it emanates or into a watercourse or easement drain.

EPA Guidelines

Refer to Environment Protection Authority Victoria (EPA) guidelines. The amended Environment Protection Act 2017 came into effect on 1 July 2021. The amended Environment Protection Act 2017 imposes new duties on individuals and/or businesses undertaking the activity permitted by this permit. If your business engages in activities that may give rise to a risk to human health or the environment from pollution or waste, you must understand those risks and take action to minimise them as far as reasonably practicable.

Dangerous Goods Storing & Handling Regulations

As per Regulation 66, before commencing operations the applicant must submit a Dangerous Goods Storage and Handling notification to WorkSafe.

CARRIED - 6:0

BACKGROUND

The application seeks to permit the use and development of an industry (laundry facility and warehouse) in the Industrial 1 zone. Specifically, South West Healthcare is proposing to use and develop the land as a 'Regional Logistics Distribution Centre' to provide linen and supply services to the south west region, with a particular focus on the increasing needs of the Warrnambool Hospital.

The proposed structure would primarily include a large warehouse including specific laundry processing areas, with additional ancillary office areas, storage areas (including dangerous good storage) and outdoor parking and truck loading facilities.

The proposed built form has a maximum building height of 11.07m (RL27.5) at the top of the flat roof sections, with additional overruns for peaked roof elements and 'proprietary fire tanks'. Primary construction materials are proposed as precast/tilt-up concrete panels on the ground floor, and 'Kingspan' insulated panels mixed with glazing panels on the first floor.

ISSUES

All of the objectors cited the parking reduction as an unsuitable outcome. Under the planning scheme, the parking requirement may be reduced if the proposal is assessed against a number of decision guidelines and the Responsible Authority deems the outcome to be suitable on balance. One of those guidelines is the findings of a Car Parking Demand Assessment. That assessment was provided as part of the proposal, where the study showed that required demand for the use would range between 26 and 42 spaces, meaning at peak demand the shortcoming would be 13 spaces (the proposal provides 29 spaces on site). The applicant has been liaising with Council's Infrastructure department in order to confirm that the formalisation of on-street parking options can adequately service the requirement.

A planning assessment must ensure that applications as they are received are suitable on balance, with regard to the range of requirements under the planning scheme. The parking requirement is one such concern, and the assessment concluded that the proposal represented a suitable outcome. It is acknowledged the parking reduction will be felt by neighbouring uses, however this must be weighed against the availability of existing industrial land that is suitable for the use, and the merits of the proposal in its entirety. The proposal has been assessed against the requirements of the zone, planning policy, particular and general provisions, and has integrated comments and feedback from both referral authorities and concerned objectors. The result of the assessment is that a Notice of Decision to grant a permit subject to conditions should be issued.

FINANCIAL IMPACT

The costs associated with the assessment of the application and any subsequent reviews have been allowed for in the City Strategy and Development budget.

LEGISLATION / POLICY / COUNCIL PLAN CONTEXT

1 A healthy community

1.3 Health and wellbeing : Council will take action to improve health, wellbeing and safety outcomes for Warrnambool's community.

4 A connected, inclusive place

4.1 Effective planning: Council will ensure its planning acknowledges the unique character and attributes of local places and that that supports social connection, equitable access, appropriate housing and sustainable population growth.

4.4 Sustainable practices: Council will promote and encourage the implementation of sustainable design across the municipality including the attractiveness, safety, accessibility and functionality of our built environment.

TIMING

Already outside of statutory requirements.

COMMUNITY IMPACT / CONSULTATION

- In line with Council's delegation policy, as a result of having more than 5 objections, a consultation meeting was held with Councillors on 31 May 2022.
- The application was also externally referred to EPA, WorkSafe, and FRV, and internally referred to Council's Infrastructure, Building, and Health departments. No objections were received, and comments provided in responses from all parties has been included in the assessment.

LEGAL RISK / IMPACT

The proposal has been assessed against all relevant requirements of the Planning Scheme and the *Planning and Environment Act 1987*.

OFFICERS' DECLARATION OF INTEREST

No conflict of interest.

COLLABORATIVE PROCUREMENT

Not applicable.

CONCLUSION

ATTACHMENTS

1. P P 2021-0356 - Delegate Report - 1-5 Cooper Street [7.5.1 - 21 pages]
2. 1-5 Cooper St - Air Quality Assessment (Appendix G [7.5.2 - 47 pages]
3. 1-5 Cooper St - Dangerous Goods Assessment (Append [7.5.3 - 66 pages]
4. 1-5 Cooper St - Noise Impact Assessment (Appendix [7.5.4 - 17 pages]
5. 1-5 Cooper St - Traffic Impact Assessment (Appendi [7.5.5 - 25 pages]



Delegate Planning Assessment Report

Application Details:

Application is for:	Use & development of the land for industry (laundry and warehouse) and reduction of car parking requirements
Applicant's/Owner's Name:	South West Healthcare C/- Spiire Australia PO Box 10684 MELBOURNE VIC 8007
Date Received:	4 January 2022
Statutory Days:	111 as at 9 June 2022
Application Number:	PP2021-0356
Planner:	Rob Wandell
Land/Address:	Lot 11 PS 434682 TSH WARR 1-5 Cooper St WARRNAMBOOL VIC 3280
Zoning:	Industrial 1 (IN1Z)
Overlays:	N/A
Under what clause(s) is a permit required?	33.01-1 (use of Industry listed under 53.10) 33.01-4 (buildings and works) 52.06-3 (reduction in car parking requirement)
Restrictive covenants on the title?	None (however a Section 173 agreement applies)
Current use and development:	Vacant

Proposal

The application seeks to permit the use and development of an industry (laundry facility and warehouse) in the Industrial 1 zone. Specifically, South West Healthcare is proposing to use and develop the land as a 'Regional Logistics Distribution Centre' to provide linen and supply services to the south west region, with a particular focus on the increasing needs of the Warrnambool Hospital.

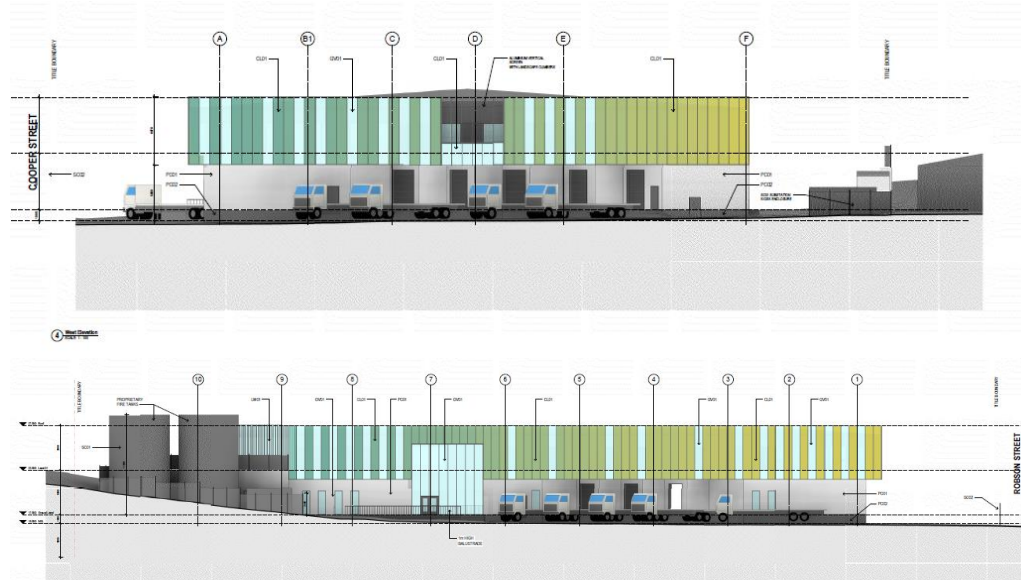
The proposed structure would primarily include a large warehouse including specific laundry processing areas, with additional ancillary office areas, storage areas (including dangerous good storage) and outdoor parking and truck loading facilities.

Figure 1: Proposed Site Plan (source: applicant submission)



As the site is on a corner intersection with three effective frontages, elevations are designed to interact primarily with both Cooper Street and Robson Street, with a wall on boundary against the Mcmeekin Road frontage and proposed landscaped screening in the road reserve.

Figure 2: Proposed west (Robson Street) and north (Cooper Street) elevations (source: application submission)



The proposed built form has a maximum building height of 11.07m (RL27.5) at the top of the flat roof sections, with additional overruns for peaked roof elements and 'proprietary fire tanks'. Primary construction materials are proposed as precast/tilt-up concrete panels on the

ground floor, and 'Kingspan' insulated panels mixed with glazing panels on the first floor. The presentation of the building is controlled via a Section 173 agreement, which is discussed further below.

Twenty-nine car parking spaces are proposed, which does not meet the requirement under the particular provision.

Subject site & locality

The subject site totals approximately 6471m² in an irregular polygon shape with frontages onto three roads. The site is currently vacant and cleared of all vegetation, however the road reserve associated with Mcmeekin Road has a relatively large nature strip where a collection of trees is present. There is evidence from historical aerial photographs that the road reserves on all three sides of the site are used as informal parking areas.

Figure 3: Aerial photograph showing site context (source: Exponare, 2022)



The subject site is centrally located within an existing and established industrial estate and represents one of the few remaining undeveloped lots. It is of particular relevance to the applicant as it is one of the few remaining large lots zoned as Industrial 1 that is also relatively close to the existing Hospital. Surrounding uses include a transitional area of Industrial 3 to the south, before it converts to General Residential (approximately 100m from the subject site at its nearest) and various Public Park and Recreation and Special Use zones (public ovals, and the showgrounds reserve).

Figure 4: Streetview standing at corner of McMeeking and Cooper, facing northwest (source: Google Streetview, November 2019)



The land could be characterised as generally flat, with a very slight fall from south to north, although there is a significant rise at the road reserve to the south.

Permit/Site History

A review of Council's online records does not show any planning permits associated with the land since conversion to the digital format.

Cultural Heritage Management

The site is within an area of cultural sensitivity, and the proposal does involve a high impact activity as defined by the Regulations, therefore a Cultural Heritage Management Plan (CHMP) is required. A plan was provided in response to a request for further information, and the approved plan (Unearthed Heritage, May 2021) forms part of the application.

Section 173 Agreement

Agreement AB251167E applies to the land. This agreement was entered into in April 2002 as a requirement of Planning Permit 67/00, which allowed the original subdivision of land into 27 lots. The Agreement includes the original permit condition, which includes the following wording in relation to requirements:

- *Colour-coated roofing in non-reflective muted colours in view of higher elevation overview from Granter and McMeekin Road.*
- *Stipulated use of green or bronze olive coated chain mesh fencing where highly visible from adjoining roads.*
- *Set backs of both buildings and fences from frontage of properties, with requirements for kerbing/paving to define landscaped areas.*
- *Control on plot ratios to ensure landscaped area at rear of properties backing onto Granter Street and McMeekin Road ie; continuation of adjoining trees reserve landscaping, particularly within remainder of sloping area inside property boundaries.*
- *Depending on type of industry, possible agreement/restrictions to ensure that commercial vehicle movements to/from property do not use adjoining residential streets.*

Curiously, the direction provided by the permit condition was not entirely translated to the actual wording of the agreement. Clause 4 stipulates that the owner shall not erect any building on the lot other than pursuant to a design approved by the Council, and Clause 5 provides 'Design Considerations', which are obviously informed by the condition, but lack for specificity. The considerations are listed as follows:

- 5.1 *All roofing shall be colour-coated roofing in non-reflective muted colours.*

5.2 All fencing shall be green or bronze olive coated chain mesh.

5.3 All plans submitted pursuant to Clause 4 must cover the following design points:

- setbacks of buildings
- setbacks of fences
- kerbing
- paving
- landscaping

Clause 6 then indicates owners should “use its best endeavours” to encourage vehicles to access using Dickson and Cooper Street and to avoid using Granter Street, and McMeekin Street.

Although the permit condition seems to include specific direction to control plot ratios and ensure landscaping, the actual agreement only specifies that plans “must cover” the points, where no metrics or even qualitative statements are offered as to what is appropriate for those points to actually look like. As a result, while it would be reasonable to translate a certain level of intent from the direction of the original permit condition, it can be concluded that the proposal includes a design that addresses the design considerations as written, and as such the proposal does not contravene the agreement.

Public Notification

A review of the relevant planning controls confirms that the application is not exempt from review, as even though an exemption applies under 33.01-4 and 52.06, it does not exist under 33.01-2.

The application has been advertised pursuant to Section 52 of the *Planning and Environment Act 1987*, by:

- Sending notices to the owners and occupiers of adjoining land.
- Displaying a sign on site

The notification has been carried out correctly.

Council has received 8 objections to date. 7 of the 8 objectors raised inadequate parking as the only grounds for objection. One objector raised parking, but also noted noise, dust, and the effect on property values as additional concerns.

Consultation

The applicant was provided a copy of all objections, and opted in the first instance to provide a written response, dated 19 April 2022. Additional information was provided to support positions and demonstrate appropriate parking and traffic, as well as dust and noise attenuation, however plans were not amended.

As a result of the response, all objectors opted to sustain their submissions. Consequently, a consultation meeting was held at Council offices on 31 May 2022, giving an opportunity for both the applicant and objectors to present their views to councillors. At the conclusion of the meeting, all objectors continued to sustain their submissions.

Referrals

Section 55 Referrals:

EPA

Under Clause 66.02, the EPA is a determining referral when the 100m threshold is not met as specified under Clause 53.10, or when a license is required for dangerous goods. A response was received 23 February 2022 indicating consent with a number of comments, and no conditions with a recommendation to add a note on the permit. The comments as provided include:

Odour and Air emissions

The applicant has submitted the following technical assessment that addresses potential air quality impacts:

- *1-5 Cooper St, Warrnambool SWH Regional Logistics Centre Adverse Amenity Impact Assessment: Air Quality prepared by SLR, dated 17 December, 2021 (the assessment).*

EPA has not undertaken a comprehensive technical review of the assessment. EPA notes that the development does not meet amenity threshold requirements specified in Clause 53.10 of the Warrnambool Planning Scheme. The assessment noted that the distance between an industrial activity and the nearest sensitive land use should be measured from the 'activity boundary' of the industrial activity rather than the property boundary. In this case, the activity boundary would be the building itself, excluding the car parking areas and internal roadways from which no odour emission would occur. This would mean that the separation distance would be 105m, 5m greater than 100m threshold.

EPA understands that based on the assessment, the combination of minor air emissions, separation distance and prevailing wind conditions, the proposed development is unlikely to result in any significant impacts to any nearby sensitive land uses. Therefore, the potential for air quality and odour impacts will be minimal if they are managed appropriately.

Whilst no mitigation measures were deemed necessary, the responsibility rests with the permit applicant/operator to minimise odour and air emissions as reasonably practicable. This may include but not limited to keeping windows and doors closed where practicable, including roller doors when not in use.

Noise

The applicant has submitted the following technical assessment that addresses potential noise impacts:

- *1-5 Cooper St, Warrnambool SWH Regional Logistics Centre Noise Impact Assessment, prepared by SLR, dated 17 December, 2021 (the assessment).*

EPA has not undertaken a comprehensive technical review of the assessment. Based on the assessment, it is considered that the development should be able to satisfy the requirements of EPA publication 1826: "Noise limit and assessment protocol for the control of noise from commercial, industrial and trade premises and entertainment venues". The development is considered to have a low level noise impact at surrounding residences due to the proposed hours of operation (day period operations), separation distance to sensitive receptors, and acoustic shielding to the nearest dwellings.

EPA believes the proposal can operate effectively at this site using contemporary industry standards, enabling the applicant to comply with their legal obligations under the Environment Protection Act 2017.

Close landfill

It is noted that the subject site is located within the 500m buffer distance from the closed Braithwaite Street landfill. A planning permit application for the use or development of sensitive land uses within landfill buffers must be carefully considered. In the context of landfill gas, any building or structure is considered sensitive, because of the risk of explosion or asphyxiation.

It is recommended that Council refer to EPA publication 1642 (Assessing planning proposals within a buffer of a landfill) for information and advice on assessing planning permit applications that would lead to development within the buffer of a closed landfill.

In the context of landfill gas, any building or structure is considered sensitive, because of the risk of explosion or asphyxiation.

Liquid storage and handling

To prevent land contamination from the proposal, it should be recommended that in the event the proposal includes liquid storage and handling, the applicant should adopt appropriate liquid storage and use practices consistent with EPA guidance. For further information on storing and handling liquid substances, including secondary containment, please refer to:

- EPA Publication 1698 Liquid Storage and Handling Guidelines should be referred to. This guideline outlines the principles for preventing harm to the environment and human health when storing and handling liquid substances. See <https://www.epa.vic.gov.au/about-epa/publications/1698>*
- EPA Publication 1700 Preventing Liquid Leaks and Spills from entering the Environment (Fact Sheet) -provides guidance on how businesses that store or handle liquids can prevent liquid leaks and spills from entering the environment. See <https://www.epa.vic.gov.au/about-epa/publications/1700>*

EPA acknowledges the Dangerous Goods Assessment undertaken by CETEC dated 20 December 2021. The assessment notes that the design and operation of the proposed Regional Logistics Distribution Centre (RLDC) has been informed by the findings and recommendations of this assessment. If further guidance is required, it is recommended to consult with Worksafe Victoria.

Waste management

Waste materials generated at the site should be stored appropriately and removed by authorised services or contractors to reduce litter and the risk of land contamination. EPA recommends that a waste management plan should be provided to Council to address waste management for the proposal.

Recommended Permit Note

EPA recommends the following permit note to be placed on any permit issued:

- The amended Environment Protection Act 2017 came into effect on 1 July 2021.*

The amended Environment Protection Act 2017 imposes new duties on individuals and/or businesses undertaking the activity permitted by this permit. If your business engages in activities that may give rise to a risk to human health or the environment from pollution or waste, you must understand those risks and take action to minimise them as far as reasonably practicable.

The note as recommended has been added, and the Environmental Management Plan as recommended has been required via permit condition. WorkSafe was separately contacted for comment, as noted below. As a result, given that Council has reviewed the advice and will satisfy itself in relation to the identified risks, it can be concluded that the determining referral is generally supportive of the proposal.

Section 52 Referrals:

WorkSafe

In response to the recommendation from EPA, a referral was sent to WorkSafe under Section 52, commonly done for applications involving dangerous goods which could adversely affect health and safety. A response was provided 30 March 2022 indicating no

objection. Two comments were added that were not phrased as conditions. One relates to seeking comments from FRV; as that authority has provided its own advice below, this note has not been considered. The second directs the applicant to submit a notification to WorkSafe as per Regulation 66 of the Dangerous Goods Storing & Handling Regulations. It is not common practice to include permit conditions that simply refer to requirements under other Acts or Regulations, however as it was unclear whether this was intended to be included on the permit or not, it has been added as a note.

Fire Rescue Victoria

The subject site is not within either a Bushfire Management overlay or a Bushfire Prone Area, however the application was referred to FRV under Section 52 in respect to the dangerous goods proposed to be stored on site. A response was provided 7 February 2022 indicating consent with no conditions or comments.

Internal Referrals:

Building

An internal referral was sent to Council's Building department. A response was provided 7 February 2022 indicating consent with no conditions. A comment was provided to confirm that compliance with NCC BBA Volume One is required, however it is assumed that building compliance will be dealt with at building permit stage, and this will be added as a note on the permit.

Infrastructure

An internal referral was sent to Council's Infrastructure department. A response was provided 29 March 2022 indicating no objection, with comments as follows:

On- Street Car Park Requirements in Robson Street

All of the proposed on-street carparks in Robson Street shall be indented. The partial indentation depicted on the current drawing submission for the south side of Robson is acceptable to Council, due to constraints imposed by existing services. The proposed car parks on the north side of Robson Street shall be indented to provide 2.3m wide parallel carparks measured from the existing kerb invert, so that usable pavement width is not reduced.

On-street Car Park Requirements in Cooper Street

The existing road width is not sufficient to provide on-street parking as shown. All of the proposed on-street carparks in Cooper Street shall be indented to provide 2.3m wide parallel carparks.

The suggested conditions have been added to the permit, and it can be concluded that Infrastructure is generally supportive of the proposal.

Health

An internal referral was sent to Council's Health department. A response was provided 2 February 2022 indicating no objection, and a number of suggested conditions. The first condition required connection to reticulated sewer, where it is assumed this would be checked as required as part of the occupancy permit and not required for planning purposes. The remaining conditions have been added as recommended.

Assessment

Planning Policy

Under Clause 02.04, the Warrnambool Strategic Framework Plan shows the subject site as within the urban settlement boundary, and within an Industrial Precinct (the south end of the West Warrnambool Industrial Precinct). Under Clause 02.03-7 (Economic Development),

Warrnambool is presented as the industrial service centre for the South West region, where the West Warrnambool Industrial Precinct is a key employment precinct. It is acknowledged that the growth and positioning of this precinct has resulted in industrial and residential uses located in close proximity, and Council is directed to manage the industrial/residential interface to ensure any amenity impacts are minimised. Additionally, policy directs to ensure development meets standards for amenity and urban design that promotes the attractiveness of the municipality.

This particular development is presented as an essential underpinning of the health care sector in the larger region, being a pivotal piece of the overall hospital infrastructure development program. Clause 02.03-8 provides high level support for health and education institutions due to the social and economic benefits they provide. In short, there is obvious policy direction in support of infrastructure and facilities in appropriate locations, but also acknowledgement of the potential land use conflicts that require careful management and oversight.

Specific guidance for particularly sensitive development is provided under a range of Clauses, including 13.05-1S (Noise abatement), where it is directed to consider the noise requirements of the Environment Protection Regulations, 13.06-1S (Air quality management), where it is directed to ensure where possible that there is suitable separation between land uses that reduce air amenity and sensitive land uses such as dwellings, and 13.07-1S (Land use compatibility), where it directs to avoid or otherwise minimise adverse off-site impact from commercial, industrial and other uses through land use separation, siting, building design and operational measures.

The application is supported by a range of studies including:

- Air Quality Assessment (SLR Consulting, November 2021)
- Dangerous Goods Assessment (CETEC, December 2021)
- Noise Impact Assessment (SLR, December 2021)
- Traffic Impact Assessment (OneMileGrid, December 2021)
- Vegetation Assessment (Tree Wishes, July 2020)

The results of these assessments demonstrate that various amenity impacts can be managed and mitigated as required. Given that the main opposing factors can be adequately controlled, the overall policy direction for supporting opportunities for the expansion of industry and the provision of related infrastructure as per Clause 17.03-1L, and develop Warrnambool as the “key specialist health service centre of South-West Victoria as per Clause 19.02-1L, suggests the proposal is generally consistent with the policy direction as provided.

Most relevant to the physical attributes of industrial developments, Clause 15.01-2L (Industrial development) provides policy guidance to encourage “well planned and designed industrial development”. It is likely that the strategies adopted here found genesis in the same strategic directions that led to the creation of the original Section 173 agreement, as it directs to use non-reflective materials, provide setbacks responsive to site conditions, and use landscaping instead of fencing in site frontages. The one specific policy guideline provided here is to “discourage buildings that occupy more than 50 per cent of the site”. In this respect, the siting and built form of the proposal are not perfectly in step with the policy guidance, as site coverage extends to 61%. However, it is also clear that the applicant is designing within the confines of existing industrial land with a specific and complicated design program, that remains as responsive to the site exactly because it does attempt to direct loading and traffic volume towards the identified preferred roads and away from McMeekin. The zero setback on this boundary is therefore understandable given the primary concern for loading and parking activities. The treatment of this tertiary frontage is identified as important in the agreement (or at least the underlying permit condition behind the

agreement), therefore a permit condition has been added to require a greater understanding of landscaping intent. However, it is assumed that an appropriate landscaping outcome can be reached on this frontage, which would lead to general consistency with the intent of this policy.

Zoning

Industrial 1 (33.01 and Schedule)

Use

Under Clause 33.01-1, 'Industry' is designated as a Section 1 use, on condition that it must not be a purpose listed in the table to Clause 53.10 with no threshold distance specified, and must be at least the threshold distance for a purpose listed in the table to Clause 53.10. Additionally, the industrial use cannot require a license under the Dangerous Goods (HCDG) Regulations 2016. The facility proposes to include a warehouse to store goods from the hospital, with the capacity to receive dangerous goods. Additionally, the laundry component requires some storage of dangerous goods (for example, using tank storage for bulk delivered sensitive liquids, and the storage of caustic substances and oxidizing agents required for the service). As these goods do require a license under the Regulations, the use is considered Section 2, where a permit is required.

Clause 33.01-2 outlines the application requirements, where the information has been provided with the submission. Specific Decision Guidelines are provided as follows:

- *The effect that the use may have on nearby existing or proposed residential areas or other uses which are sensitive to industrial off-site effects, having regard to any comments or directions of the referral authorities.*
- *The effect that nearby industries may have on the proposed use.*
- *The drainage of the land.*
- *The availability of and connection to services.*
- *The effect of traffic to be generated on roads.*
- *The interim use of those parts of the land not required for the proposed use.*

The use is proposed within the confines of an existing Industrial Estate, however a residential area does exist a minimum of approximately 100m away to the southwest. Referral comments have been received from both EPA and WorkSafe, where both bodies generally support the application, but ask Council to satisfy itself that the land use is appropriate in its context. Services and infrastructure are available and will be utilised by the proposed development, and drainage will be controlled via a Stormwater Management Plan required by condition. The effect on traffic to be generated on roads is indeed contentious, and has led to the objections as noted above. This is discussed at length in later sections, however as it relates to the specific decision guideline, the anticipated impact of additional traffic generation is shown as reasonable in the associated study, where Council's Infrastructure department has reviewed and provided overall consent.

The main amenity impacts are addressed in the various reports as submitted. As noted in EPA's response above, concerns around noise and/or odour would be minimal as the development is in fact not within the 100m threshold. Notwithstanding, the report as submitted shows that noise and odours are not expected to result in land use conflict, especially given the existence of another laundry facility in the same precinct.

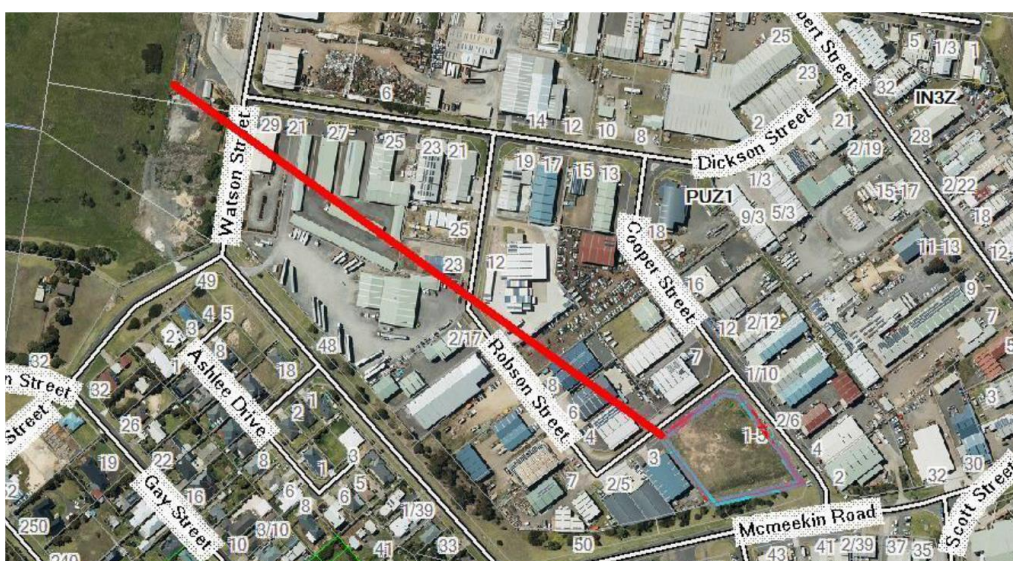
Closed Landfill

As identified in the EPA referral response, the referral authority questioned whether the subject site was located within the 500m buffer distance from the closed Braithwaite Street landfill site, as an application for the use or development of sensitive land uses within landfill buffers must be considered with reference to EPA publication 1642 (Assessing planning proposals within a buffer of a landfill).

This publication confirms default buffer distances of 500m for landfill accepting putrescible waste, and 200m from landfill accepting solid inert waste, however allows for the distance to be reduced based on a risk assessment that considers design and operational measures, and an evaluation demonstrating environmental protection and no adverse effect on amenity. It also confirms that for closed landfills, the buffer should be measured from the sensitive land use to the edge of the edge of the nearest landfill cell.

The first step is identifying whether the planning proposal falls within the landfill buffer, where the buffer may in fact be either the default distance as described, or a site-specific distance determined by Council. Here, it is noted that buffer distances for closed landfills can often be reduced as the risk decreases over time.

Figure 5: Aerial showing the approximate distance from the subject site to the landfill cell (source: Officer assessment based on estimation)



The subject site is marginally within the 500m buffer if measured from the closest point of lot boundaries, however the red line above measures the distance between the corner of the subject site and the estimated extent of the cell, where the distance measured is 525m.

In the context of landfill gas, any building or structure is considered sensitive, because of the risk of explosion or asphyxiation, however it is also apparent from the aerial how many intermediary buildings exist along the path of the line. It is therefore concluded that the subject site is either not within the default buffer distance, or if it is that Council could be satisfied in reducing the default distance slightly, and acknowledging that the risk is understood but reasonable in its context.

Dangerous Goods Storage

The CETEC report as submitted has identified the required EPA regulations, and while the report will not be endorsed with the permit, it is seen as appropriate to include a condition confirming that the findings should be followed and implemented.

Waste Management

The EPA recommends a specific waste management plan be required and endorsed. A condition has been added to require the plan, and that it be in accordance with the finding of the reports already submitted.

Based on the above, it is concluded that the use is appropriate in its context, where amenity impacts can be appropriately managed.

Development

Clause 33.01-4 also requires a permit to construct a building or construct or carry out works. A number of exemptions apply, however none are relevant to this proposal. Additional Decision Guidelines are provided as follows:

- *Any natural or cultural values on or near the land.*
- *Streetscape character.*
- *Built form.*
- *Landscape treatment.*
- *Interface with non-industrial areas.*
- *Parking and site access.*
- *Loading and service areas.*
- *Outdoor storage.*
- *Lighting.*
- *Stormwater discharge.*

The site is entirely cleared of structures and vegetation, and within an established industrial estate. A number of planted (native but non-indigenous) trees are located in the road reserve, and have been identified as likely recently planted in an attempt to stabilise land and provide screening. The land is within an area of cultural heritage sensitivity, however a Cultural Heritage Management Plan has been approved, and it is reasonable to conclude that any unearthed natural or cultural values will be safeguarded as per the plan.

The streetscape character is typical of an industrial estate, where adjoining uses include a fruit supply warehouse/store, a tire repair and servicing centre, and auto body/panel beating shop, and a car service facility. Other significant uses in the general area include a seafood wholesaler, another laundry service (~175m northwest), a place of assembly, and the Warrnambool Show Grounds (~525 southeast). The size and scale of the development is reasonably substantial, but not out of keeping with its surroundings. Again, the policy direction under 15.01 directs development to be "responsive to existing site conditions", so although there is a preference for maintaining site coverage to a reasonable level, it also needs to be assessed in its context. Loading, storage, lighting, and circulation have all been considered and are appropriately accounted for. The built form will be significant but not unreasonable in the streetscape. A landscaping condition has been added to ensure that built form elements with tight setbacks will be softened accordingly. Therefore, considering the decision guidelines above in conjunction with the direction of planning policy as well as the S173 agreement, it is concluded that the development meets to the objectives of the zone.

Relevant Particular Provisions

52.06 Car Parking

Under Clause 52.06-2, before a new use commences the number of car spaces required under 52.06-5 must be provided, unless a reduction is approved in accordance with a permit issued under 52.06-3.

The traffic report (OneMileGrid) in calculating the requirement identifies the use as split between 'Industry' (the laundry service), and 'Warehouse'. These land uses have been identified as the use being applied for, and therefore suitable for the analysis. Industry carries a requirement of 2.9 spaces to each 100m² of net floor area. Warehouse carries a requirements of 2 spaces to each premises plus 1.5 spaces to each 100m² of net floor area.

It is noted that gross floor areas were used in the report, however the service areas (e.g. stairwells, lifts, etc) are minimal and therefore probably do not alter that calculations significantly. The Industry area of 1940m² @ 2.9 spaces for each 100m² therefore requires 56 spaces (2.9*20), and the warehouse area (including ancillary office space) of 2106m² @

1.5 spaces for each 100m² requires 31 spaces (1.5*21), plus an additional 2 required for one premises. The total requirement is therefore 89 spaces, where 29 are provided.

Under Clause 52.06-3, a permit is required to reduce the number of car spaces, where Clause 52.06-7 provides decision guidelines to consider, where relevant guidelines include:

- *The Car Parking Demand Assessment.*
- *Any relevant local planning policy or incorporated plan.*
- *The availability of alternative car parking in the locality of the land, including:*
 - *Efficiencies gained from the consolidation of shared car parking spaces.*
 - *Public car parks intended to serve the land.*
 - *On street parking in non residential zones.*
 - *Streets in residential zones specifically managed for non-residential parking.*
- *Any adverse economic impact a shortfall of parking may have on the economic viability of any nearby activity centre.*
- *Local traffic management in the locality of the land.*
- *The impact of fewer car parking spaces on local amenity, including pedestrian amenity and the amenity of nearby residential areas.*
- *The need to create safe, functional and attractive parking areas.*
- *Access to or provision of alternative transport modes to and from the land.*
- *The character of the surrounding area and whether reducing the car parking provision would result in a quality/positive urban design outcome.*

The parking reduction remains as the most contentious issue of the proposal, as will be discussed in the objectors section below. The traffic report includes a car parking demand assessment, where the results of the assessment show that the proposed development is anticipated to generate a parking demand for 24 to 42 spaces in the immediate term. Therefore the peak demand shortfall in this case is 13 spaces. The report suggests that there is ample on-street parking to accommodate the overflow. Ongoing conversations have been occurring with Council's Infrastructure department to confirm the ability of on-street parking to accommodate the increased demand, and permit conditions have been added in order to ensure that appropriate accommodation is made. Therefore, without assessing whether this argument is sufficient in relation to the grounds raised by objectors, as it relates to the specific decision guidelines, the proposal is appropriate. In other words, the increased demand in parking will undoubtedly have an impact on the surrounding area, but the proposal must be assessed on balance, where the associated increase in traffic and parking demand is seen as an issue that can be managed appropriately via condition.

52.17 Native Vegetation

Under Clause 52.17-1, a permit is required to remove, destroy or lop vegetation, unless the table in Clause 52.17-7 states a permit is not required. No significant vegetation exists on the site therefore no consideration is required. It is noted that trees do exist in the road reserve, where it is likely that a landscaping requirement will involve removal/replacement of some of those trees. A report has been submitted which confirms all trees in the road reserve to be planted, and therefore exempt under 52.17-7.

52.34 Bicycle Facilities

Under Clause 52.34-5, the use of Industry carries a requirement for 1 employee space per 1000m² of net floor area. Additionally, if 5 or more spaces are required, 1 shower for the first 5 spaces plus 1 to each 10 spaces thereafter is required. Finally, 1 change room or direct access to a communal change room is required to each shower.

Four spaces have been designated which meet the required specifications. The net floor area was not identified on plans, but as the gross floor area associated with Industry is approximately 1900m², it is reasonable to assume that once stairwells, lifts, and service areas are removed, the requirement would still be 2. Therefore, the provision has been satisfied.

Objections

Eight submissions were received as a result of public notification, where all eight could be read as in objection to the proposal. Seven of the eight cited parking (and specifically the inappropriate reduction of the parking requirement) as the only grounds for objection. It was heard at the consultation meeting that most objectors are in fact in favour of the development generally, but specifically feel that parking has not adequately been addressed. One objection also cited noise, dust, and property value as grounds, and it is noted that the objection originates from an owner within the adjoining residential zone.

It has been consistently ruled by the Tribunal that the effect on property values is not a planning concern, and should not form part of any planning assessment. Noise and dust have been addressed in the assessment above, and although the objector in question does reside in the adjoining residential zone, it has been shown that these dwellings are further than 100m from the subject site. While this does not remove the concern from legitimacy, it is reasonable to assume that noise and dust can be controlled via the measures outlined in the reports, where industrial activities will be subject to EPA regulations.

Parking remains as the common ground for objection, where all parties felt that the reduction in the requirement was unreasonable. In this context, Council does have a responsibility to listen to the concerns, as parking reductions for one development have flow on effects across the entire precinct. A review of streetview photographs (see Figure 4 above) confirms that the subject site has a long history of being used as informal parking for many surrounding uses. This is not unlike a neighbour in a residential context living next to a vacant lot, and making use of that vacancy to enjoy vegetation/wildlife/open space/etc. The development of a dwelling on that vacant lot will certainly cause a loss in amenity, however that lot was zoned residentially where it should be assumed that a dwelling would be developed at some point.

The similarity in this case is that the land is zoned industrial 1, where a significant industrial use should be assumed to be developed on the land. The difference in this case is that the parking requirement could be met, and therefore the argument is not that use and development is not warranted, simply that a proposal should consider meeting the parking requirement.

In this instance, Council must satisfy itself that the reduction is suitable in its context, which requires an understanding of the findings of the parking demand assessment, in combination with the understanding that simply because a vacant lot has been used for overflow parking does not imply that a proposal that relies on a parking reduction should not be considered.

The provision of formalised on-street parking spaces has been reviewed by Infrastructure, and although modifications are required to the indentation of spaces, it has been concluded that the combination of on-site and on-street parking is suitable for the associated demand. As a result, despite understanding that it will cause adjustment and possible annoyance to the precinct in general, the objections have been considered, and the recommendation below has been reached.

General Provisions

The proposal has been reviewed against the decision guidelines under Clause 65.01. It is concluded that the purpose of the zone, particular provisions, orderly planning, and other considerations as listed have been assessed, and that the proposal is generally compliant. As a result of the above, the recommendation below has been reached.

Recommendation

That council:

- having caused notice of Planning Application No. PP2021-0356 to be given under Section 52 of the *Planning and Environment Act 1987* and or the planning scheme, and

having considered all the matters required under Section 60 of the *Planning and Environment Act 1987* should decide to issue a Notice of Decision to grant a permit under the provisions of the Warrnambool Planning Scheme in respect of the land known and described as Lot 11 PS 434682 TSH WARR, 1-5 Cooper St WARRNAMBOOL VIC 3280, for the Use & development of the land for industry (laundry and warehouse) and reduction of car parking requirements in accordance with the endorsed plans, subject to the following conditions:

1. The layout of the site and size, design and location of the building and works as shown on the endorsed plans must not be altered without the prior written consent of the responsible authority.

2. Air Quality/Noise Impact Plans

The recommendations of the Air Quality Assessment (SLR Consulting, November 2021) and Noise Impact Assessment (SLR, December 2021) should be adopted subject to any requirements of the EPA.

3. Noise levels emanating from the premises must not exceed the recommended levels as set out in the Noise from Industry in Regional Victoria (NIRV; EPA Publication 1411, 2011) or as amended.

4. Dangerous Goods

The recommendations of the Dangerous Goods Assessment (CETEC, December 2021) should be adopted subject to any requirements of the EPA.

5. Construction amenity

To safeguard the local amenity, reduce noise nuisance and to prevent environmental pollution during the construction period:

- a. Stockpiles of topsoil, sand, aggregate, spoil or other material must be stored clear of any drainage path or easement, natural watercourse, footpath, kerb or road surface and must have measures in place to prevent the movement of such material off site.
- b. Building operations such as brick cutting, washing tools, concreting and bricklaying must be undertaken on the building block. The pollutants from these building operations must be contained on site.
- c. Builders waste must not be burnt or buried on site. All waste must be contained and removed to a Waste Disposal Depot.

All works on the land must be undertaken in accordance with the endorsed Project/Construction Management Plan to the satisfaction of the Responsible Authority.

6. Industry Use

All waste material not required for further on-site processing must be regularly removed from the site. All vehicles removing waste must have fully secured and contained loads so that no wastes are spilled or dust or odour is created to the satisfaction of the responsible authority.

7. The loading and unloading of goods from vehicles must only be carried out on the land.
8. The use must be managed to the satisfaction of the Responsible Authority so as not to detrimentally affect the amenity of the neighbourhood, including through the:
 - a. Transport of materials, goods or commodities to or from the land.
 - b. Appearance of any building, works or materials.
 - c. Emission of noise, artificial light, vibration, smell, fumes, smoke, vapour, steam, soot, ash, dust, waste water, waste products, grit or oil.
9. All buildings and works must be maintained in good order and appearance to the satisfaction of the Responsible Authority.

10. Landscape Plan

Prior to works commencing, a landscape plan to the satisfaction of the Responsible Authority must be submitted to and approved by the Responsible Authority. When approved, the plan will be endorsed and will then form part of the permit. The plan must be drawn to scale with dimensions, be generally in accordance with the landscape concept as shown on the site plan prepared by STH Architects (12/10/2021), but modified to show:

- a) a survey (including botanical names) of all existing vegetation to be retained and/or removed;
 - b) buildings and trees (including botanical names) on neighbouring properties within at least three metres of the boundary, or where impacted;
 - c) details of surface finishes of hardstand areas such as pathways and driveways;
 - d) a planting schedule of all proposed trees, shrubs and ground covers, including botanical names, common names, pot sizes, sizes at maturity, and quantities of each plant;
 - e) continuous landscaping and planting along the Mcmeekin Street frontage so as to soften the appearance of built form
11. Unless otherwise approved in writing by the Responsible Authority, prior to the commencement of the use the landscaping works shown on the endorsed plans must be carried out and completed to the satisfaction of the responsible authority. The landscaping shown on the endorsed plans must be maintained to the satisfaction of the responsible authority, including that any dead, diseased or damaged plants are to be replaced.

12. Environmental Management Plan

Before the use starts, an Environmental Management Plan for the management and operation of the use which is to the satisfaction of the Responsible Authority must be submitted to and approved by the Responsible Authority. When approved, the plan

will be endorsed and will then form part of the permit. The environmental management plan must include:

- a. overall environmental objectives for the operation of the use and techniques for their achievement
- b. procedures to ensure that no significant adverse environmental impacts occur as a result of the use
- c. proposed monitoring systems
- d. identification of possible risks of operational failure and response measures to be implemented
- e. day to day management requirements for the use
- f. specific procedures for the management, storage, and disposal of waste.

Unless agreed in writing with the Responsible Authority, the use must be conducted in accordance with the endorsed plan at all times.

13. Stormwater Management Plan

Before the commencement of any construction activity, a detailed Stormwater Management Plan is to be submitted to and endorsed by the Responsible Authority. The stormwater works must be designed in accordance with the current Responsible Authority's Design Guidelines, the endorsed application plans and the approved Development Plan and must include:

- a) Identification of any existing drainage on the site.
- b) Details of how the works on the land are to be drained and/or retarded.
- c) Computations in support of the proposed drainage.
- d) A proposed Legal Point of Discharge for each lot.
- e) An underground drainage system to convey minor flows (as defined by the IDM) to the drainage outfall for the development;
- f) Details of how the storm water discharge from the development will be limited such that post development flows for the 10% and the 1% AEP do not exceed pre development flows;
- g) Details and measures to enhance stormwater discharge quality from the site and protect downstream waterways and groundwater in accordance with Clause 56.07-4 of the Planning Scheme;

Where tank systems are included in the stormwater treatment train for the development, agreements to the satisfaction of Council for the provision and maintenance of these systems.

- i) Evidence that storm water runoff resulting from a 1% AEP storm event is able to pass through the development via reserves and/or easements, or be retained within lots without causing damage or nuisance to adjoining lots.
- j) Where interim or temporary works are proposed, details on how these interim or temporary works will integrate with the ultimate drainage systems.
- k) Where drainage is required to be conveyed across privately owned land, easements to be created or, demonstration that the consent of the landholder has been provided.

- l) Maintenance schedules for treatment elements.

14. Stormwater Works

The endorsed Stormwater Management Plan is to be implemented to the satisfaction of the Responsible Authority prior to the use or occupation of the development.

15. Vehicle Access

Before the use or occupation of the development, the applicant must provide vehicle access to the satisfaction of the Responsible Authority. This includes the removal of existing redundant vehicle crossings and reinstatement of affected kerb, nature strip and footpath. Satisfactory clearance is to be provided to any stormwater pit, power or telecommunications pole, manhole cover, marker, or street tree. Any relocation, alteration or replacement required shall be at the applicant's expense.

16. Heavy Vehicle Entry & Exit

Heavy vehicles are to enter the development from Robson Street and exit the development to Cooper Street in a forwards direction.

17. Parking and Operational Traffic Management Plan

Before the use starts, a Parking and Operational Traffic Management Plan to the satisfaction of the responsible authority must be submitted to and approved by the responsible authority. When approved, the plan will be endorsed and will then form part of the permit. Traffic and parking operations on and adjacent to the site must conform to this endorsed plan. The plan must be generally in accordance with the plan (specify any earlier submitted plan) but must include:

- a) the location of all areas on- and/or off-site to be used for staff and patron parking
- b) owner's permission and any required planning permission for parking on other land
- c) specification of staff numbers adequate to enable efficient operation of car parking areas both on- and off-site
- d) the number and location of all on- and off-site security staff
- e) the means by which the direction of traffic and pedestrian flows to and from car parking areas will be controlled both on- and off-site
- f) measures to preclude staff parking in designated patron car parking areas
- g) Servicing of the drainage and maintenance of car parking areas.
- h) The heavy vehicle movements into and out of the site shall be demonstrated on a scale drawing to be achievable in a single forward movement by the use of current Austroads Vehicle Turning Templates. (The vehicle type, speed and radius information shall be included).
- i) The plan shall state the route for heavy vehicles to follow to arrive at the Robson Street site entrance and shall state how this information will be advised to the affected drivers.
- j) The operational traffic management plan is required to advise of any removal of existing redundant vehicle crossings and reinstatement of affected kerb, nature strip and footpath. Satisfactory clearance is to be provided to any stormwater pit, power or telecommunications pole, manhole cover, marker, or street tree. Any relocation, alteration or replacement required shall be at the applicant's expense.

18. Car Parking

Before the use or occupation of the development, the internal traffic and parking areas must be constructed to the satisfaction of the Responsible Authority, and shall be:

- a) In accordance with endorsed plans;
- b) In accordance with Australian Standards;
- c) Finished with an all-weather sealed surface;
- d) Adequately drained;
- e) Provided with appropriate signage, lighting, line marking and traffic calming treatments.

19. Footpath Construction Requirements

Before the commencement of the use or occupation of the development, the applicant must provide a concrete footpath for the full width of the site frontage in Robson Street and Cooper Street to the satisfaction of the Responsible Authority. Before any works associated with the footpath start, Detailed Construction Plans must be provided in accordance with Council's current Design Guidelines and endorsed by the responsible authority.

20. Project Management Plan

Before the commencement of any works for each stage of the development (including any preliminary site preparation and establishment works, demolition or material removal) a Project Management Plan to the satisfaction of the Responsible Authority must be submitted for review. The Project Management Plan must include and address the following:

- a) Health & Safety Management Plan
 - i) Description of Works
 - ii) Site Security / Signage
 - iii) Worksite Safety / Public Safety
- b) Environmental Management Plan (EMP) in accordance with the Environment Protection Authority document Environmental Guidelines for Major Construction Sites, February 1996 or its successor document, including:
 - i) Operating Hours, Noise and Vibration Controls;
 - ii) Air and Dust Management;
 - iii) Stormwater and Sediment Control; and
 - iv) Waste and Materials Reuse Management.
 - v) Amenity Considerations
 - vi) Protection Zones (Flora, Fauna, Weeds, Pests and Cultural Heritage)
- c) Construction Management Plan
 - i) Company Structure / Site Contacts
 - ii) Company Policies (if applicable)
 - iii) Responsible Authority Approvals
 - iv) Insurances
 - v) Asset Condition Report
 - vi) Quality Management
 - vii) Construction Program
- d) Traffic Management Plan.
 - i) Traffic Guidance Schemes
 - ii) Site Compound Map
 - iii) WCC Road Reserve Works Permit
 - iv) VicRoads MoA (if applicable)

The Project Management Plan must be implemented to the satisfaction of the responsible authority for the duration of the works. The Warrnambool City Council template may be used if completed correctly and in full.

21. This permit will expire if one of the following circumstances applies:

- a. the development and the use are not started within two (2) years of the date of this permit.
- b. the development is not completed within four (4) years of the date of this permit.

The Responsible Authority may extend the periods referred to if a request is made in writing before the permit expires, or:

- a. Within six months afterwards for commencement, or
- b. Within twelve months afterwards for completion.

NOTES

Road Reserve Works Permit

Before the commencement of any works within a Road Reserve, the applicant must obtain a Road Reserve Works Permit from Council. All conditions on the Permit must be complied with.

Asset Protection Permit

Before the commencement of any physical works to the site, an Asset Protection Permit must be obtained from Council. This purpose of this permit is to protect Council assets from damage which can result from the works and from the movement of heavy equipment and materials on and off the site. All conditions on the Permit must be complied with.

Discharge of Polluted Water

Polluted drainage must be treated and/or absorbed on the lot from which it emanates to the satisfaction of the Responsible Authority.

Polluted drainage must not be discharged beyond the boundaries of the lot from which it emanates or into a watercourse or easement drain.

EPA Guidelines

Refer to Environment Protection Authority Victoria (EPA) guidelines. The amended Environment Protection Act 2017 came into effect on 1 July 2021. The amended Environment Protection Act 2017 imposes new duties on individuals and/or businesses undertaking the activity permitted by this permit. If your business engages in activities that may give rise to a risk to human health or the environment from pollution or waste, you must understand those risks and take action to minimise them as far as reasonably practicable.

Dangerous Goods Storing & Handling Regulations

As per Regulation 66, before commencing operations the applicant must submit a Dangerous Goods Storage and Handling notification to WorkSafe.

Planner
Responsible:

Delegate: Rob Wandell

Signature:

Signature:



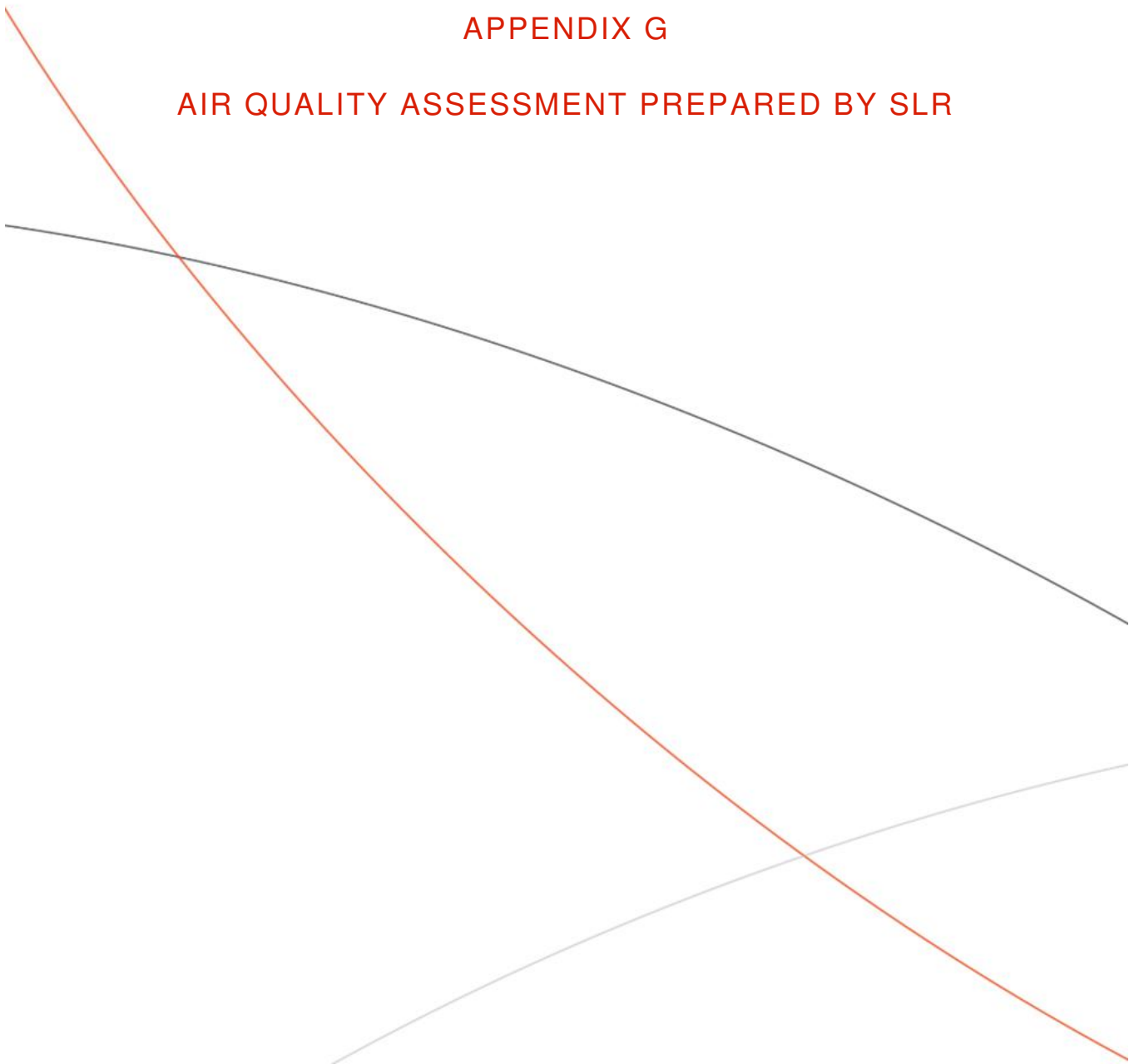
Date:

Date:

10 June 2022

APPENDIX G

AIR QUALITY ASSESSMENT PREPARED BY SLR



1-5 COOPER ST, WARRNAMBOOL

SWH Regional Logistics Centre Adverse Amenity Impact Assessment: Air Quality

Prepared for:

South West Healthcare
Ryot Street
WARRNAMBOOL VIC 3280

SLR Ref: 640.30079.00000-R02
Version No: -v2.1
November 2021



South West Healthcare
1-5 Cooper St, Warrnambool
SWH Regional Logistics Centre
Adverse Amenity Impact Assessment:
Air Quality

SLR Ref No: 640.30079.00000-R02-v2.1.docx
November 2021

PREPARED BY

SLR Consulting Australia Pty Ltd
ABN 29 001 584 612
Level 11, 176 Wellington Parade
East Melbourne VIC 3002 Australia

T: +61 3 9249 9400
E: melbourne@slrconsulting.com www.slrconsulting.com

BASIS OF REPORT

This report has been prepared by SLR Consulting Australia Pty Ltd (SLR) with all reasonable skill, care and diligence, and taking account of the timescale and resources allocated to it by agreement with South West Healthcare (the Client). Information reported herein is based on the interpretation of data collected, which has been accepted in good faith as being accurate and valid.

This report is for the exclusive use of the Client. No warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from SLR.

SLR disclaims any responsibility to the Client and others in respect of any matters outside the agreed scope of the work.

DOCUMENT CONTROL

Reference	Date	Prepared	Checked	Authorised
640.30079.00000-R02-v2.1	11 November 2021	Jason Shepherd	Johan Meline	Jason Shepherd
640.30079.00000-R02-v2.0	29 September 2020	Jason Shepherd	Johan Meline	Jason Shepherd
640.30079.00000-R02-v1.0	25 September 2020	Jason Shepherd	Johan Meline	Jason Shepherd

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1 Introduction

SLR Consulting Australia Pty Ltd (SLR) was engaged by South West Healthcare to undertake an adverse amenity impact assessment (AAIA) for noise and air quality relating to the proposed Regional Logistics Centre at 1-5 Cooper Street, Warrnambool (the Development). It is understood that a Regional Logistics Centre is proposed in Warrnambool in partnership with South West Healthcare and that the development will involve commercial laundry and distribution of clean linen to surrounding hospitals and healthcare service providers. This report presents the air quality AAIA; a separate report has been prepared to address noise impacts.

This AAIA was commissioned to determine whether any constraints are posed by the proposed Development due to emissions to air impacting on surrounding sensitive land uses.

The AAIA was performed with reference to relevant standards, guidelines and resources, including:

- National Environment Protection Measures (Air Quality) (Air NEPM) (NEPC, 2016)
- State Environment Protection Policy (Ambient Air Quality) [SEPP(AAQ)] (EPAV, 2016)
- Environmental Protection Authority (EPA) Victoria publication '*Recommended Separation Distances for Industrial Residual Air Emissions*' (EPAV, 2013)
- Victoria Planning Provisions (Victoria State Government, 2020)

2 Project Description and Site Details

2.1 Site Location and Surroundings

The site is located at 1-5 Cooper Street, Warrnambool in an Industrial 1 Zone land use planning zone in the Warrnambool City Council. The location of the site and the nearest residence at 51 McMeekin Rd, Warrnambool are identified in the aerial photograph presented in **Figure 1**.

Figure 1 Site Location and Nearest Sensitive Receivers



Source: Nearmap 22/09/2020

2.2 Hours of Operation

The currently proposed operating hours will be from 7:00 am to 5:00 pm, Monday to Friday. These hours could increase to include a Saturday from 7:00 am to 12:00 pm in the first 12-24 months (laundry only).

2.3 Potential Sources of Emissions to Air

There may be emissions to air from the proposed Development of volatile organic compounds (VOCs) and associated odours, related to the laundry process. These would most likely be emitted passively or by forced ventilation of the building interior and driers through stacks on the roof of the building.

Materials containing print laundered by industrial laundries can contain substantial amounts of VOCs. However, this is not the case for uniforms and rugs or hospitality related materials which are likely to have only incidental solvent content, if any.

Oxides of nitrogen (NO_x) and carbon monoxide (CO) associated with gas boilers may also be emitted from flues.

3 Relevant Standards and Guidelines

3.1 Commonwealth Legislation

The National Environment Protection Council (NEPC) was established under the *National Environment Protection Council Act 1994 (Cth)* (Australian Government, 2016) with the primary function of:

- Developing National Environment Protection Measures (NEPMs)
- Assessing and reporting on the implementation and effectiveness of the NEPMs in each State and Territory.

3.2 Victorian Environmental Legislation

The Environment Protection Act (EP Act) (Victoria State Government, 2017) is the primary legislative instrument that governs protection of the environment in Victoria. It sets environmental objectives for air, water and land and regulates the discharge of emissions of these elements to the environment. Pursuant to the EP Act, beneficial uses of the air quality environment are principally protected by subordinate regulations and policies. The most relevant of these for this assessment is the SEPP(AAQ).

Note that the *Environment Protection Amendment Act 2018* (Victoria State Government, 2018), which will repeal the current *Environment Protection Act 1970* is expected to come into effect in July 2021. Changes to the regulations, policies and guidelines subordinate to the *Environment Protection Act 1970* are expected to follow, though it is envisaged that in general there will be no material changes to the assessment methodology or the air quality criteria set out in this AAIA.

3.2.1 State Environment Protection Policy (Ambient Air Quality)

In general, the SEPP(AAQ) adopts the requirements of the Air NEPM. The SEPP(AAQ) provides environmental quality objectives (EQOs) for CO, nitrogen dioxide (NO₂), photochemical oxidants (as ozone), sulphur dioxide (SO₂), lead and particulate with an aerodynamic diameter of less than 10 microns (PM₁₀) and less than 2.5 microns (PM_{2.5}). The SEPP(AAQ) EQOs apply to air quality within a region or sub-region considered to be representative of exposure of the general population in Victoria.

3.3 Recommended Separation Distances for Industrial Residual Air Emissions

EPA Victoria publication 1518, *Recommended Separation Distances for Industrial Residual Air Emissions* (the Recommended Separation Distances) makes recommendations for assessing appropriate separation distances where amenity may be reduced for sensitive or incompatible land uses. Sensitive land uses that warrant protection from amenity-reducing off-site effects of industry by maintenance of a buffer distance include residential areas and zones, hospitals and schools.

Industrial Residual Air Emissions (IRAEs) are defined by the EPA as unintended or accidental emissions (i.e. due to equipment failure, abnormal weather conditions etc) which are often episodic in occurrence and may originate near ground level. While routine emissions may be controlled at point of emissions or through sufficient dispersion to ensure ground level concentrations meet license requirements, provision of a buffer distance also considering IRAEs allows for unintended emissions to dissipate without adverse impacts on sensitive land uses.

The Recommended Separation Distances is intended to support effective decision making with regard to land uses to protect human health and wellbeing, local amenity and aesthetic enjoyment from IRAEs, but they are also intended to protect existing industry from encroachment by sensitive uses.

The encroachment of sensitive land uses on existing industrial uses has the potential to lead to the unwanted situation where amenity at the sensitive land use is compromised and remedial action to alleviate off-site impacts from the industry is deemed uneconomical, such that the viability of the industry is jeopardised.

The compatibility of a proposed sensitive land use development with surrounding land uses and zones should therefore be carefully assessed.

The Recommended Separation Distances lists a number of industries with their recommended IRAE separation distances and recommends EPA consultation where site-specific circumstances indicate a lesser separation distance may be appropriate (i.e. where there is no history of complaints arising from residual emissions or where the plant is significantly smaller than that used in the recommendations etc).

3.4 Victorian Planning Provisions

The Victoria Planning Provisions (VPP) is a state-wide reference document or template from which Victorian planning schemes are sourced and constructed. Of relevance to the Development is the Warrnambool Planning Scheme.

3.4.1 Warrnambool Planning Scheme

The purpose of the Warrnambool Planning Scheme is:

- *To provide a clear and consistent framework within which decisions about the use and development of land can be made.*
- *To express state, regional, local and community expectations for areas and land uses.*
- *To provide for the implementation of State, regional and local policies affecting land use and development.*

Clause 13.06-1S 'Air quality management' considers the SEPP(AAQ) and the Recommended Separation Distances, as discussed in **Section 3.3**, as relevant policy documents and includes the following strategy:

"Ensure, wherever possible, that there is suitable separation between land uses that reduce air amenity and sensitive land uses."

3.4.2 Threshold Distances

Clause 53.10 of the VPP discusses land uses with adverse amenity potential. The purpose of this clause is to define those types of uses and activities which, if not appropriately designed and located, may cause offense or unacceptable risk to the neighbourhood. Clause 53.10.-1 provides a table of Threshold Distances for various land uses, where the Threshold Distance is:

"the shortest distance from any part of the land to:

- *land (not a road) in an Activity Centre Zone, Capital City Zone, Commercial 1 Zone, Docklands Zone, residential zone or Rural Living Zone; or*
- *land used for a hospital, an education centre or a corrective institution; or*

- *land in a Public Acquisition Overlay to be acquired for a hospital, an education centre or a corrective institution.”*

Clause 53.10-1 states that:

“An application to use land for an industry, utility installation or warehouse for a purpose listed in the table to this clause must be referred to the Environment Protection Authority under section 55 of the Act if the threshold distance is not to be met or no threshold distance is specified.”

Amendment VC175, gazetted on 26 May 2020, updated the Planning Policy Framework and Clause 53.10 of the Victoria Planning Provisions to improve the way the planning system addresses buffers for amenity, human health and safety impacts. The updates include a modernised list of uses and threshold distances, in consultation with EPA and more production thresholds added to exempt smaller operations. The updated threshold distances are included in this assessment.

4 Existing Environment

4.1 Air Quality

EPA Victoria conducts long term ambient air quality monitoring at performance monitoring stations to meet its obligations under the Air NEPM. There is no nearby performance ambient air quality monitoring station (AAQMS) to the Development, with Geelong South, approximately 160 km to the east, the closest.

In general, however, air quality at all of EPAV's AAQMS has been in the 'good' to 'very good' air quality categories at least 75 per cent of the time, meaning air quality in Victoria is typically good (EPAV, 2018).

Air quality in rural areas is generally less impacted by anthropogenic sources such as traffic emissions and industrial emissions, however it may be impacted on occasion by bush fires and prescribed planned fuel reduction burns that have the potential to result in elevated concentrations of PM_{2.5}, while windblown dust may lead to elevated PM₁₀ concentrations. Domestic wood burning heaters are commonly used all over Victoria and are another source of PM_{2.5}.

The relatively low population density and light industry in the surrounding area suggests the Project location air quality is not expected to be significantly impacted by vehicular traffic emissions, domestic wood burning emissions or significant industrial emissions.

4.2 Meteorology

The nearest available meteorological monitoring station operated by the Bureau of Meteorology (BOM) is Warrnambool automatic weather station (AWS) (station number 090186), located approximately 9 kilometres (km) north of the Development at Warrnambool Aerodrome. Although the distance between Warrnambool Aerodrome and the Development is relatively short, the meteorological conditions experienced at Warrnambool Aerodrome, approximately 9 km inland from the coast may not reflect those experienced within Warrnambool and the Development, being subject to coastal influences (e.g. sea breezes). Port Fairy AWS (station number 090175) is located approximately 20 km west of the Development, a greater distance than the aerodrome, but may be more reflective of the meteorology at the Development given its coastal location.

Of the parameters monitored at the AWSs, the most relevant to this AAIA are the prevailing wind speed and wind direction as these will influence the transport of air pollutants including odour, from the Development.

Annual and seasonal wind roses generated using hourly wind data recorded by the Warrnambool and Port Fairy AWS for a representative year of meteorology, in this case 2019, are provided in **Figure 2** and **Figure 3**, respectively. These indicate the prevailing wind directions for the year and how they predominantly change between seasons.

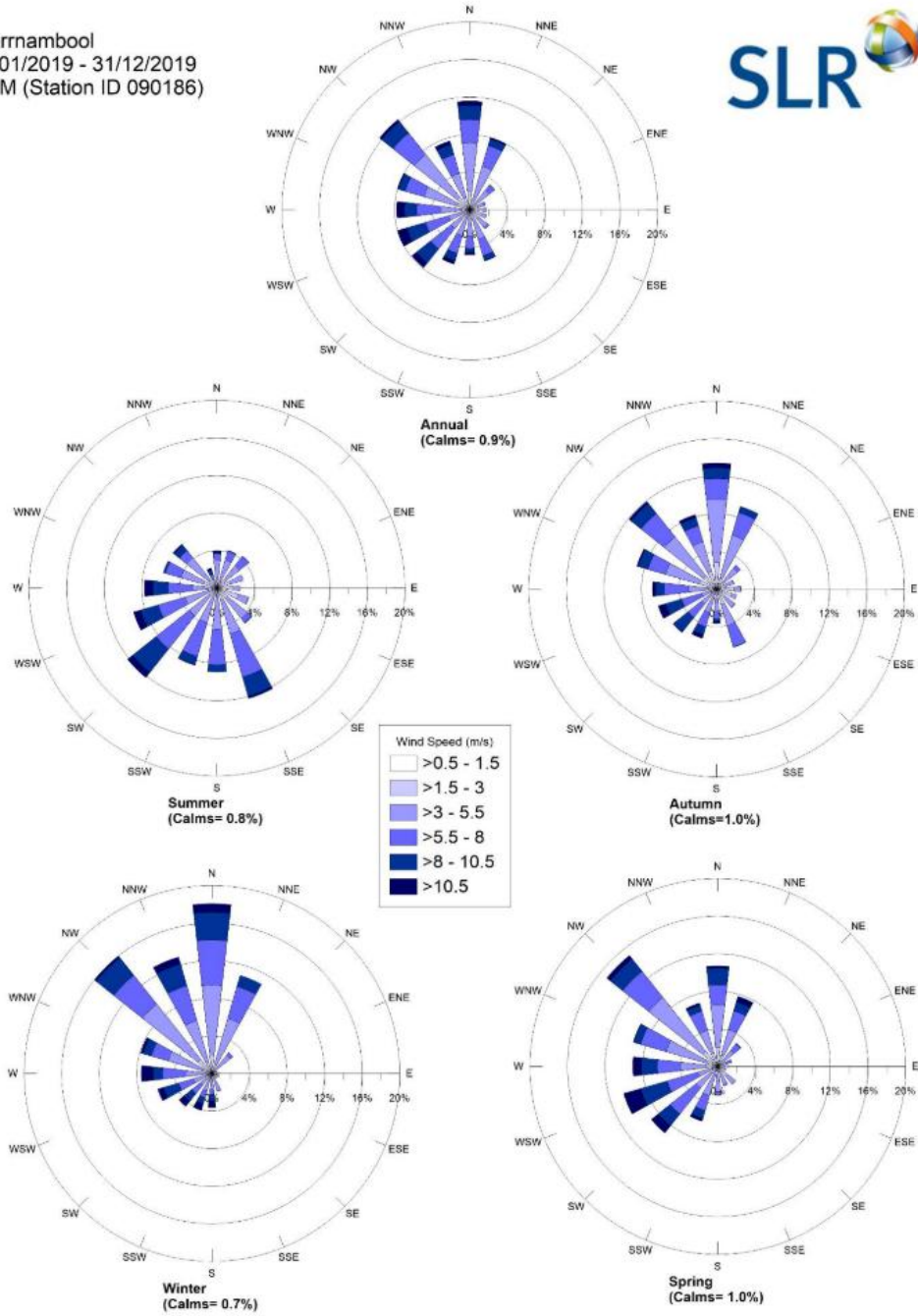
The annual wind roses indicate that during 2019, there were a high proportion of relatively strong winds, with few very light winds and calms. Summer months are dominated by southern quadrants winds, while the other seasons see mainly northern and western winds. There are generally very few easterly winds.

South West Healthcare
 1-5 Cooper St, Warrnambool
 SWH Regional Logistics Centre
 Adverse Amenity Impact Assessment: Air Quality Air Quality

SLR Ref No: 640.30079.00000-R02-v2.1.docx
 November 2021

Figure 2 Warrnambool AWS Annual and Seasonal Wind Roses (2019)

Warrnambool
 01/01/2019 - 31/12/2019
 BOM (Station ID 090186)

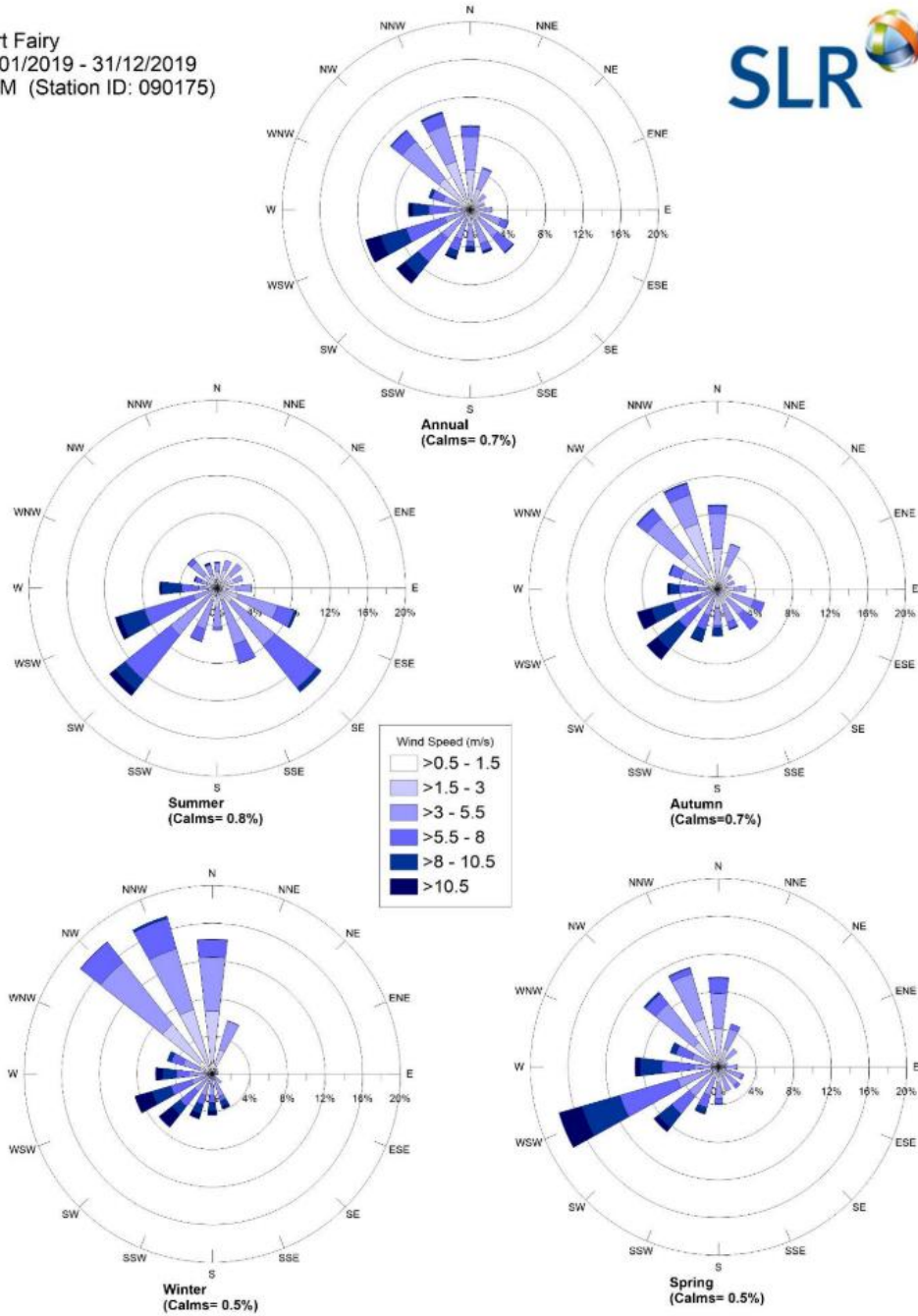


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 November 2021

Figure 3 Port Fairy AWS Annual and Seasonal Wind Roses (2019)

Port Fairy
 01/01/2019 - 31/12/2019
 BOM (Station ID: 090175)



5 Desktop Study

5.1 Recommended Separation Distances and Threshold Distances

There is no recommended separation distance for an activity corresponding to that of the proposed Development. There is, however, a relevant *type of use or activity (purpose)* and corresponding threshold distance for the proposed Development under “*Recreational, personal and other services*”, specifically:

- *Laundry for commercial and institutional customers, or in bulk quantities: 100 m.*

If the distance between the proposed Development and the nearest sensitive receptor is greater than 100 m, the risk of emissions to air from the Development impacting on the sensitive receptor is considered to be low.

5.1.1 Assessment

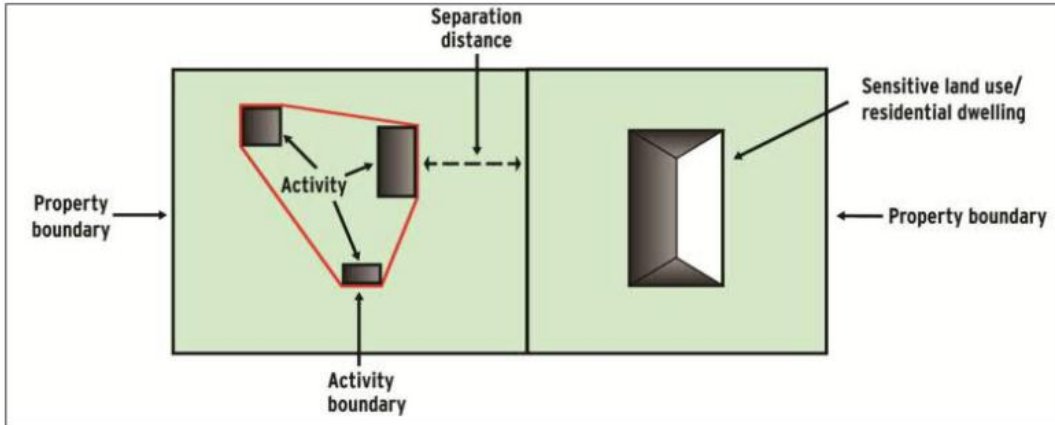
The planning provisions indicate that the distance between an activity and a sensitive land use should be the shortest distance from any part of the land (belonging to the activity) and the land of the sensitive receptor. The shortest distance between the two land boundaries (**Figure 4**) is 96.4 m, or 3.6 m less than the Threshold Distance).

Figure 4 Shortest Distance Between Any Part of the Land



However, it is worth noting that the Recommended Separation Distances provides an arguably more meaningful approach with which to measure the distance between the two land uses. The Recommended Separation Distances advises that in ‘urban’ situations, including within townships, the distance between an industrial activity and the nearest sensitive land use should be measured from the ‘activity boundary’ of the industrial activity, a convex polygon that includes all current or proposed industrial activities from which IRAEs may arise. An example reproduced from the Recommended Separation Distances is provided in **Figure 5**.

Figure 5 Separation Distance Measurement: Urban Method



For the proposed Development, the activity boundary would describe the Development building itself, excluding the carparking areas and internal roadways from which no odour emission would occur. **Figure 6** presents a site plan for the Development that indicates that the western boundary of the site will include an internal road and car parking spaces, which would require a strip approximately 10 m in width. The separation distance measured from the likely activity boundary of the proposed Development as shown in **Figure 7** to the property boundary of the nearest sensitive receptor, is 105 m, 5 m greater than the 100 m threshold distance.

Figure 6 Development Site Plan

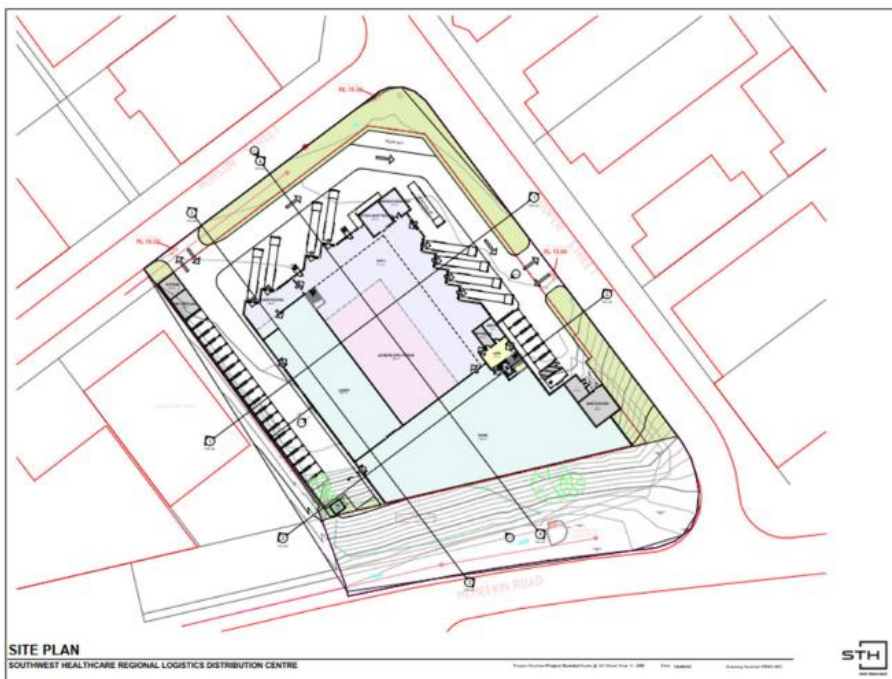


Figure 7 Shortest Distance Between the Development Activity Boundary and Sensitive Land Use



Source: Nearthmap 22/09/2020

5.2 Additional Considerations

For odour emissions from the proposed Development to be transported to the nearest sensitive receptor, light winds blowing from the northeast / east-northeast are required. As indicated by the wind roses provided in **Section 4.2**, winds from these directions occur less than 4% of the time (both annually and for each season). For the majority of the time winds will disperse any emissions from the Development to the west, away from any nearby sensitive receptors.

6 Mitigation Measures

Due to the low risk of potential adverse amenity impacts from the proposed Development on nearby sensitive receptors, no mitigation measures are deemed necessary. However, the proponent is responsible for minimizing emissions from the boundary of the Development. In the unlikely event that offensive odour impacts are reported (e.g. complaints from nearby residences), the potential for fugitive odour emissions should be minimized by keeping windows and doors closed where practicable, including roller doors when not in use. This will assist in keeping the building negatively pressurized, with extraction of indoor laundry spaces and driers ventilated through stacks on the roof. Emissions from above the roof, will aid dispersion and further lessen off-site impacts.

7 Conclusion

The combination of relatively minor emissions with an appropriate separation distance and prevailing wind conditions favourable for dispersion indicates that the proposed Development is unlikely to result in any significant impacts at any nearby sensitive land uses. The potential for air quality and odour impacts are not considered to pose a constraint for the proposed Development.

8 References

- Australian Government. (2016, July). National Environment Protection Council Act 1994 (Compilation No. 11). Canberra, ACT.
- EPAV. (2013, March 7). *EPA Publication 1518 Recommended Separation Distances for Industrial Residual Air Emissions*. Retrieved from Environmental Protection Authority Victoria: <https://www.epa.vic.gov.au/our-work/publications/publication/2013/march/1518>
- EPAV. (2016, July 28). State Environment Protection Policy (Ambient Air Quality). *Environment Protection Authority*. Melbourne, Vic, Australia: Victoria Government Gazette.
- EPAV. (2018). *Air pollution in Victoria – a summary of the state of knowledge*. Melbourne: Environment Protection Authority Victoria.
- NEPC. (2016). *National Environment Protection (Ambient Air Quality) Measure*. Canberra: Department of the Environment: National Environment Protection Council.
- Victoria State Government. (2017). Environment Protection Act. Melbourne, Victoria.
- Victoria State Government. (2018). Environment Protection Amendment Act 2018. Melbourne, Victoria.
- Victoria State Government. (2020, May 26). Victoria Planning Provisions. Melbourne, Victoria: Victoria State Government.

ASIA PACIFIC OFFICES

BRISBANE

Level 2, 15 Astor Terrace
Spring Hill QLD 4000
Australia
T: +61 7 3858 4800
F: +61 7 3858 4801

MACKAY

21 River Street
Mackay QLD 4740
Australia
T: +61 7 3181 3300

SYDNEY

2 Lincoln Street
Lane Cove NSW 2066
Australia
T: +61 2 9427 8100
F: +61 2 9427 8200

AUCKLAND

68 Beach Road
Auckland 1010
New Zealand
T: +64 27 441 7849

CANBERRA

GPO 410
Canberra ACT 2600
Australia
T: +61 2 6287 0800
F: +61 2 9427 8200

MELBOURNE

Suite 2, 2 Domville Avenue
Hawthorn VIC 3122
Australia
T: +61 3 9249 9400
F: +61 3 9249 9499

TOWNSVILLE

Level 1, 514 Sturt Street
Townsville QLD 4810
Australia
T: +61 7 4722 8000
F: +61 7 4722 8001

NELSON

6/A Cambridge Street
Richmond, Nelson 7020
New Zealand
T: +64 274 898 628

DARWIN

Unit 5, 21 Parap Road
Parap NT 0820
Australia
T: +61 8 8998 0100
F: +61 8 9370 0101

NEWCASTLE

10 Kings Road
New Lambton NSW 2305
Australia
T: +61 2 4037 3200
F: +61 2 4037 3201

TOWNSVILLE SOUTH

12 Cannan Street
Townsville South QLD 4810
Australia
T: +61 7 4772 6500

GOLD COAST

Level 2, 194 Varsity Parade
Varsity Lakes QLD 4227
Australia
M: +61 438 763 516

PERTH

Ground Floor, 503 Murray Street
Perth WA 6000
Australia
T: +61 8 9422 5900
F: +61 8 9422 5901

WOLLONGONG

Level 1, The Central Building
UoW Innovation Campus
North Wollongong NSW 2500
Australia
T: +61 404 939 922





1-5 COOPER STREET, WARRNAMBOOL STORMWATER MANAGEMENT STRATEGY

SOUTH WEST HEALTHCARE
OCTOBER 2021



This report has been prepared by the office of Spiire
Level 6, 414 La Trobe Street PO Box 16084 **Melbourne** Victoria 8007

Issue Date	Rev No	Authors	Checked	Approved
18/01/2021	A	C. Cosgriff, I.Pham	J. Ward	M. Yule

Spiire Job Number: 307904

Citation: Spiire 2021, L

File Name: G:\30\307904\Integrated Water\Documents & Calculations\Reports\W_REP_0_307904_SWH SWMS_(JW review).docx

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1. INTRODUCTION

Spiire have been engaged by South West Healthcare to develop a stormwater management strategy (SWMS) for the proposed site at 1- 5 Cooper Street, Warrnambool.

The purpose of this document is to demonstrate:

- ▶ The hydrological and hydraulic analysis supporting the Strategy.
- ▶ The indicative drainage conditions of the developed site.
- ▶ Compliance with retardation and stormwater treatment requirements.

Warrnambool City council were engaged to determine specific requirements for the stormwater drainage of the site. Correspondence can be found in Appendix 4 and the requirements are as follows:

- ▶ Identification of existing drainage on the site.
- ▶ A proposed Legal Point of Discharge (LOPD).
- ▶ Underground drainage system for minor flows to the drainage outfall.
- ▶ Limiting the 20% AEP storm event flows to the 20% predevelopment flows.
- ▶ Measures to enhance stormwater discharge quality from the site in accordance with Clause 56.07-4 of the planning scheme.
- ▶ A major drainage network catering for the 1% AEP storm event to pass through the development without causing damage or nuisance to adjoining lots.

This document will be submitted to Warrnambool City Council for development approval.

1.1 SUBJECT SITE

The site is bound on the north west by Robson Street, on the north east by Cooper Street, and on the south west by MB Fabrication, a metal fabrication business. The southern boundary measuring approximately 80m is bordered by an open space reserve vested in Council with McMeekin Street beyond. A two-metre wide section of the reserve wraps around onto the Cooper Street frontage of approximately 29m metres.

The subject site is approximately 6,476m² and is shown in Figure 1 below.



Figure 1: Aerial of view of 1-5 Cooper Street

1.2 EXISTING DRAINAGE CONDITIONS

The property is generally flat with a slight slope towards the south east corner. A power pole is also located centrally to the site's Robson Street frontage.

Existing side entry drainage pits are located on both Robson and Cooper St. Council has indicated the preferred LPOD to be the Robson St drain described in Table 1 (Refer Appendix 4 and Figure 4).

Table 1: Summary of each potential LPOD and flows

Road	Pipe Size (mm)	Pipe capacity (m ³ /s)
Robson Street	300 dia	0.068 ⁽¹⁾
Cooper St	225 dia	0.045 ⁽¹⁾

(1) Pipe capacities are based on mannings pipe flow calculations using slope from levels provided by Council.

1.3 PROPOSED SITE

The subject site will be developed as shown on the layout below. Most of the site will be a large warehouse building consisting of a storage and laundry facility. The remainder of the site consists of a hardstand area providing access to the internal carpark and truck bays. The developed site layout is shown in Figure 2.

The developed site will grade to the north and consist of the following drainage components:

- ▶ A minor drainage system accommodating 20 % AEP (1 in 5 Year ARI) peak flow in the form of grated pits and pipes.
- ▶ A major drainage system conveying overland flow for the 1 % AEP (1 in 100 Year ARI) peak flow event.

The drainage system will connect with the existing drainage at the LPOD. Additionally, water sensitive urban design will be incorporated to treat the stormwater to the satisfaction of Council. Warrnambool



City Council were engaged to determine specific requirements for the stormwater drainage of the site. Correspondance can be found in Appendix D and the requirements are as follows:

- ▶ Identification of existing drainage on the site.
- ▶ A proposed Legal Point of Discharge (LOPD).
- ▶ Underground drainage system for minor flows to the drainage outfall.
- ▶ Limiting the 18% AEP storm event flows to the 18% predevelopment flows.
- ▶ Measures to enhance stormwater discharge quality from the site in accordance with Clause 56.07-4 of the planning scheme.
- ▶ A major drainage network catering for the 1% AEP storm event to pass through the development without causing damage or nuisance to adjoining lots.



Figure 2: Developed Site Layout



2. HYDROLOGIC AND HYDRAULIC ANALYSIS

2.1 FLOW CALCULATIONS

The Rational Method was used to undertake flow calculations to estimate the sizing of the drainage system and confirm the suitability of the LPOD pipe.

As mentioned, the underground drainage network will be designed to carry the 20% AEP peak flow event while flows that exceed this will be conveyed via overland flow up to the 1 % AEP peak flow event. The 4EY flow was calculated to determine treatment and bypass flows to size the bioretention asset required to treat the site.

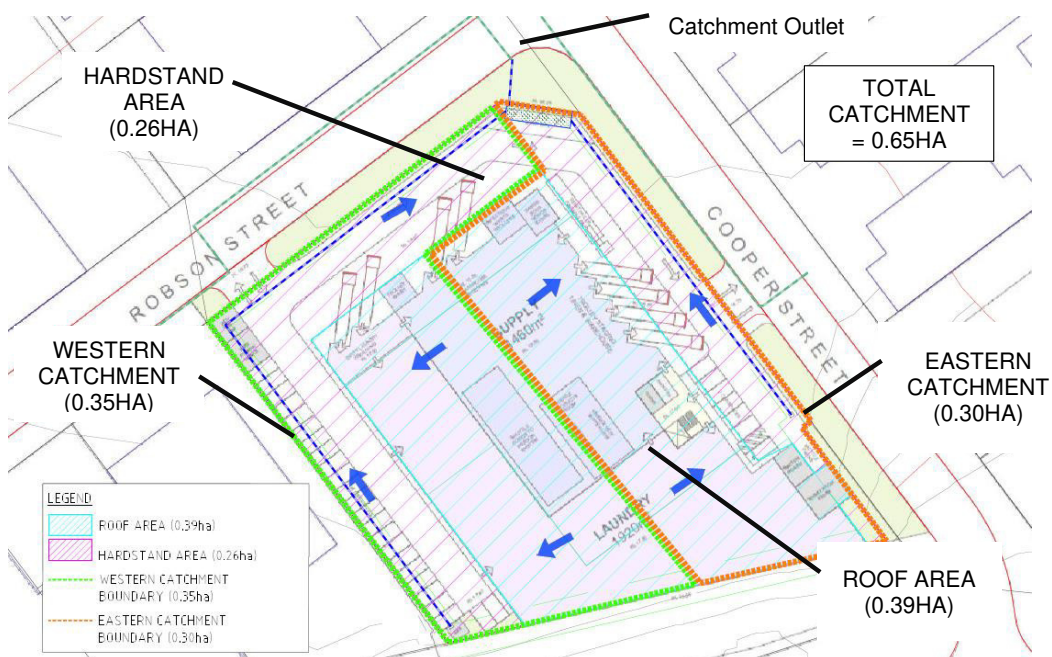


Figure 3: Catchment Plan

A summary of flows from the rational calculations can be shown in Table 2. For full calculations refer Appendix 2.

Table 2: Rational Calculation Summary

	Predeveloped	Developed
Catchment Size	0.65ha	0.65ha
Fraction Impervious	0.3	0.9
Peak Flow 1% AEP	0.11 m ³ /s	0.26 m ³ /s
Peak Flow 20% AEP	0.04 m ³ /s	0.10 m ³ /s
4EY	0.009 m ³ /s	0.020 m ³ /s



2.1.1 MINOR DRAINAGE

Approximately 0.39ha of the site is roof area, Flow from this surface will be conveyed via downpipes for minor flow. This will combine with the remaining hardstand minor flow, and drain to the LPOD, on Robson St shown on Figure 4.

The LPOD is a 300 mm pipe with parameters outlined in table 3.



Figure 4: Excerpt

Table 3: LPOD pipe parameters

Parameter	Value
Invert level	14.90 m AHD
Depth to invert	1.20 m
Pipe diameter	300 mm
Pipe grade	1 in 200
Pipe capacity	0.068 m ³ /s



The developed minor drainage flow is 0.1 m³/s (refer Table 2) and given a LPOD pipe capacity of 0.068 m³/s it is clear that retardation is required, to bring the peak flow back to pre-development levels.

There is an approximate 1m drop across the site with approximately 900mm cover at the LPOD. This allows internal drainage to grade with appropriate cover across the site and provide the required minor drainage. Figure 5 displays minor event flow paths and indicative minor drainage system alignments.

2.1.2 MAJOR DRAINAGE

Flows which exceed the 20% AEP event will be conveyed via overland sheet flow. The roof drainage and downpipes capacity will be exceeded major events where overtopping will occur. Overland flow will be designed to grade to the north west Robson St site access and secondly to the Cooper St site access area and join the overland flow paths on Robson and Cooper St. There should be crossfall on the hardstand areas to allow sheet flow to kerbs and avoid trapped low points.

Major event flow paths and discharge points from the site are shown in figure 5.

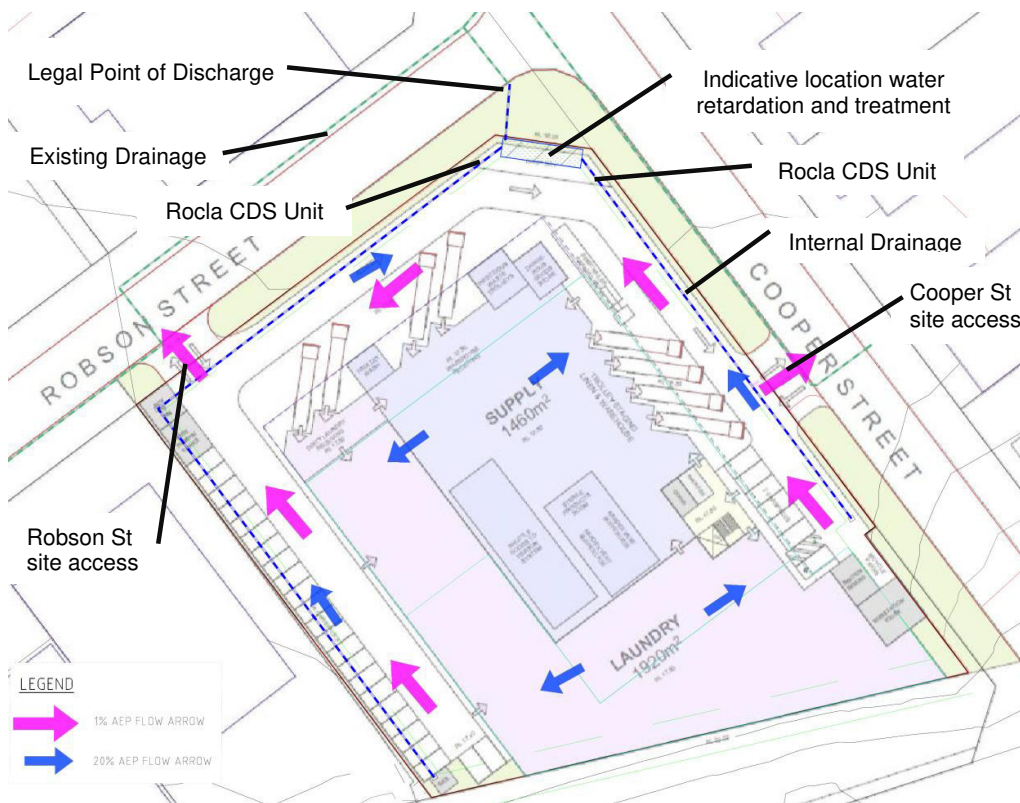


Figure 5: Drainage Layout

3. RETARDATION REQUIREMENTS

Council requires that developments mitigate flows to the 20% AEP predeveloped rate at the point of discharge. Rational calculations were used to determine the 20% AEP predeveloped flow indicating an allowable discharge of 0.043m³/s (Refer Section 1.2 and Appendix 2). Given a LPOD pipe capacity of 0.068 m³/s this allowable discharge from the retardation is valid.



The required storage was calculated using the Swinburne Institute of Technology method (refer Appendix 3). The relevant flows and required storage are presented in Table 5.

Table 4: Retardation Figures

Parameter	Value
20% Predevelopment Flow	0.043 m ³ /s
20% Post Development Flow	0.102 m ³ /s
Required Storage	24 m ³

The retardation can be achieved on the design surface in the form of a basin, or an equivalent underground proprietary product with a 24 m³ capacity. The storage will be provided to the north east of the site immediately upstream of the LPOD.

To reduce the footprint of the retarding basin, the basin should be graded with 1 in 1 batters with suitable surface treatment, and fenced to restrict access.

4. STORMWATER QUALITY

Stormwater quality treatment targets for the site as required by Council are consistent with clause 56.07-4 of the planning scheme. The 4EY flows from the site are required to be treated to the below targets.

Table 5: Urban Water Quality Objectives

Pollutant	Required % Reduction
Total Suspended Solids	80%
Total Nitrogen	45%
Total Phosphorus	45%
Gross Pollutants	70%

As with retardation, this can be achieved using a WSUD asset above ground, in the base of a retardation basin if applicable, alongside an equivalent underground proprietary product.

Rainfall data was extracted from pluviography data for the Mortlake weather station. A suitable 10 year period of rainfall data was selected and checked against annual totals for Warrnambool, indicating the station data was suitably similar to rainfall in Warrnambool for use within the modelling.

A MUSIC model was developed for the site indicating the following assets are required to meet the defined treatment targets:

- ▶ A 17 m² Bioretention Basin
- ▶ 2 Rocla CDS Units (CDS Nipper)

See treatment train below in Figure 4:

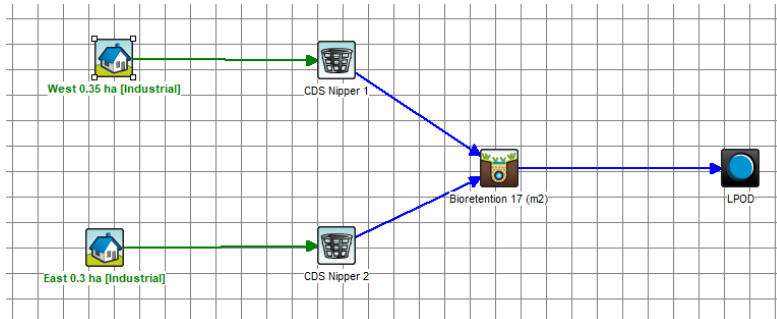


Figure 6: MUSIC Model Treatment Train

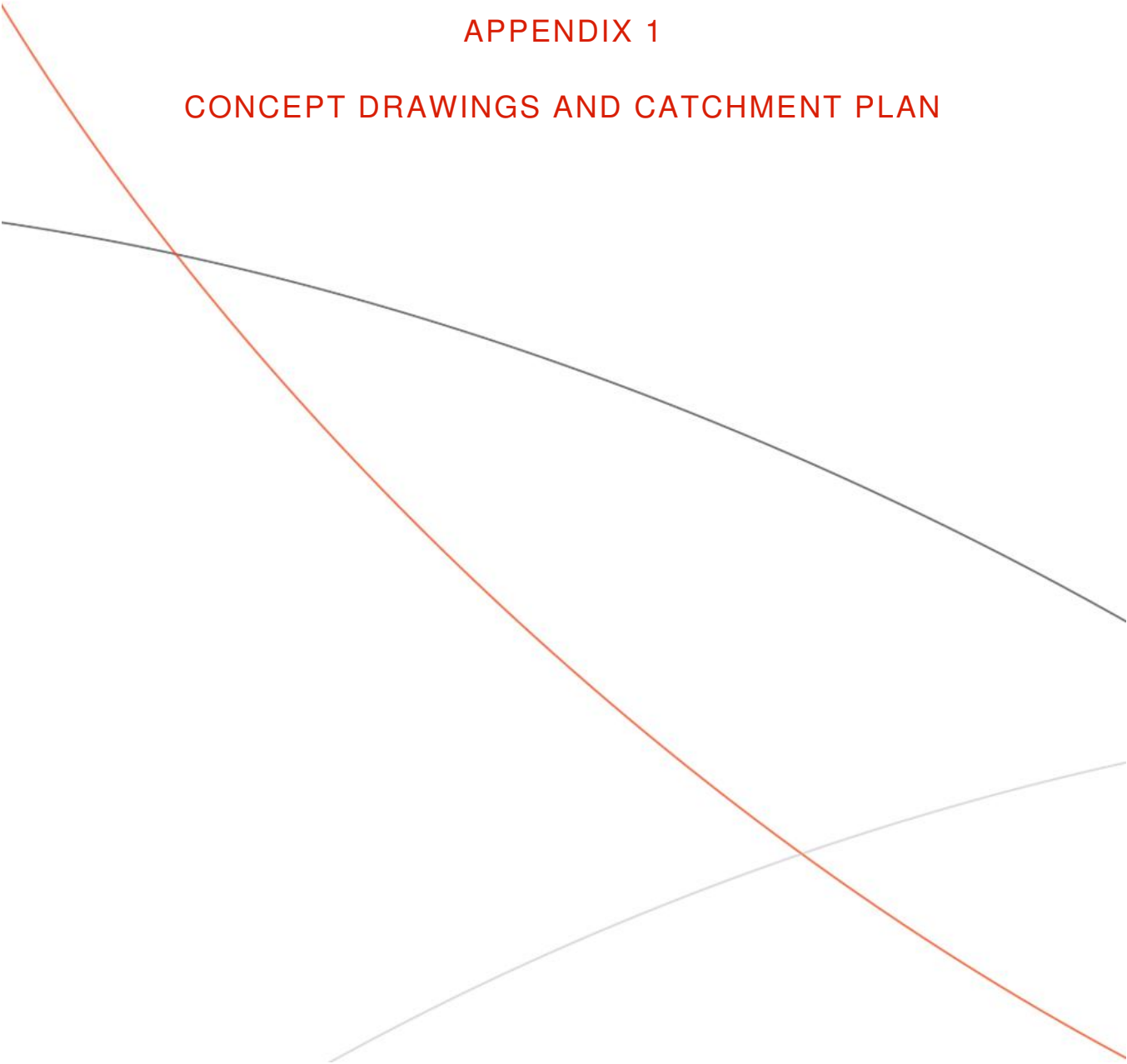
Given the level at the LPOD and existing levels within Lot 8-9, there is not adequate cover and depth to confidently assume the drop across a bioretention basin can be provided with a standard filter media depth. As such, the bioretention depth was modelled with a reduced filter media depth of 0.40 m, to ensure that treatment targets can be met in these conditions.

5. CONCLUSION

This SWMS demonstrates the required stormwater works to meet Council requirements. To document has presented the following:

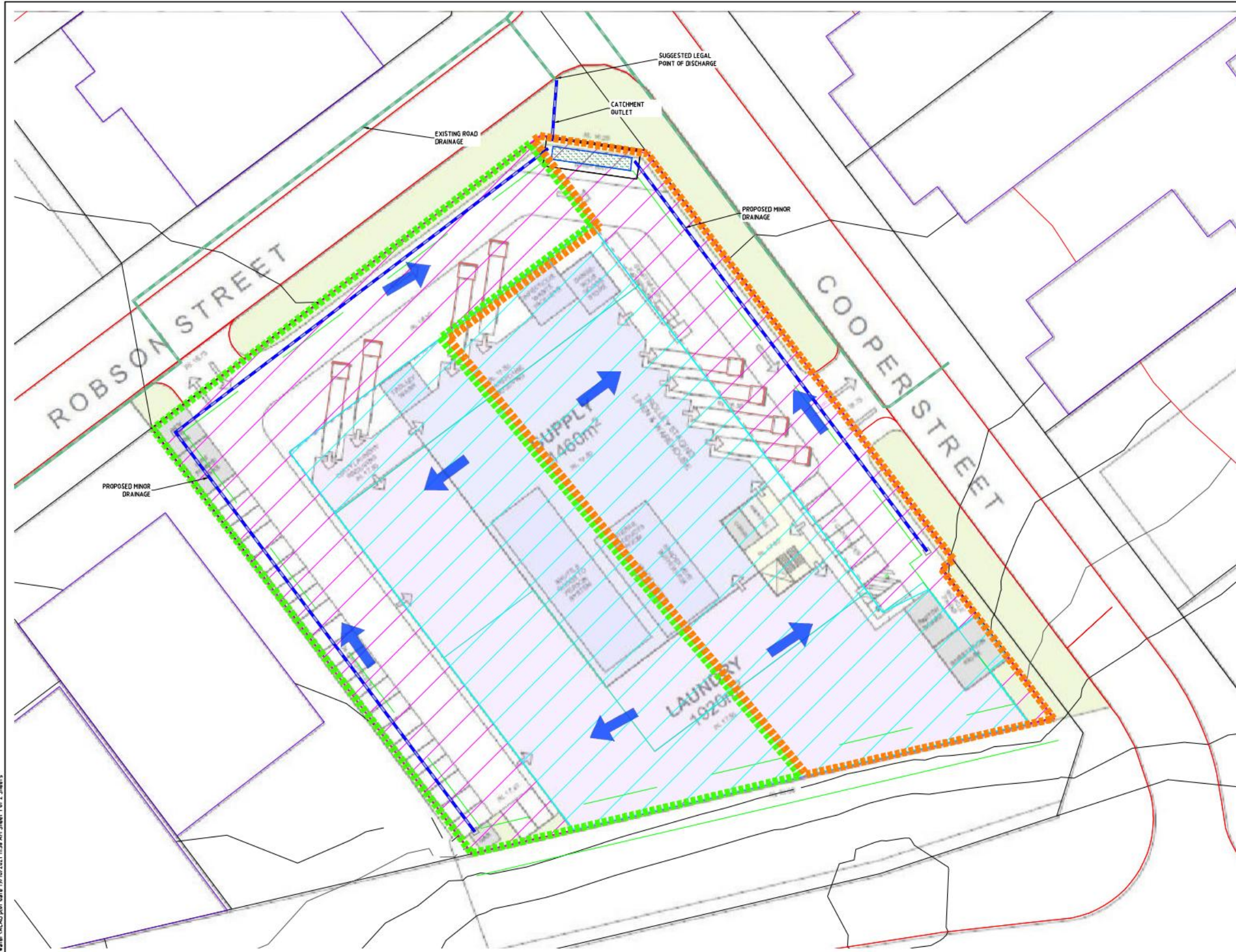
- ▶ The LPOD for 1-5 Cooper St Warrnambool is the side entry pit located at 7 Cooper St (Asset ID 140858). All flows up to the 20% AEP event will be conveyed via the internal drainage network and discharged at the LPOD at the retarded predevelopment rate, which the 300mm diameter outlet has the capacity to convey.
- ▶ Flows that exceed the 20% AEP event will be conveyed as overland flow and drained primarily to the access point on Robson St and secondly to the access point on Cooper St to enter the road drainage.
- ▶ Stormwater retardation and treatment requirements will be catered for by WSUD assets on site. The minor flows (up to 20% AEP) will be retarded back to the predeveloped 20% AEP rate of 0.042 m³/s using a retarding basin or equivalent proprietary product with a 24 m³ capacity.
- ▶ A bioretention system was sized at 17m², with 2 Rocla CDS units is required to treat the 4EY flow to best practice treatment targets.

APPENDIX 1
CONCEPT DRAWINGS AND CATCHMENT PLAN





LEGEND	
	ROOF CATCHMENT (0.39ha)
	HARDSTAND CATCHMENT (0.26ha)
	WESTERN CATCHMENT (0.35ha)
	EASTERN CATCHMENT (0.30ha)



file name: 307904WC800 HQ.dwg, layout name: WC800, plotted by: Chelsea Cogger, file location: C:\307904\307904\integrated\warrnambool\307904\307904.dwg, plot date: 15/01/2022 11:58 AM, sheet 1 of 2 sheets

Rev	Amendments	Approved	Date
A	FOR INFORMATION ONLY	M.Y	19-10-21



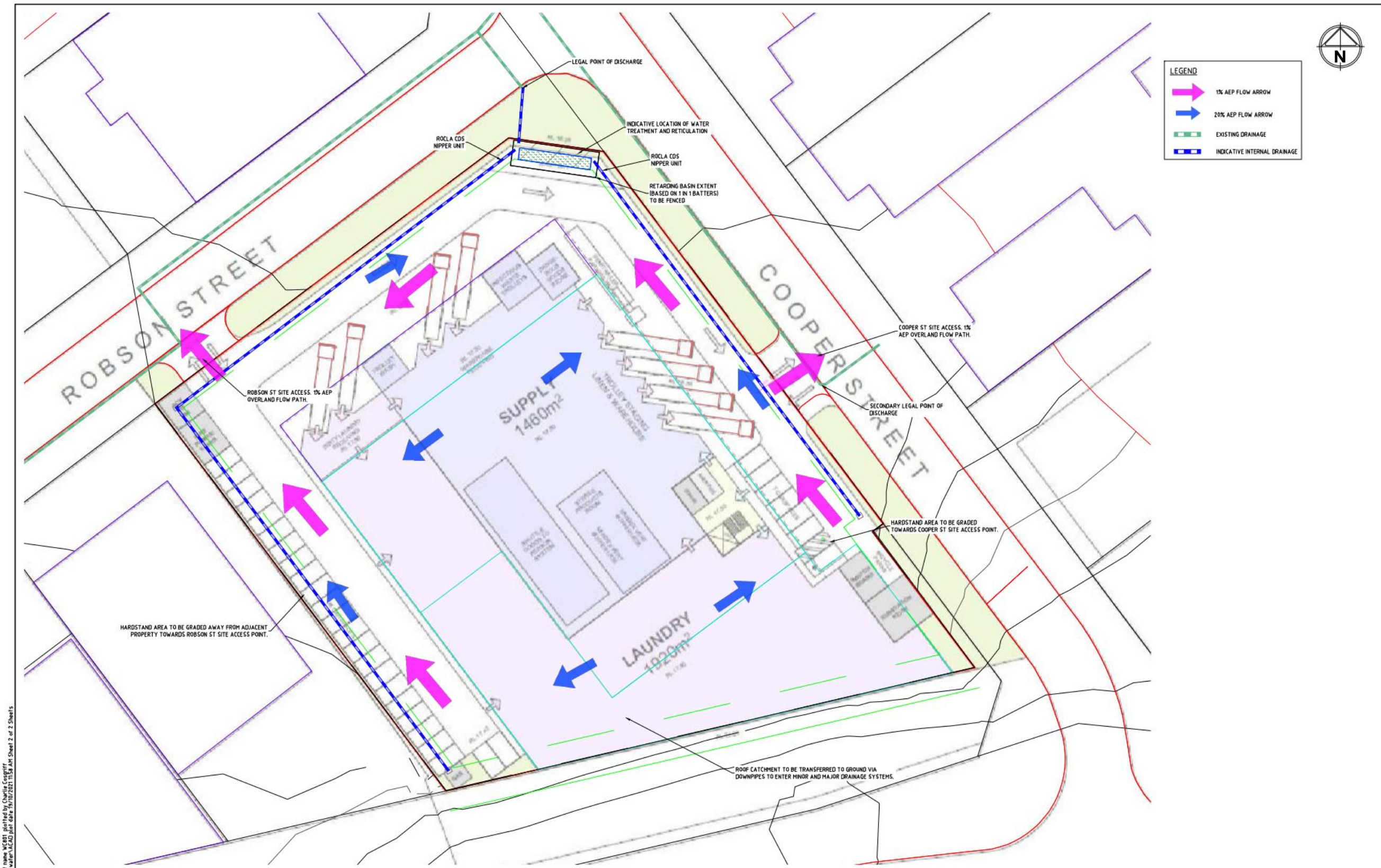
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414 La Trobe Street PO Box 16084 Melbourne
Victoria 3007 Australia T 61 3 9993 7888
spiire.com.au ABN 55 050 029 635

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**SWH REGIONAL LOGISTICS CENTRE
SWMS
LAYOUT PLAN
SITE CATCHMENT PLAN**
WARRNAMBOOL CITY COUNCIL
SOUTH WEST HEALTHCARE

Dwg No: **PRELIMINARY 307904WC800** Rev: **A**



file name: 307904WC800_H02.dwg, layout name: MCB1, plotted by: Chelsea Goggin, file location: C:\307904\307904\integrated\warrnambool\307904\307904.dwg, plot date: 19/10/2021 11:58 AM, sheet 2 of 2 sheets

Rev	Amendments	Approved	Date
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414 La Trobe Street PO Box 16084 Melbourne
Victoria 3007 Australia T 61 3 9993 7888
spiire.com.au ABN 55 050 029 635

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SITE DRAINAGE STRATEGY
WARRNAMBOOL CITY COUNCIL
SOUTH WEST HEALTHCARE**

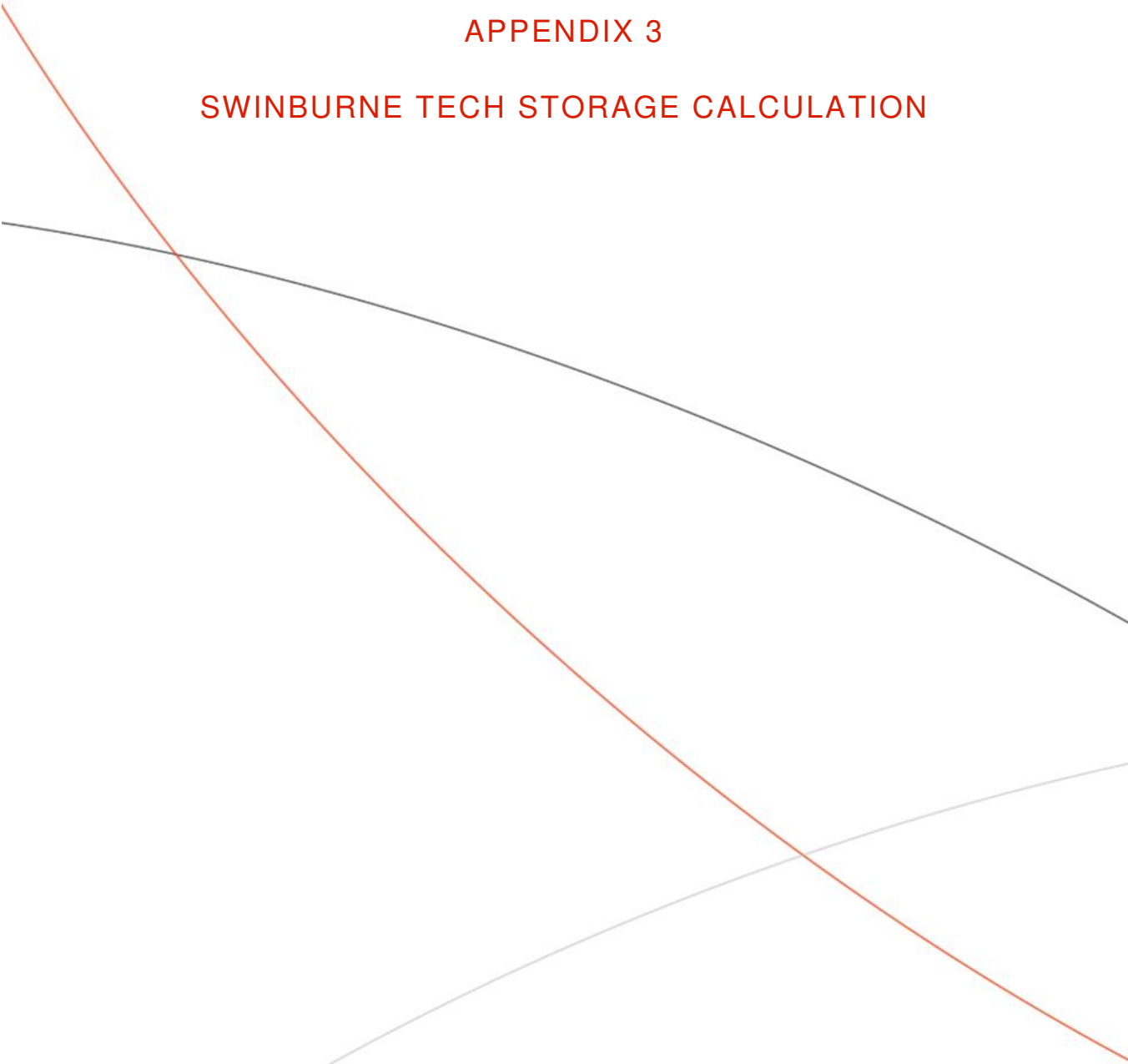
PRELIMINARY Dwg No 307904WC801 Rev A

APPENDIX 2
RATIONAL CALCULATIONS



APPENDIX 3

SWINBURNE TECH STORAGE CALCULATION





Karibok Park Basin Storage Estimation

Calculation in accordance with Swinburne Institute of Technology 1987

Onsite storage calculation

Input data from calcs/external source
Calculated data

Project No.:	307904.00
Project:	Warrnambool HLH
Designed:	CC
Date:	13 01 21
Checked:	
Date:	

BOM Website: <http://www.bom.gov.au/water/designRainfalls/revised-afd/>

Rainfall Data Coordinating & Information

Latitude	-38.37
Longitude	142.46
CSV Link:	

Annual Exceedance Probability (%)

AEP Coefficients	63%	50%	20%	10%	5%	2%	1%
C0	0.19121252	0.35440263	0.76478821	0.9877247	1.1779989	1.3999492	1.5525362
C1	0.78889537	0.75549257	0.6770876	0.6343807	0.5963373	0.45641121	0.33228505
C2	0.0059487	0.04771612	0.13886595	0.1838274	0.2213222	0.38238668	0.52587444
C3	-0.0483153	-0.0668157	-0.103996	-0.119978	-0.1318751	-0.1981204	-0.2575261
C4	0.01215768	0.0158615	0.02263242	0.0249969	0.0263739	0.03874137	0.04992889
C5	-0.0012001	-0.0015487	-0.0021222	-0.002265	-0.0022976	-0.0033665	-0.0043425
C6	4.26E-05	5.50E-05	7.33E-05	7.57E-05	7.35E-05	0.0001082	0.00014021

Urban Frequency Factor

AEP %	ARI (years)	F _y	C _x
63%	1	0.8	C _{63%}
50%	2	0.85	C _{50%}
20%	4.48	0.95	C _{20%}
10%	10	1	C _{10%}
5%	20	1.05	C _{5%}
2%	50	1.15	C _{2%}
1%	100	1.2	C _{1%}

tc	10%I ₁
60	24.71

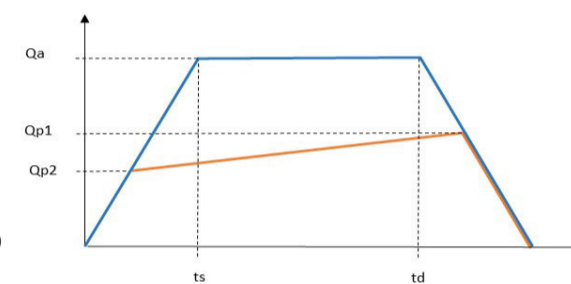
C _{x%}	0.779
-----------------	-------

inflow hydrograph
outflow hydrograph

AEP (%)	C0	C1	C2	C3	C4	C5	C6	Frequency Factor F _y
20%	0.764788	0.6770876	0.13886595	-0.103996	0.0226324	-0.0021222	7.332E-05	0.95

Ref: *insert source reference and co-ordinates for data or reference to this data elsewhere in project file*

- Qa** Peak inflow for design storm. (m³/s) (Calculated for a given ts)
- Qp1** Peak permitted controlled outflow to drainage system (m³/s)
- Qp2** Effectively starting outflow before pressure builds up in the detention (ie the capacity of the outfall drain running full without head) (m³/s)
Could use Colebrook-white for preferred pipe size as a starting point
- ts** Site time of concentration (usually 6 mins for a small sub-division - adopt urban tc otherwise)
- td** Duration of storm (mins) before assumed hydrograph begins to recede
- Vs** Volume of on site storage needed (cubic metres)
- A** Area of catchment (ha)
NOTE: Volume calculation has been developed and recommended for catchments up to 8 ha; Use with caution above this area.
- C1%** Coefficient of runoff (e.g. for 1% AEP)
- I** Intensity (design year (AEP) corresponding to td)



I _{AEP}	Fraction Impervious (f)	C20%	A (ha)	Ae (ha)	Qa (m ³ /s)	Qp1 (m ³ /s)	Qp2 (m ³ /s)	ts (min)	td (min)	Vs (m ³)	Check
70.782	0.9	0.779	0.65	0.506	0.100	0.042	0.024	6.67	7.00	18.8	
66.661	0.9	0.779	0.65	0.506	0.094	0.042	0.024	6.67	8.000	20.2	More Storage
63.052	0.9	0.779	0.65	0.506	0.089	0.042	0.024	6.67	9.000	21.4	More Storage
59.861	0.9	0.779	0.65	0.506	0.084	0.042	0.024	6.67	10.000	22.3	More Storage
57.019	0.9	0.779	0.65	0.506	0.080	0.042	0.024	6.67	11.000	23.0	More Storage
54.469	0.9	0.779	0.65	0.506	0.077	0.042	0.024	6.67	12.000	23.4	More Storage
52.167	0.9	0.779	0.65	0.506	0.073	0.042	0.024	6.67	13.000	23.8	More Storage
50.077	0.9	0.779	0.65	0.506	0.070	0.042	0.024	6.67	14.000	23.9	More Storage
48.171	0.9	0.779	0.65	0.506	0.068	0.042	0.024	6.67	15.000	24.0	More Storage
46.425	0.9	0.779	0.65	0.506	0.065	0.042	0.024	6.67	16.000	24.0	Okay
44.819	0.9	0.779	0.65	0.506	0.063	0.042	0.024	6.67	17.000	23.8	Okay
43.336	0.9	0.779	0.65	0.506	0.061	0.042	0.024	6.67	18.000	23.6	Okay
41.962	0.9	0.779	0.65	0.506	0.059	0.042	0.024	6.67	19.000	23.3	Okay
40.686	0.9	0.779	0.65	0.506	0.057	0.042	0.024	6.67	20.000	22.9	Okay
39.496	0.9	0.779	0.65	0.506	0.056	0.042	0.024	6.67	21.000	22.4	Okay
38.385	0.9	0.779	0.65	0.506	0.054	0.042	0.024	6.67	22.000	21.9	Okay
37.343	0.9	0.779	0.65	0.506	0.052	0.042	0.024	6.67	23.000	21.4	Okay
36.366	0.9	0.779	0.65	0.506	0.051	0.042	0.024	6.67	24.000	20.8	Okay
35.447	0.9	0.779	0.65	0.506	0.050	0.042	0.024	6.67	25.000	20.1	Okay
34.580	0.9	0.779	0.65	0.506	0.049	0.042	0.024	6.67	26.000	19.5	Okay
33.762	0.9	0.779	0.65	0.506	0.047	0.042	0.024	6.67	27.000	18.7	Okay
32.987	0.9	0.779	0.65	0.506	0.046	0.042	0.024	6.67	28.000	18.0	Okay
32.253	0.9	0.779	0.65	0.506	0.045	0.042	0.024	6.67	29.000	17.2	Okay
31.557	0.9	0.779	0.65	0.506	0.044	0.042	0.024	6.67	30.000	16.3	Okay
30.895	0.9	0.779	0.65	0.506	0.043	0.042	0.024	6.67	31.000	15.5	Okay
30.265	0.9	0.779	0.65	0.506	0.043	0.042	0.024	6.67	32.000	14.6	Okay
29.665	0.9	0.779	0.65	0.506	0.042	0.042	0.024	6.67	33.000	13.7	Okay
29.092	0.9	0.779	0.65	0.506	0.041	0.042	0.024	6.67	34.000	12.8	Okay
28.545	0.9	0.779	0.65	0.506	0.040	0.042	0.024	6.67	35.000	11.8	Okay
28.021	0.9	0.779	0.65	0.506	0.039	0.042	0.024	6.67	36.000	10.8	Okay
27.520	0.9	0.779	0.65	0.506	0.039	0.042	0.024	6.67	37.000	9.9	Okay
27.040	0.9	0.779	0.65	0.506	0.038	0.042	0.024	6.67	38.000	8.8	Okay
26.579	0.9	0.779	0.65	0.506	0.037	0.042	0.024	6.67	39.000	7.8	Okay
26.136	0.9	0.779	0.65	0.506	0.037	0.042	0.024	6.67	40.000	6.8	Okay
25.711	0.9	0.779	0.65	0.506	0.036	0.042	0.024	6.67	41.000	5.7	Okay
25.302	0.9	0.779	0.65	0.506	0.036	0.042	0.024	6.67	42.000	4.6	Okay
24.908	0.9	0.779	0.65	0.506	0.035	0.042	0.024	6.67	43.000	3.5	Okay

ts Calculation - check against Rational spreadsheet calcs

td	8 mins
Velocity	1.5 m/s
Length	150 m/s

Predeveloped flow (check against RURAL Rational spreadsheet)

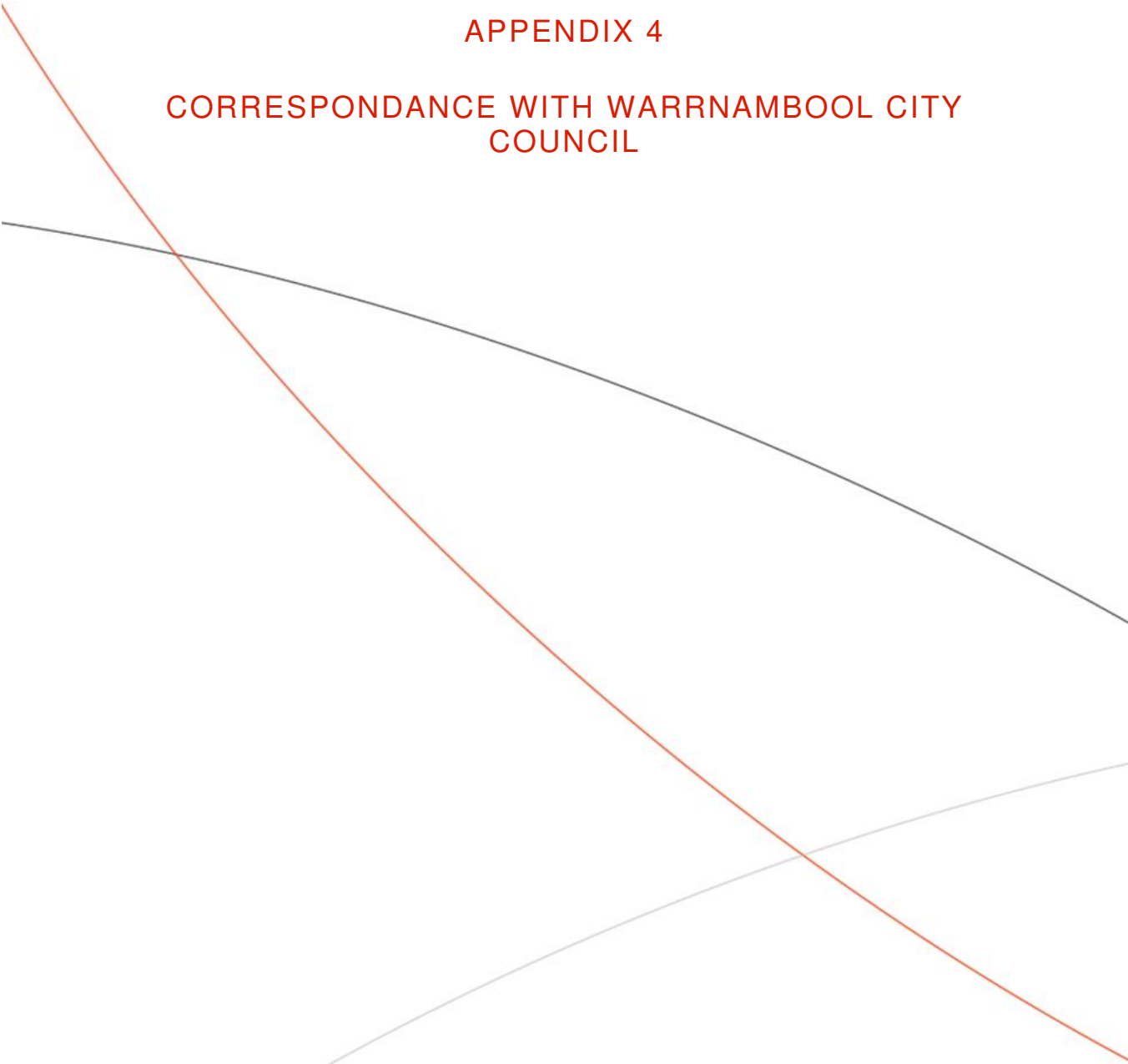
Area	0.0065 km ²	or	0.65 Ha
tc	0.1 hours	or	7 mins

Estimated Flows

Int. 1%	mm/hr	C1%	
Q100	0.000	m ³ /s	
DNRE	0.100131	m ³ /s	

APPENDIX 4

CORRESPONDANCE WITH WARRNAMBOOL CITY
COUNCIL



Charlie Cosgriff

From: Ian Pham
Sent: Tuesday, 12 January 2021 3:11 PM
To: Charlie Cosgriff
Subject: FW: Request for council drainage advice 5 Cooper Street Warrnambool
Attachments: preferred discharge point.pdf

Ian Pham
Senior Professional
Integrated Water



Level 6 | 414 La Trobe Street Melbourne VIC 3000
PO Box 16084 Melbourne VIC 8007

t +61 3 9993 7889
spiire.com.au



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From: Peter Reid <preid@warrnambool.vic.gov.au>
Sent: Tuesday, 15 December 2020 8:06 AM
To: Ian Pham <Ian.Pham@spiire.com.au>
Cc: Paul Cugley <pcugley@warrnambool.vic.gov.au>; Keith Watson <KWatson@warrnambool.vic.gov.au>
Subject: RE: Request for council drainage advice 5 Cooper Street Warrnambool

Hi Ian,

Our standard requirements for a stormwater management plan for this type of development are as follows:

Before the commencement of any construction activity, a detailed Stormwater Management Plan is to be submitted to and endorsed by the Responsible Authority. The stormwater works must be designed in accordance with the current Responsible Authority's Design Guidelines, and must include:

- a) Identification of any existing drainage on the site.
- b) Details of how the works on the land are to be drained and/or retarded.
- c) Computations in support of the proposed drainage.
- d) A proposed Legal Point of Discharge.
- e) An underground drainage system to convey minor flows (as defined by the IDM) to the drainage outfall for the development;
- f) Details of how the storm water discharge from the development will be limited such that post development flows for 18% AEP storms do not exceed pre development flows;

- g) Details and measures to enhance stormwater discharge quality from the site and protect downstream waterways and groundwater in accordance with Clause 56.07-4 of the Planning Scheme;
 - h) Evidence that storm water runoff resulting from a 1% AEP storm event is able to pass through the development via reserves and/or easements, or be retained within lots without causing damage or nuisance to adjoining lots.
 - i) Maintenance schedules for treatment elements.
- The endorsed Stormwater Management Plan is to be implemented to the satisfaction of the Responsible Authority prior to the use or occupation of the development.

See the attached pdf for our recommended connection point. If you can demonstrate that this point will not work for you and that the entire development can drain to a different point we will consider that proposal.

Any stormwater treatment train that will meet the urban stormwater performance objectives (80% TSS, 45% N, 45% P, 70% litter) will be considered.

Feel free to contact me if you have any questions or concerns.

Cheers

Pete

Peter Reid | Team Leader | Design & Development

Warrnambool City Council | 25 Liebig Street Warrnambool 3280 | P.O Box 198 Warrnambool 3280

T: +61 355594961 | M: +61 448393281 | F: +61 355594900 | E: preid@warrnambool.vic.gov.au

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From: Ian Pham <lan.Pham@spiire.com.au>

Sent: Friday, 11 December 2020 4:11 PM

To: Warrnambool City Council <contact@warrnambool.vic.gov.au>

Subject: Request for council drainage advice 5 Cooper Street Warrnambool

CAUTION: This email originated from outside of Warrnambool City Council. Do not follow guidance, click links, or open attachments unless you recognise the sender and know the content is safe.

Hi (and please fwd to relevant persons),

Spiire has been engaged to document the requirements and specifying drainage layout/design of the proposed SWH distribution centre. I will be the drainage engineer on the project .

- The site is **5 Cooper Street Warrnambool**: Southwest Healthcare Regional Distribution Logistics Centre.

Would council be able to provide preliminary drainage advice so we can integrate into the current layout plan. Attached is the preliminary architectural plan, which I have overlayed the existing council drainage.

Would council be able to confirm:

- The legal point of discharge for the site and its designed size/AEP capacity. I've noted that there is existing drainage on Robson Street, Cooper Street and McMeekin Road;
- If stormwater detention is required for the site;
- If stormwater quality treatment is required and if so what is council's preferred method; and
- Any other site specific drainage requirements or issues that council is aware of.

Feel free to pass on any relevant documents/modelling files that may be relevant for us to review and incorporate.

Please do not hesitate contact anytime to discuss.

Kind Regards,

Ian Pham
Senior Professional
Integrated Water



Level 6 | 414 La Trobe Street Melbourne VIC 3000
PO Box 16084 Melbourne VIC 8007

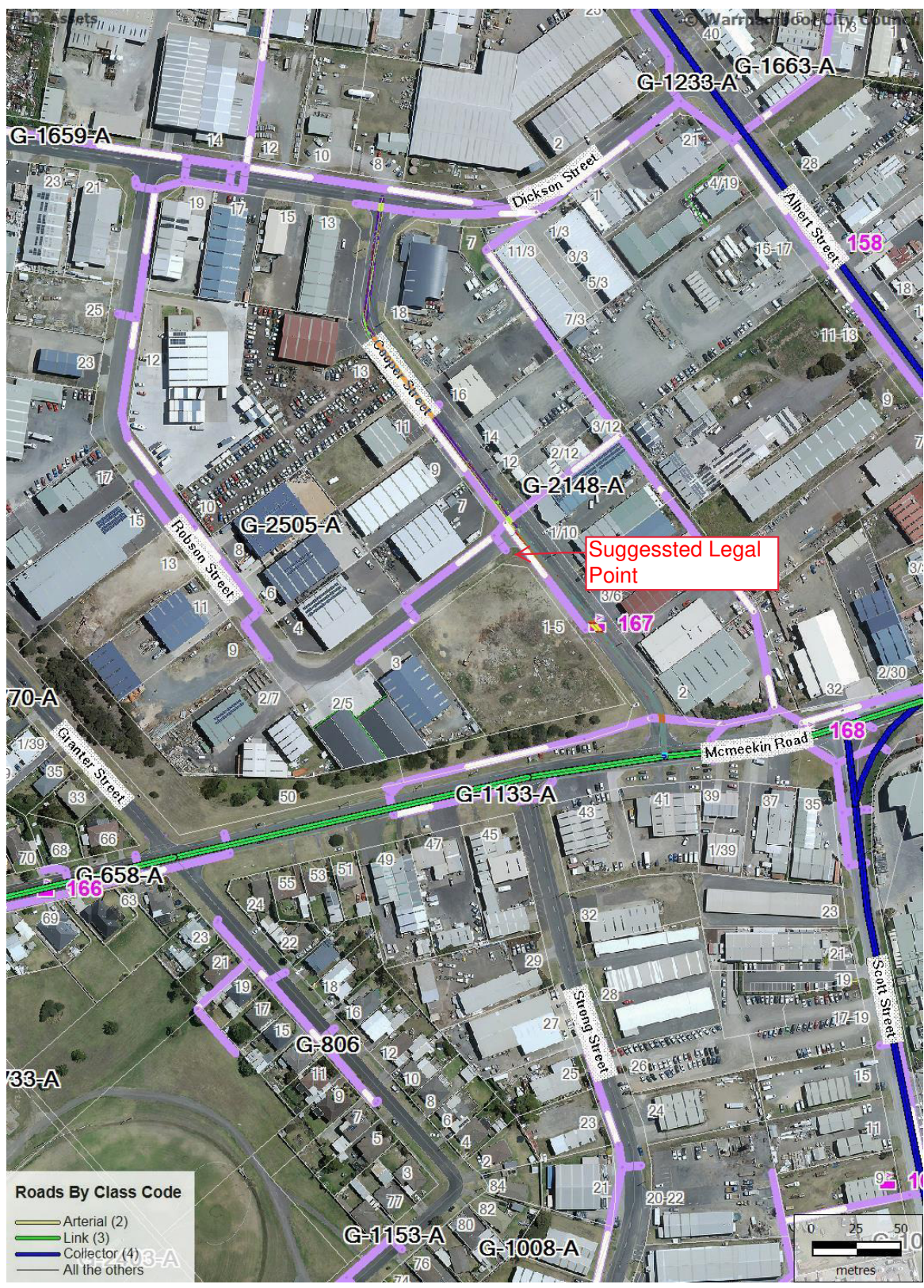
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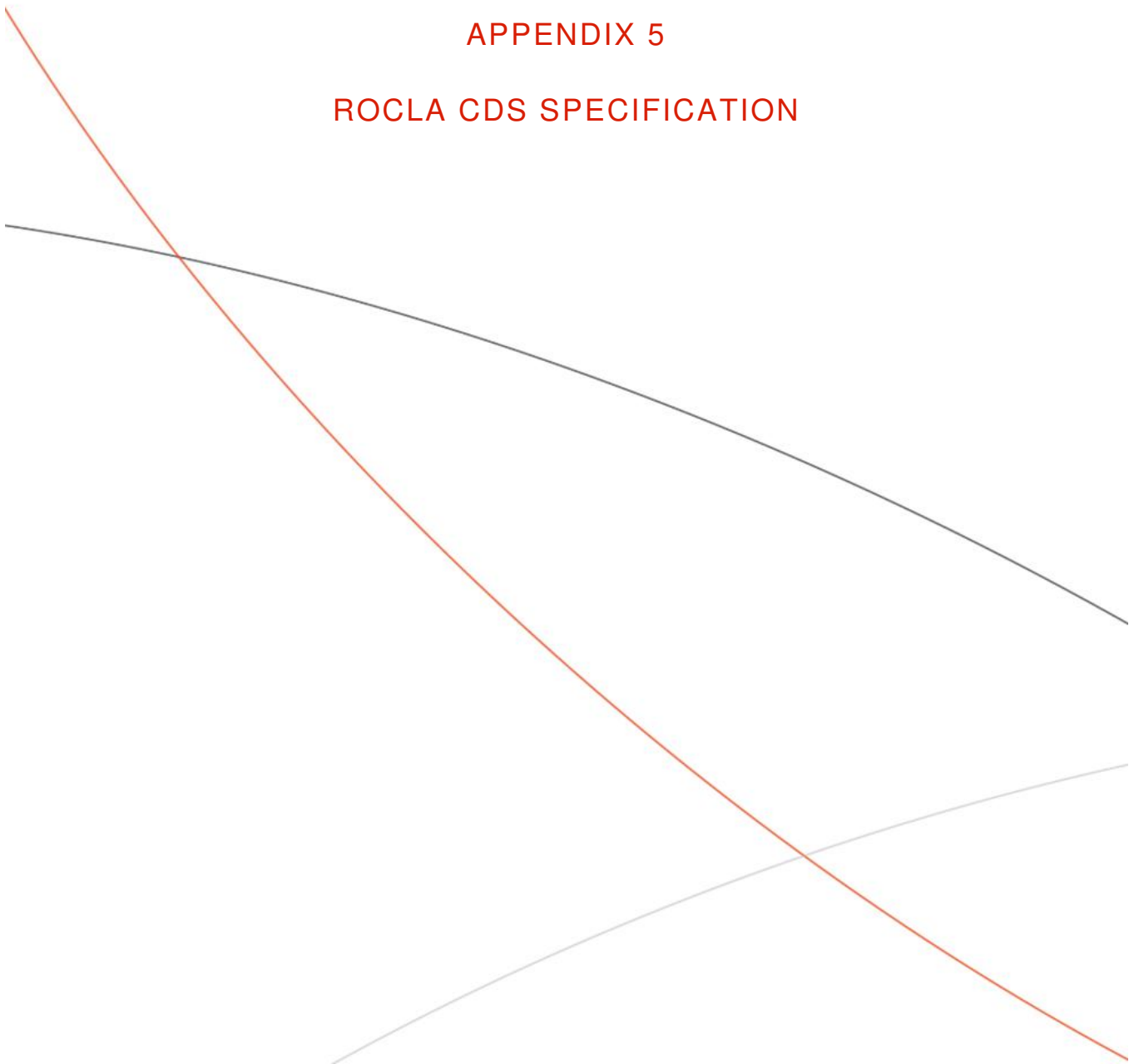
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APPENDIX 5
ROCLA CDS SPECIFICATION



**PRODUCT
BROCHURE**



**CDS[®]
SEPARATOR**



CD 3030 SCO
14500 KG MAX

131 004
rocla.com.au

CDS® SEPARATOR

CDS® Separator are designed to capture and retain gross pollutants, litter, grit, sediments and associated oils, utilising patented CDS® indirect screening technology.

Rocla offers a complete design service for CDS® products that takes into account the catchment's characteristics, pollution load, hydraulic site constraints and opportunities, system capacities, velocity, backwater, as well as the location of services and access for cleaning.

Hydraulic reports are available on request and are automatically carried out for larger units.

CHARACTERISTICS

- Non-blocking functionality
- 95% capture of gross pollutants >1mm
- 95% sediment capture >200µm
- Captures organics and oils
- Captures adsorbed toxics and nutrients
- Can treat any pipe or multiple pipes
- Various sump sizes available
- Customised bypass requirements
- Underground - small footprint
- Easy installation
- No moving parts
- Lowest life cycle costs
- More water treated than comparable treatment designs
- Pollutants stored in the sump, not the screens

BENEFITS

- Subdivisions and roads
- Residential, commercial and industrial developments
- Car parks and shopping centres
- Pre-treatment for wetlands
- Pre-treatment for reuse applications
- Pipes, channels, culverts and creeks

Other CDS® models are available for non-stormwater applications involving high flow solids/ liquids separation, such as industrial processes and sewer overflows.



CDS® CONTINUOUS DEFLECTIVE SEPARATION

The CDS® Separator utilises the energy of the inflow to create a vortex flow regime within the CDS® screening chamber.

The CDS® Separator simply creates a whirlpool that draws all the deflected and settling pollutants to the centre of the screening chamber where they fall out into the storage sump below.

The pollutant storage sump located below the screening chamber allows pollutants to be removed from the flow path and away from the screens, thus maintaining a reliable treatment efficiency.

The unique CDS® technology is the most reliable way to effectively and efficiently treat gross pollutants in stormwater drainage systems.

One of the leading storm water traps

CDS® UNIT MODELS

The size and type of CDS® separator required depends on catchment area, flows, pollution loads, performance requirements, maintenance method, hydraulic limitations and site constraints.

Visit the Rocla website for a sizing request form. Details submitted with this form provide all the information needed to calculate the size of device most applicable for the site.

CDS® Separator Model No. ⁴	Overall Dia ¹ (mm)	Treatment ³ Flow (L/s)	Weir Height ² (mm)	Minimum DTI ⁵ (mm)
Nipper 0506	1300	20-22	300	1035
CDS 0708	1750	50-55	400	1105
CDS 0708Maxi	2600	50-55	400	1185
CDS 1009	1950	100-110	500	1610
CDS 1012	1950	140-150	600	1610
CDS 1015	1950	180-200	700	1610
CDS 1512	2600	220-250	650	1610
CDS 1518	2600	350-400	800	1610
CDS 2018	3400	500-600	900	1610
CDS 2028	3400	800-900	1100	1610
CDS 3018	5000	800-900	900	1610
CDS 3024	5000	1250-1400	1000	1610
CDS 3030	5000	1750-1900	1200	1800

1: Excludes Diversion Chamber except for models 0506, 0708 & 0708M

2: Measured from outlet invert with no tailwater

3: CDS treatment flows are indicative only

4: Model sizing is undertaken independently from the bypass hydraulics of the diversion chamber

5: In most cases minimum DTI is determined by diversion chamber depth

CDS® SEPARATOR PERFORMANCE

Gross Pollutant Removal	98% (>3mm)
Sediments Capture	>80% (>75µm)
TSS Removal	>70% (d ₅₀ = 106µm)
Total Phosphorous (TP) Removal	>30% (at 70% TSS removal)
Hydrocarbon Capture	80-90% *at typical stormwater concentrations for free oil

MAINTAINING CDS® SEPARATOR

The CDS® Separator has the lowest life-cycle costs due to its non-blocking functionality, large off-line storage and multiple cleaning options. There are 3 methods of emptying CDS® Separators:

- Removable basket
- Material grab
- Suction method

With no requirement to unblock screens, confined space entry is minimised. Large off-line sump volumes (up to 10m³ available) also minimise cleaning frequency.

CDS® CONTINUOUS DEFLECTIVE SEPARATION

It has long been acknowledged that best management practice for stormwater pollutant traps involves locating the devices off-line.

- GPTs located on-line suffer badly from turbulence and eddies, often resulting in the re-suspension and loss of previously captured pollutants.
- GPTs which store pollution in the screening area suffer decreasing screen area and therefore decreasing flow rates, as they fill up.
- GPTs which function by direct filtration have a treatable flow rate decay that is proportional to the percentage of screen blockage.
- GPTs that utilise a vortex only, without a screen, cannot guarantee neutrally buoyant pollution removal.

Only CDS® Separators combine the advantages of being off-line, having non-blocking functionality, vortex forces and storing pollution outside the screening area. For these reasons, no other device is “equivalent” to a CDS® Separator.

DIVERSION CHAMBER

Precast diversion chambers can be manufactured to suit most typical installations, or chambers can be tailored to meet the hydraulic limitations of the site.

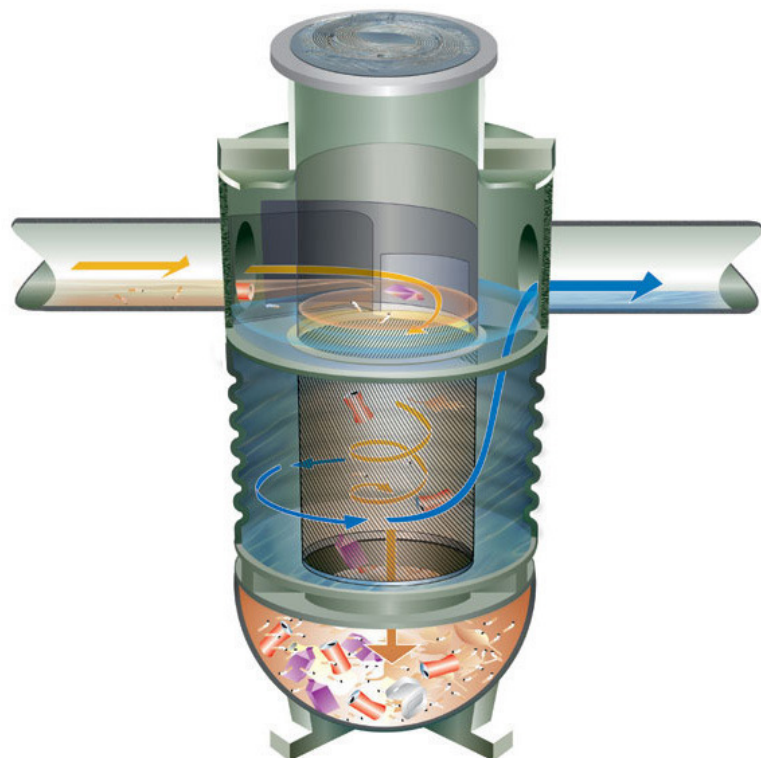
The diversion chamber has the capacity to cater for the highest possible flow in the stormwater system. The chamber is configured on the assumption that the CDS® Separator has not been maintained and there is no flow passing through the unit.

A weir is located within the diversion chamber to create a driving head and direct the majority of flows into the CDS® GPT.

CHAMBER OPTIONS

The CDS® Separator and diversion chamber design depends on the system capacity and site constraints. Rocla will design the most suitable CDS® Separator configuration to meet project requirements.

- Precast diversion chambers
- Semi-precaster diversion chambers
- Customised designs for multiple pipes, drops and bends
- In-situ channel designs
- Fixed or collapsible weirs
- Any flow capacity
- No flooding





CDS® 0506 Separator

The PL0506 in-line CDS® Unit, known as the Nipper, is the smallest in the CDS® range of gross pollutant traps. It provides the fully proven performance of CDS® Separators in a pint-sized polymer unit.

The Nipper is ideally suited for installation at the collection source in small catchment areas of less than a hectare and is designed to remove gross pollutants, organic waste, silt, sediment and oils.

Manufactured from strong, lightweight polymer material, the CDS® 0506 is delivered to site in one piece, making it easy to install and cost-effective.

CDS® 0506 PERFORMANCE

Pipe Flows	Treatment 25 L/s Max 150 L/S
Gross Pollutant Removal	98% (>3mm)
Sediments Capture	>80% (>75µm)
TSS Removal	>70% ($d_{50} = 106\mu\text{m}$)
Total Phosphorous (TP) Removal	>30% (at 70% TSS removal)
Hydrocarbon Capture	80-90% 'at typical stormwater concentrations for free oil
Free Oil Storage Capacity	150 litres

PRODUCT APPLICATION DESIGN (PAD) SERVICES

Rocla offers a full design and drafting service in support of its water quality products, including the CDS® separator.

These service are available to all customers. To see how Rocla can assist you with your water sensitive urban design (WSUD) solutions please visit the Rocla website or call your local sales representative on 131 004.

SPECIFICATIONS

Storage

- 0.72 cubic metres

Weight

- 140 kilograms

Footprint

- 1050mm diameter

Material

- High density polyethylene

Treatment

- Self-cleaning screens, vortex and gravity

Screens

- 2.4mm stainless steel

Inlet Size

- Up to 375mm diameter

APPLICATIONS

- Small subdivisions
- Bus and train stations
- Pre-screening bio- retention systems
- Pre-screening construction wetlands
- Packaging warehouses
- Roadside drains
- Car parks



For more
information
call Rocla on
131 004 or visit
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CONCRETE PRODUCTS | PIPE | ENGINEERING CAPABILITY



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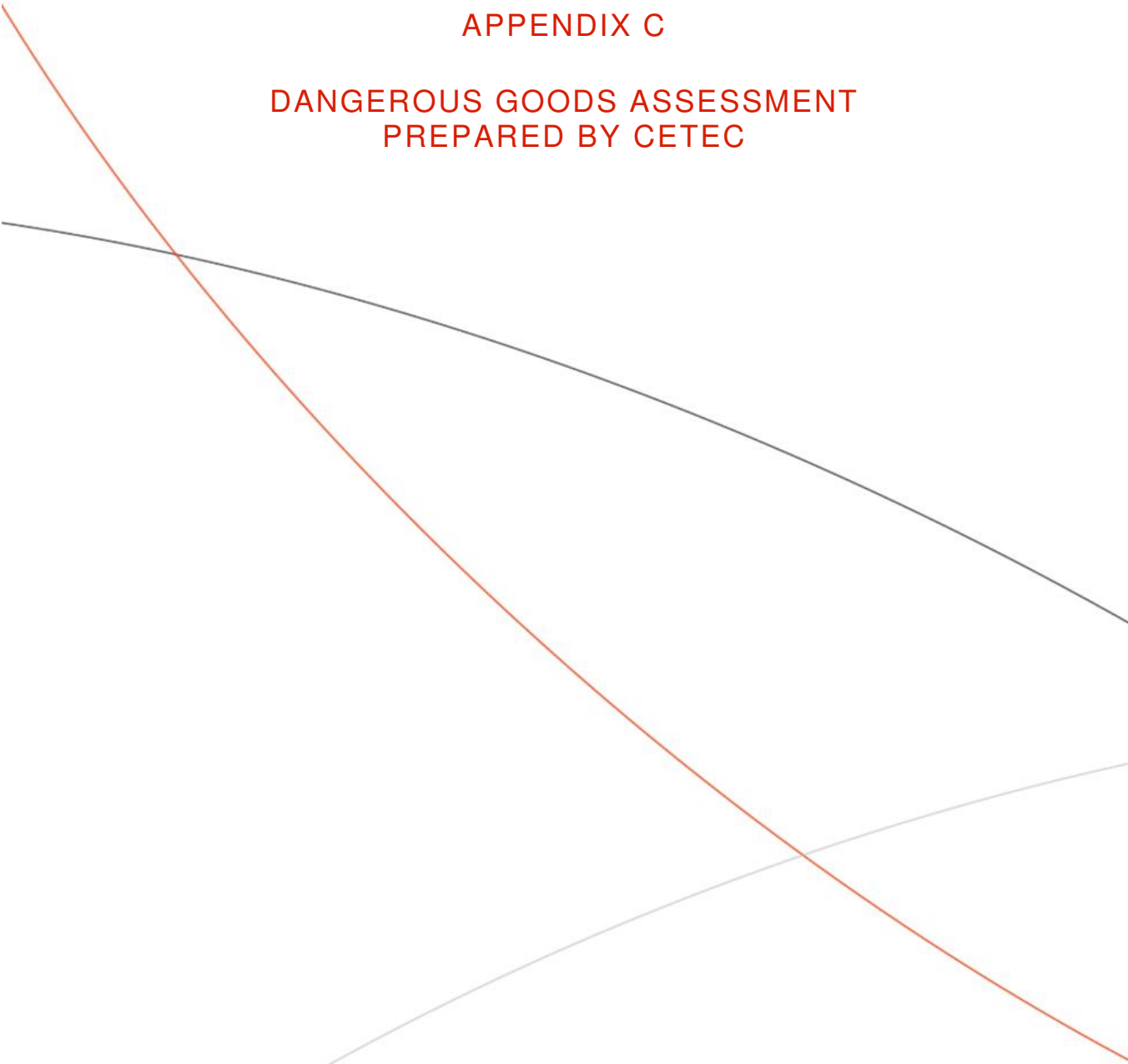
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APPENDIX C

**DANGEROUS GOODS ASSESSMENT
PREPARED BY CETEC**





SILVER THOMAS HANLEY

DANGEROUS GOODS CONSULTANCY SERVICES FOR DESIGN AND CONSTRUCTION OF REGIONAL LOGISTICS DISTRIBUTION CENTRE (RLDC)

REGIONAL LOGISTICS DISTRIBUTION CENTRE (RLDC), WARRNAMBOOL



REPORT VERSION – 1.2

OUR REFERENCE: N2110063.

DATE: 20 DECEMBER 2021

Prepared By:

Prepared For:



Dr Paulo Da Silva
Adam Garnys
Dr Vyt Garnys

CETEC Pty Ltd,
3/216 Willoughby Road,
St Leonards NSW 2065
(02) 9966 9211



Silver Thomas Hanley
Pelaco Complex, Building 3, Level 2, 21-31 Goodwood St, (PO Box 550),
Richmond, VIC 3121



CONSULTANT: CETEC Pty Ltd Dangerous Goods Consultancy 3/216 Willoughby Road, St. Leonards NSW 2065		REPORT COMMISSIONED BY: Silver Thomas Hanley		
PROJECT: SILVER THOMAS HANLEY – Regional Logistics Distribution Centre (RLDC), Warrnambool		CETEC REF: N2110063.	CLIENT REF: -	ISSUE 1.2
AMD	DESCRIPTION	INT	REVIEWED	DATE
1.0	Early version of report, awaiting more specific information for completion	PDS	AG / VG	25/11/2021
1.1	Later version of report, with further information on storage requirements and incompatibilities to be considered in the case of oxidising agents (Class 5.1) and corrosive substances (Class 8) to be presented in a more detailed revision by December 16 th .	PDS	AG / VG	10/12/2021
1.2	Further discussion taking full account of the storage of corrosive liquids and the potential incompatibilities involved.	PDS	AG / VG	21/12/2021

Authors:

Tim Nightingale
MSc, BSc(Hons), MRACI
Dangerous Goods Consultant

Reviewers:

Dr Paulo Da Silva
PhD, BSc(Hons), MRACI
Senior Dangerous Goods Consultant

Dr. Vyt Garnys
PhD, BSc(Hons) AIMM, ARACI, ISIAQ
ACA, AIRAH, FMA
Managing Director and Principal Consultant



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1. INTRODUCTION

CETEC undertook to advise on construction requirements for the storage of dangerous goods at the Warrnambool Base Hospital Redevelopment (WBHR). The advice concerns the construction of the new Regional Logistics Distribution Centre (RLDC) on Cooper Street and McMeekin Road Warrnambool.

The warehouse will store goods for the hospital, with the capacity to receive dangerous goods from truck deliveries and place them in immediate storage. The facility will also host the hospital's laundry service, for which some storage of dangerous goods will also be necessary, using tank storage for some liquids that are to be delivered in bulk. These dangerous goods are to be stored close to the laundry.

A separate dangerous goods store is to be located in the northern corner of the site, close to the proposed truck loading dock. It's assumed this area will be set aside for dangerous goods that aren't for use in the laundry.

There is also to be an engineering store proposed on Level 1 of the building and it's proposed that this will contain paints (some of which may be flammable liquids) and flammable liquids other than paints. As this store is to be on a floor above ground level, the quantities that can be stored in this area may be restricted.

According to information supplied to CETEC, the chemicals to be stored will include:

- Hand Sanitisers – these are generally Class 3 Packing Group II flammable liquids; the total quantity is not currently specified but it's likely to exceed minor storage quantities under the AS 1940¹ standard or under the mixed-class dangerous goods standard AS 3833² (both to be discussed in this report).
- Cleaning products and heavy duties degreasers – some of these are Class 8 dangerous goods; the total quantity is not currently specified but it's likely to exceed minor storage quantities under the standard AS 3380 (to be discussed in this report).
- Diesel – classified as a C1 combustible liquid (and not classified as dangerous goods): the diesel tank that's to support the site generator is outside the scope of this report.

¹ AS 1940:2017 The storage and handling of flammable and combustible liquids.

² AS/NZS 3833:2007 The storage and handling of mixed classes of dangerous goods, in packages and intermediate bulk containers



- Other combustible liquids – lubricants to be used for site engineering purposes may come under this heading. If stored with flammable liquids, then their quantity would affect the required separation distances from flammable liquids to other site features.
- Paints and varnishes – some paints have a flammable liquid classification and may also be Class 9 (miscellaneous dangerous goods).
- Refrigerants – although there are considered to be outside the scope of this report, the refrigerants described in the Principal’s Project Requirements (November 2021) include those described as being in Groups A1 and A2L under AS/NZS ISO 817. The A2L group can include gases that are classified as flammable (Class 2.1) and if such refrigerants are to be used then there would need to be a full awareness of their hazards. Other refrigerants in Group A2L may have autoignition temperatures that don’t lead to a flammability classification but may increase the degree of hazard in the event of a fire.
- Propane gas – in reports received by CETEC to date, there is some discussion of the need to store liquefied propane gas (LPG). As there is limited information on this, no discussion is offered and the lack of any discussion in no way implies a lack of requirement to address the hazards posed by LPG storage.
- 1 x 1500L of hydrogen peroxide – Class 5.1 (oxidizing agent)
- 1 x 1500L Phosphoric Acid Solution – Class 8 (corrosive substance)
- 3 x 1500L corrosive substances (including sodium hypochlorite solution, which is a corrosive substance and has several serious incompatibility issues).

The final three products on the list above are, according to supplied drawings, to be stored in a chemical storage area adjacent to the laundry on the southwest side of the site. Based on information supplied, this is to comprise mainly tank storage, possibly including some additional storage in packages. It’s noted that sodium hypochlorite solution undergoes a dangerous reaction with acidic solutions, including phosphoric acid solution, so measures will need to be taken to prevent the possibility that the liquids could be allowed to come into contact other in the event of a spillage.



2. GENERAL INFORMATION – DESIGN AND CONSTRUCTION FOR DANGEROUS GOODS STORE

2.1. SYNOPSIS ON HAZARDOUS SUBSTANCES AND DANGEROUS GOODS

“Dangerous goods” (hereafter abbreviated to “DG”), is a term used to describe substances, and some products such as lithium batteries or capacitors, that acquire the description as a result of coming under various DG classes in the Australian Code for the Transport of Dangerous Goods by Road & Rail³, hereafter referred to as the “ADG Code”. The ADG Code in turn is closely aligned to the equivalent United Nations code⁴, so what’s considered to have a DG classification in Australia is also considered to have the same classification in the rest of the world. DG classifications mainly affect how products are transported, and there are equivalent international codes, using mostly the same DG classifications, for maritime and air transport of DG.

How products are stored in workplaces and handled is now dictated mainly by a parallel system for classifying hazardous substances, which is the Globally Harmonized System (GHS⁵). The GHS dictates how safety data sheets (SDSs) are produced and defines many chemical, environmental and health-based hazard categories. In several respects the two systems offer complementary classifications: for example, Category 1, 2 and 3 flammable liquids under the GHS are equivalent to Class 3, Packing Groups I, II and III, under the DG system. However, the GHS is far more wide-reaching in the way it addresses hazards that aren’t applicable to transport, such as carcinogenicity and chronic toxicity. For example, although acute toxicity in Categories 1, 2 and 3 under the GHS closely correspond to the Class 6.1 DG classification (Packing Groups⁶ I, II & III respectively), chronic health effects such as reproductive toxicity and carcinogenicity (which aren’t considered an immediate danger to health) will not impart a DG classification to a substance. In effect this means that something that may be highly hazardous under the GHS will not necessarily have a DG classification.

2.2. SYNOPSIS ON FLAMMABLE AND COMBUSTIBLE LIQUIDS

Flammable liquids are considered a separate dangerous goods class owing to their specific hazards, which include their ability to flow while on fire, and their ability to produce clouds of flammable vapour

³ Australian Code for the Transport of Dangerous Goods by Road & Rail, Edition 7.7, 2019

⁴ UN Recommendations on the Transport of Dangerous Goods - Model Regulations, Twenty-first revised edition (2019)

⁵ Globally Harmonized System of Classification and Labelling of Chemicals, 7th Revised Edition, United Nations 2017 – this is frequently referred to internationally as ‘the GHS’.

⁶ “Packing Group” is often abbreviated to ‘PG’ and this abbreviation will be applied in this report. PG is a term applied only to Dangerous Goods, while the GHS divides hazard types into “categories”.



which can ignite over wide areas, depending on the extent of the vapour cloud. Explosions can also occur along entire lengths of pipework if the vapour/air mixture is allowed to fill that pipe.

There is a small discrepancy between the DG and GHS definitions of a flammable liquid. Under the GHS, liquids that have a flash point less than 93°C, such as some types of diesel fuel, are classified as “flammable liquid Category 4”. However, under the DG system a liquid with a flash point between 60°C and 93°C is considered to be merely a combustible liquid and does not have a DG classification. Unfortunately, this leads to some confusion as to whether or not diesel or other combustible liquids should be considered to be a flammable liquid. For the purpose of this report, the term “flammable liquids” is as for the DG definition, which is a liquid with a flash point of less than 60°C. Diesel and other combustible liquids are not treated as flammable liquids in this report, and nor are they classified as dangerous goods.

The AS 1940 standard deals with storage and handling of flammable liquids under the DG-based definition but also addresses the storage and handling of combustible liquids, which don’t have a DG classification. The standard recognises that although combustible liquids (of which diesel fuel is a good example) are not as easily set on fire, once heated to their flash points as a result of an initial fire they will significantly contribute to the fuel load in the ensuing fire. The presence of combustible liquids at a flammable liquids storage location may therefore affect the way that storage has to be managed under the Standard, depending on the proximity of the combustible liquids to the flammable liquids.

2.3. SYNOPSIS ON CORROSIVE SUBSTANCES

The ADG Code classifies corrosive substances as being Packing Group I, II or III (with PG I being the most hazardous and PG III the least). The GHS distinguishes between substances that are corrosive to skin (and possibly metals also) and those that are just corrosive to metals. If just corrosive to metals under the GHS, then the substance will be PG III under the DG system. However, if corrosive to skin then there are three GHS categories: 1A, 1B and 1C (1C being the least corrosive). These categories correspond to PGs I, II and III under the DG system.

Best practice for the storage and handling of Class 8 DG is described in AS 3780:2008 (The storage and handling of corrosive substances), and this standard will be cited in this report.

2.4. SYNOPSIS ON OTHER CLASSES OF DANGEROUS GOODS

Other than flammable liquids (Class 3) and Corrosive substances (Class 8), the following other classes of dangerous goods exist:



- Class 1 - explosives
- Class 2 - compressed gases, comprising Division 2.1 (flammable gases), Division 2.2 (non-flammable, non-toxic gases) and Division 2.3 (toxic gases).
- Class 4 – comprising Division 4.1 (flammable solids, self-reactive substances, solid desensitised explosives and polymerizing substances), Division 4.2 (substances liable to spontaneous combustion) and Division 4.3 (substances which in contact with water emit flammable gases).
- Class 5 - comprising Division 5.1 (oxidising substances) and Division 5.2 (organic peroxides)
- Class 6 - comprising Division 6.1 (toxic substances) and Division 6.2 (infectious substances)
- Class 7 - radioactive substances
- Class 9 - miscellaneous dangerous substances and articles, a class which includes environmentally hazardous substances

Individual divisions such as 4.1 are often referred to as DG classes (for example, “Class 4.1”).

From the above list, Classes 7 (radioactive substances) and 6.2 (infectious substances) are outside the scope of this report and it’s assumed that there are to be no explosives (Class 1) stored at the facility. In addition, it’s considered unlikely that there will be any substances of Class 4 (other than the possible storage of substances of Class 4 division 4.1, limited to those defined as flammable solids). Any toxic substances of Class 6.1 used by the hospital are likely to be stored in the hospital pharmacy, assumed to be located at the hospital itself (and, as a result, outside the scope of this report). If there are to be any substances of Class 5 division 5.2 (hereafter referred to as Class 5.2), then they’re likely to form parts of 2-pack kits of products such as epoxy resin and will be in retail packages.

There are Australian storage and handling standards associated with Classes 2, 4, 5.1, 5.2, 6.1 and 9 and each will be referenced if it emerges during the preparation of this report that substances of that class are to be stored at the facility. There also exists an Australian standard (AS/NZS 3833⁷) for the storage and handling of mixed classes of dangerous goods, but which excludes bulk storage and the storage of some classes of dangerous goods. This too will be referenced in relation to the proposed dangerous goods store for the facility.

2.5. SYNOPSIS ON HAZARDOUS AREAS CLASSIFICATION

Flammable liquids are liquids which have flammable vapours, and those vapours are able to produce

⁷ AS/NZS 3833:2007 The storage and handling of mixed classes of dangerous goods, in packages and intermediate bulk containers



explosive vapour concentrations at temperatures up to 60°C. The term “explosive” is not over-stating the outcome of an ignition, because the ignition takes place instantaneously and with a force capable of causing damage and starting secondary fires. Flammable gases such as propane are also a danger and can produce flammable atmospheres at a very wide range of temperatures. Flammable gases or vapours are essentially invisible and often odourless and pose a very real danger. The term “hazardous area”, or sometimes “hazardous zone”, is used to describe a specific area where an explosive gas or vapour atmosphere exists, or has the potential to exist. By systematically classifying these areas, appropriate risk mitigation measures can be implemented, and appropriate levels of electrical protection can be implemented in each area. For example, in a room containing a reticulated natural gas outlet, there may be a very real possibility of gas leaking into that room and creating an explosive atmosphere. Risk mitigation might include the installation of gas sensors and implementation of procedures to minimise the possibility of a gas tap being left in the open position. However, safe work methods might not prevent electrical equipment in the hazardous area from igniting the gas, for example when a light is switched on. Hazardous area classification allows the electrical equipment within that area to be selected based on design features that prevent it from causing ignition, thereby adding an extra level of safety to a work area.

The Australian standard AS/NZS 60079.10.1⁸, which is based on an international standard produced by the International Electrotechnical Commission (the IEC), offers guidance on classifying hazardous areas into three different types of zones:

- Zone 0: an area in which an explosive gas/vapour atmosphere is present continuously or for long periods frequently.
- Zone 1: an area in which an explosive gas/vapour atmosphere is likely to occur in normal operation occasionally.
- Zone 2: an area in which an explosive gas/vapour atmosphere is not likely to occur in normal operation but, if it does occur, it will exist for a short period only.

To give an example, the ullage of a sealed vessel containing ethanol (including 70% ethanol) would be classified as Zone 0, because an explosive atmosphere is continuously present within that space.

Generally, only dangerous goods of Classes 3 (flammable liquids) and 2.1 (compressed flammable gases) create hazardous areas. Class 4.3 dangerous goods (substances which, in contact with water,

⁸ AS/NZS 60079.10.1:2009 Explosive atmospheres. Part 10.1: Classification of areas— Explosive gas atmospheres



emit flammable gases) may also create hazardous areas under abnormal conditions. However, CETEC has no reason to believe that Class 2.1 or Class 4.3 dangerous goods are present at the facility and any discussion of hazardous areas considers only the possible presence of ethanol vapour.

Once a hazardous area is classified, the level of electrical safety required in that area is a function of the zoning, as well as properties of the various substances that may give rise to that zone, including autoignition temperature and the energy required for ignition (measured as the “Minimum igniting current”, or MIC). Autoignition is the temperature at which an air/vapour mixture of a flammable liquid spontaneously ignites. The autoignition temperature of ethanol is 400°C, which places it in the **T2** Temperature Class. Selection of electrical equipment appropriate to Temperature Class T2 (or Classes T3 to T6) will ensure that autoignition of ethanol will not occur from hot surfaces on the equipment. For liquids with very low autoignition temperatures, equipment appropriate to Temperature Class T6 is required. Selecting the appropriate for electrical equipment will ensure that no surface is hot enough to cause autoignition. A vapour with a very low autoignition temperature may be easily ignited by a heat source, whereas a vapour requiring a very low ignition energy may be ignited by a spark of relatively low energy. For the MIC, (which does not correlate closely with autoignition temperature), vapours are classified into three Equipment Groups, ranging from IIA for vapours with the highest MIC to IIC for vapours with the lowest MIC. Ethanol vapour is assigned to Equipment Group **IIB**, so electrical equipment appropriate to Group IIB (or IIC) is required within a hazardous area created by ethanol vapour, in order to ensure that equipment can’t create sparks of sufficiently high energy to ignite the vapour if an explosive atmosphere exists.

2.6. LEGISLATIVE REQUIREMENTS

The Victorian Dangerous Goods (Storage and Handling) Regulations 2012 will be used to determine specific requirements relating to the storage and handling of dangerous goods. These requirements. Including manifesting and placarding obligations, will be included in an update of this report once more specific storage information becomes available.



3. DISCUSSION OF PROPOSED DANGEROUS GOODS STORE

The dangerous goods store (to be referred to as ‘the DG Store’) is to be located in the northern corner of the facility. A cut-out of Drawing TP22-000 is shown in Figure 1, indicating its location in relation to the nearby Dispatch Loading Out area and the Infectious Waste Store. Figure 2 is a more detailed illustration. The store is to be 8.3 long by 3.6 m wide.

How dangerous goods are to be stored will depend to a high degree on the class and quantities to be stored. It’s assumed that the dangerous goods in the DG Store will mainly comprise flammable liquids in the form of hand sanitisers (which are Category 2 flammable liquid).

If only flammable liquids are to be stored in this store, then it could be considered to be a flammable liquid package store and its design and construction would be dictated by AS 1940. If other dangerous goods and non-dangerous goods are to be stored, then the store could form a mixed dangerous goods store with its design dictated by AS 3833.

Figure 1: Cut-out from Drawing TP22-000 showing location of DG Store in relation to other parts of building

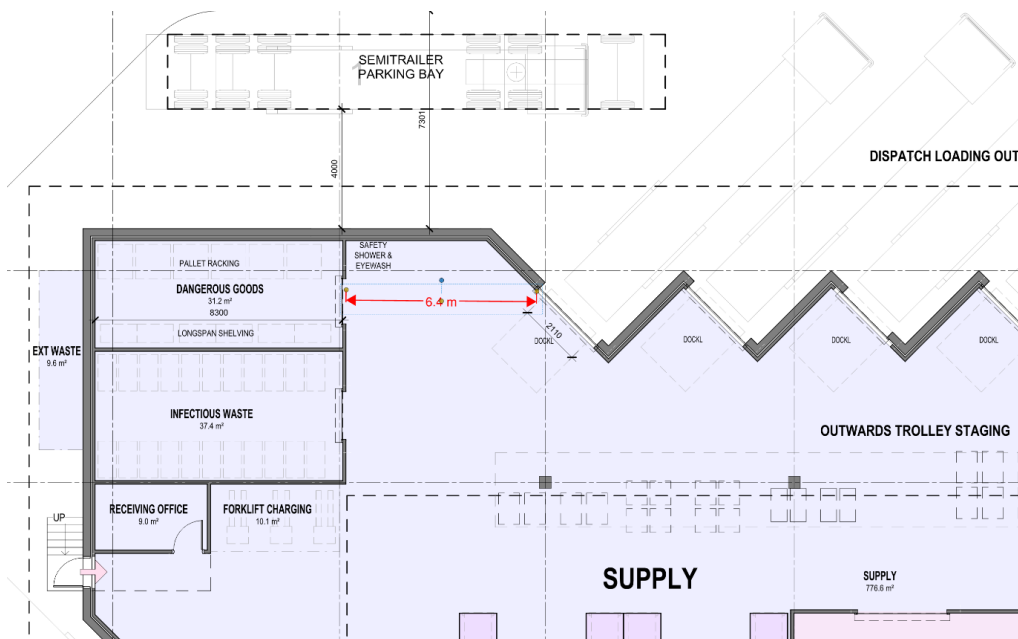
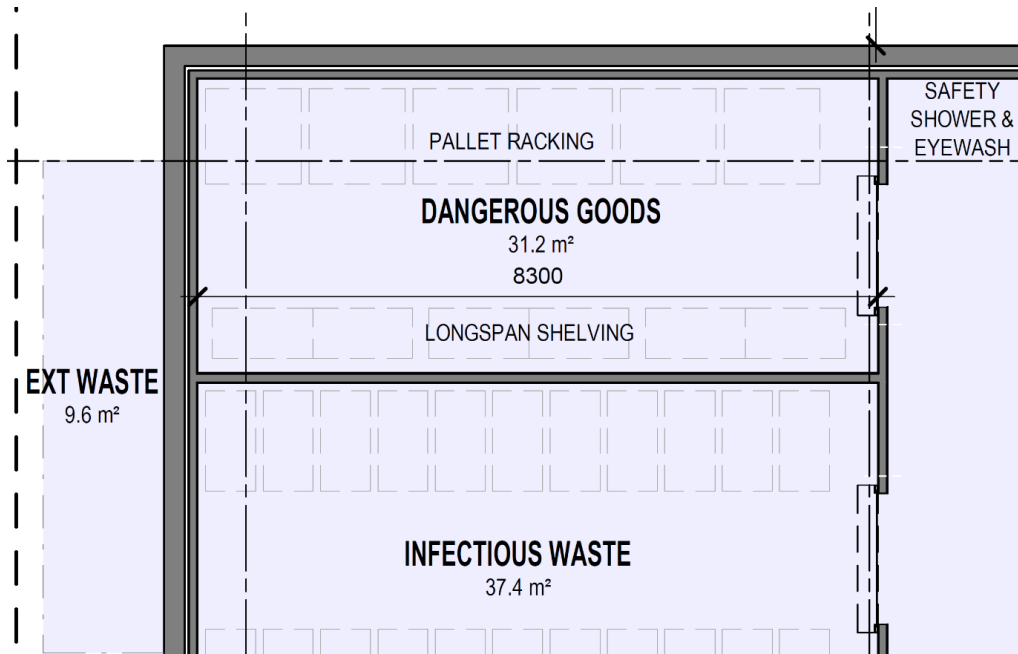




Figure 2: Cut-out from Drawing TP22-000 showing DG Store in greater detail



3.1. CONSIDERATION OF THE DANGEROUS GOODS STORE IN RELATION TO AS 1940.

AS 1940 classifies quantities of flammable liquids as either minor storage (based on the type of facility and the floor area) or as non-minor storage, in which case it would be classified as a package store (for packages only) or a tank store. A package store may consist of just a flammable liquid cabinet (constructed to AS 1940 specifications), although the location of the cabinet and required separation distances are also dictated by the standard.

Table 1: Allowable maximum chemical volumes in open storage (L) under AS 1940 minor storage provisions, as applied to the indoor areas of factories, workshops of warehouses (from Table 2.1 of AS 1940).

PG I or PG II flammable liquids	PG III flammable liquids	Combustible liquids
1 L per 2 m ² of floor space, with no more than 250 L in any 500 m ² area	1 L per 1 m ² of floor space, with no more than 500 L in any 500 m ² area	4 L per 1 m ² of floor space, with no more than 2000 L in any 500 m ² area
<p>Notes to Table 2.1 of AS 1940:</p> <p>It is permissible to store at the same time in the same area, the maximum permissible allowance for each or all of the other packing groups of flammable liquids or classes of combustible liquids.</p> <p>Where the maximum allowance is specified in terms of quantity per unit area, any arrangement which results in concentration at one point should be avoided. Such aggregation contravenes the intent of minor storage, which is dispersal, and proper storage provisions as in Section 4 could be necessary.</p>		



3.1.1. MINOR STORAGE UNDER AS 1940

In the case of the DG store, minor storage under Part 2 of AS 1940 would be as for a factory, workshop or warehouse. Allowable minor storage volumes are shown in Table 1. In the case of hand sanitiser, which is normally a PG II flammable liquid, the floor area of 31.2 m² for the DG Store would amount to an allowable storage of up to 15 L. As this is unlikely to satisfy the storage requirements for hand sanitisers, minor storage will not be an option for the DG Store.

3.1.2. STORAGE OTHER THAN MINOR STORAGE UNDER AS 1940

In the previous section, it's concluded that the quantity of flammable liquid to be stored will exceed minor storage in the DG Store. For non-minor storage of flammable liquids in the DG Store, the options would include:

- Storage within a flammable liquids cabinet that's constructed to AS 1940 requirements, with a maximum allowable capacity of 850 L and limited to a single 850 L cabinet within the DG Store.
- Construction of a dedicated flammable liquids package store, with fire-rated walls, door, floor and ceiling, and with ventilation, spillage containment and other requirements under AS 1940. The storage of aerosols would also be permissible if projectile protection (e.g. cages) is provided.
- Construction of a mixed class dangerous goods store under AS 3833.

Of the above, if the quantity of flammable liquids can be restricted to 850 L or less, then the use of a flammable liquids cabinet would be recommended. This can also form part of the AS 3833 solution. Once the quantities of flammable liquid to be stored is better known, CETEC will address the agreed option in greater detail. If there's a preference retain the ability to store larger quantities of flammable liquids, then the construction of a flammable liquids package store may be the better option. Although more expensive, it would greatly increase the quantity that can be safely stored. An outdoor flammable liquid store may also be an option if construction requirements for an internal store are considered onerous. However, this could introduce other problems such as greater temperature extremes.

3.2. CONSIDERATION OF THE DG STORE IN RELATION TO AS 3833.

3.2.1. MINOR STORAGE UNDER AS 3833

Under AS 3833 (for mixed dangerous goods classes), any quantity of PG II dangerous goods amounting to less than 250 L (or kg) is considered minor storage. There would also be an allowance for an



additional 1000 L (or kg) of PG III dangerous goods (including aerosols and all Class 9 dangerous goods) and an additional 1500 L of combustible liquids (which could include, for example, some lubricating oils or motor oils. It's assumed that no PG I dangerous goods are to be stored at the warehouse.

In the case of hand sanitisers, there would need to be a maximum of 250 L in storage under the above provisions. Assuming there are no PG I dangerous goods, and the total quantities of dangerous goods within the limits specified above, and do not include any explosives or compressed gases (other than aerosols), the following conditions would apply for indoor storage (as reproduced from Clause 2.3 of AS 3833):

- (a) Any materials that are incompatible, or might react dangerously if mixed, shall be segregated so that the possibility of reaction is minimized.

NOTE: Section 6 provides information on segregation.

- (b) The storage area shall be away from any heating or ignition sources.
- (c) The storage area shall be provided with adequate natural or mechanical ventilation, depending on the nature of the substances and the circumstances of their use.
- (d) Packages shall be kept closed when not in use. Packages should only be opened in a well-ventilated area, and, if their contents are flammable, away from any potential ignition sources.
- (e) Packages should be stored in such a manner that leaks cannot affect other substances in the store. Liquids should not be stored above powders and solids. Liquids in glass bottles should be stored at lower levels.
- (f) Appropriate spill control measures shall be provided where packages are opened and their contents transferred.
- (g) Any spills or leaks shall be cleaned up immediately and disposed of in accordance with Section 10. Contaminated, spilled or leaked material shall not be returned to its original packaging, except for disposal where it is known that this will not increase the risk.
- (h) The transfer of dangerous goods from the store to the point of use shall be carried out in a manner that minimizes the possibility of spillage or fire.
- (i) Dangerous goods shall not be stored or handled where they could hinder escape from a building in the event of fire.
- (j) Persons who handle any dangerous goods shall be informed and aware of the hazards involved.
- (k) Packages shall be kept in such a manner as to avoid spillage.
- (l) Stores shall be kept clear of combustible matter and refuse.
- (m) Packages shall be kept on surfaces that are resistant to attack by their contents if spilled.
- (n) Appropriate personal protective equipment shall be worn by personnel involved in product transfer or clean-up operations (see Clause 7.9).
- (o) A fire extinguisher of suitable type shall be installed in each minor store. It shall be located so that it is immediately accessible in an emergency, along an exit route.
- (p) A supply of water shall be available at a nearby location, for personal hygiene.

The above references to Sections 6, 7 and 8 of AS 3833 address safety matters and are not addressed in this section of the report.

3.2.1. STORAGE OTHER THAN MINOR STORAGE UNDER AS 3833

CETEC will address the requirements for non-minor storage under AS 3833 once there is better



information available concerning quantities of each class of dangerous goods to be stored. However, the following limitations on the use of chemical cabinets specific to the particular classes of dangerous goods within the DG Store are pointed out below.

3.2.1.1. USE OF CABINETS FOR STORAGE OF CLASS 8 DANGEROUS GOODS

If packages of Class 8 substances (i.e. corrosive substances) are to be kept within purpose designed cabinets then the following limitations (amongst others described in AS 3780) would apply:

- Incompatibilities for each substances should be checked by reference to an up-to-date safety data sheet (SDS) for the substances. There should be a high awareness that mutual incompatibilities are common within the group of Class 8 substances.
- There must be no incompatibilities within a cabinet. For example, sodium hypochlorite solutions must not be kept within the same cabinet as an acidic solution (such as phosphoric acid). If acids and alkalis are to be kept within the same cabinet, then they should be kept on separate shelves.
- The cabinet must meet the construction requirements of Clauses 4.6.4 and 4.5.6 of AS 3780.
- Assuming there are to be no PG I Class 8 substances stored, the cabinet must contain a maximum of 250 L or kg of PG II substances and a maximum of 1000 L or kg of any Class 8 substances.
- The cabinet mustn't be used to store any greater than its maximum design capacity.

3.2.1.2. USE OF CABINETS FOR STORAGE OF CLASS 5.1 DANGEROUS GOODS

If packages of Class 5.1 substances (i.e. oxidising substances) are to be kept within purpose designed cabinets then the following limitations (amongst others described in AS 3780) would apply:

- The cabinet must meet the construction requirements of Clauses 4.8.3 and AS 4326.
- No other classes of dangerous goods are to be stored within the cabinet
- Assuming there are to be no PG I Class 5.1 substances stored, the cabinet must contain a maximum of 250 L or kg of Class 5.1 substance.
- The cabinet mustn't be used to store any quantity greater than its maximum design capacity.

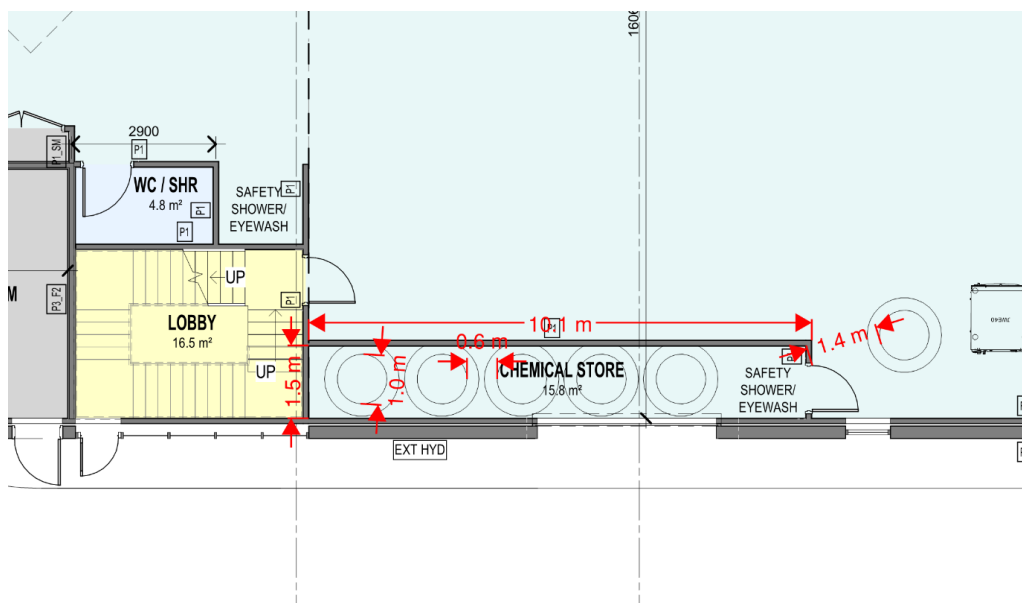


4. DISCUSSION OF PROPOSED STORAGE AREA ADJACENT TO LAUNDRY ('CHEMICAL STORE')

The discussion in this section assumes, in the absence of specific information at the time of preparing this report, that at least one of the tanks in the Chemical Store will be used to store a Class 8 liquid that's PG II or PG III (but not PG I), and that the other tanks are to store a liquid that is not incompatible with any other liquids in the store (unless the tank is double-skinned).

According to Drawing TP22-000 (the version dated Nov. 18th 2021), there is to be a 15.8 m² area set aside for chemical storage (hereafter referred to as the Chemical Store), consisting of five tanks within a walled area, with an additional tank located just outside that area (the additional tank is not considered to be part of the Chemical Store). A safety shower and eyewash facility are to be located at the single existing exit to that store. A cut-out of Drawing TP22-000 is shown in Figure 3.

Figure 3: cut-out from Dwg. TP22-000 showing proposed chemical store located on southwest wall of building



The proposed store is 10 m long, and is to contain five 1.0 m diameter tanks, with an additional 1.5 m diameter tank located roughly 1.4 m from the single door of the tank area. As an earlier report suggested that the tanks were to have a capacity of 1500 L, these tanks would need to have a height of 1.9 m to have that capacity. As a result, if the walls of the store are to be used to increase separation distances to the working area outside the call (which under the AS 3780 would be considered to be a protected place), then the wall would need to extend to the ceiling of the Chemical Store or to at least 1.0 m above the height of the highest tank. The wall would also need to have a minimum Fire Resistance Level (FRL) of 120/120/120 (from Clauses 5.3.2.3(b) of AS 3780).



It was suggested in an earlier DG Audit report (as supplied to CETEC) that there is an intention to store six 1500 L tanks of sodium hypochlorite solution. If so, it's possible that the five tanks shown in the Chemical Store would all be for the storage of sodium hypochlorite solution. If so, there would be no incompatibilities within the Chemical Store. However, the usage of the sixth tank outside of the store would need to be closely assessed.

4.1. SPILLAGE CONTAINMENT AND/OR BUNDING OF TANKS WITHIN THE CHEMICAL STORE

Clause 5.4 of AS 3780 requires the tanks to have spillage containment.

If the tanks within the Chemical Store are to include one containing sodium hypochlorite solution and another containing an acid (such as phosphoric acid) or a liquid which, according to the sodium hypochlorite supplier's safety data sheet, is incompatible with sodium hypochlorite, then the tanks cannot share a common spillage containment area. Furthermore, in order for the tanks to share a common bund each liquid in each tank needs to be checked to ensure that there are not any mutual incompatibilities within the group. Incompatibilities would include heat-generating reactions between two liquids or (in the case of hypochlorite and acid) the evolution of a highly toxic gas when the liquids are mixed).

It's recommended that each of the tanks are double-skinned – that is, each tank has its own integral secondary containment and the secondary containment, along with all parts of the tank that are likely to come into contact with the liquid, are completely resistant to that liquid. The integral secondary containment would need to be capable of capturing the entire volume of that tank. Use of only double-skinned tanks would, in CETEC's opinion, reduce the risk associated with loss of containment of a corrosive liquid.

The separation distances between the tanks are satisfactory, based on the tanks being less than 3000 L capacity (to be verified).

4.2. FURTHER REQUIREMENTS FOR TANKS WITHIN THE CHEMICAL STORE

It's recommended that the tanks containing the least hazardous contents are located furthest from the exit door of the chemical store.

The design and construction of each tank need to be in accordance with Clauses 5.5 and 5.7 of AS 3780. CETEC can further specify these requirements before construction proceeds. These requirements include the transfer points for the delivery of liquid to each tank.

The design and construction of the bund, or of the secondary containment of each tank, need to be in



accordance with Clause 5.4.3 of AS 3780. CETEC can further specific these requirements before construction proceeds.

The filling of each tank needs to be in accordance with Clauses 5.8 of AS 3780. CETEC can further specific these requirements before construction proceeds. These requirements include the transfer points for the delivery of liquid to each tank.

Packages (as opposed to tanks) of Class 8 liquids or solids should not be stored in the Chemical Store if it's to be used for tank storage. They could if required be stored in chemical cabinets suitable for the storage of Class 8 substances, with incompatibilities taken into account, as described in Section 3.2.1.1 of this report.

4.3. REQUIREMENTS FOR TANK LOCATED OUTSIDE OF CHEMICAL STORE

Figure 3 indicates a tank to be located just outside the Chemical Store. It's currently not clear what it's to contain, but CETEC would recommend that it's used for the storage of a non-hazardous liquid, or of a liquid that doesn't have a dangerous goods classification.

4.4. REQUIREMENTS FOR STORAGE OF HYDROGEN PEROXIDE SOLUTION

The requirements for installation of a fixed tank of hydrogen peroxide are described in Section 5 of this report.



5. GENERAL REQUIREMENTS FOR INSTALLATION OF A TANK OF HYDROGEN PEROXIDE

In this section, where parts of AS 4326 are reproduced verbatim they are shown in coloured background in order to make it clear that they're unedited from the original standard document. Where it's necessary to reproduce an entire block of text, text that is of no relevance to this context is struck out.

The requirements for the installation of a tank of hydrogen peroxide are described in AS 4326:2008.

It's assumed that the tank will be a fixed tank, as opposed to a demountable tank that's delivered to the site (and the empty tank removed).

It's understood that the hydrogen peroxide is to be supplied as a 50% solution, which in terms of its dangerous goods class is described as follows:

- UN Number 2014; Class 5.1; Subsidiary Class 8; Packing Group II.

The Class 8 subsidiary class indicates that it's also corrosive. "Corrosive" under the DG definition doesn't distinguish between corrosivity to skin or to metals. In this instance it's known to be corrosive to skin, and has the following hazard rating under the GHS (among other GHS hazards):

- Skin Corrosion Category 1B

Most substances that are corrosive to skin also tend to be corrosive to metals. However, in the case of hydrogen peroxide solution it's more the case that the substance reacts to certain metallic surfaces by undergoing catalytic decomposition, and as a result the composition of the tank is important. This underscores the need to follow directions in the standard. In the case of the subsidiary Class 8 designation, reference to the storage and handling standard for corrosive substances isn't necessary as the oxidants standard (AS 4326) specifically addresses storage of hydrogen peroxide.

In some countries, including the European Union, hydrogen peroxide at less than 50% concentration is no longer considered to be either Class 8 or an oxidising liquid. However, under the ADG Code (see footnote to Section 2.1) hydrogen peroxide (UN 2014) is designated with the above DG classification at concentrations between 20% and 60%.

It's understood that the hydrogen peroxide is to be stored in a 1500 L tank. The following specific requirements will apply under AS 4326⁹:

- The tank would need to be located in accordance with Clause 7.4 of AS 4326.

⁹ AS 4326:2008 The storage and handling of oxidizing agents



- The tank would need to be banded in accordance with Clause 7.5 of AS 4326.
- The tank would need to be designed and constructed in accordance with Clause 7.6 of AS 4326 and additionally in accordance with Clause 7.8.
- The ancillary equipment for the tank would need to meet the requirements of Clause 7.9 of AS 4326.
- The tank would need to meet the additional requirements of Part 8 of AS 4326 for the storage of and handling of hydrogen peroxide solutions in fixed tanks.

The requirements from Part 7 of AS 4326, entitled “Storage and Handling of Liquids in Tanks” (purely in the context of oxidising liquids in general) are discussed in the following parts of this section.

5.1. SCOPE OF SECTION (CLAUSE 7.1 OF AS 4326)

This section sets out the requirements and recommendations for the storage and handling of oxidizing agents that are in liquid form and kept in tanks.

Additional requirements for the storage of hydrogen peroxide and mixtures containing hydrogen peroxide in tanks are given in Section 8.

Comment: the above section introduces the scope of the section for general requirements for the storage of oxidising liquids in tanks. The additional requirements (from Part 8 of the standard) are also discussed later in this report as they apply in addition to the general requirements of Part 7.

5.2. APPLICATION OF SECTION (CL. 7.2 OF AS 4326)

Clauses 7.3, 7.5, 7.6 and 7.10 apply to any storage of liquid oxidizing agents in tanks. Clause 7.4 also applies to any storage of liquid oxidizing agents in tanks, other than where break tanks are specifically excluded.

Additionally, Clauses 7.7 and 7.8 apply specifically to portable and to permanent tanks respectively.

5.3. TANK TYPES (CL. 7.3 OF AS 4326)

A tank for the storage of handling of liquid oxidizing agents in bulk shall be one of the following:

- (a) A portable tank, being—
 - (i) an intermediate bulk container (IBC) having a capacity greater than 1.6 m³ (see also Section 5);
 - (ii) a portable tank as described in Clause 1.4.53(d);
 - (iii) an ISO tank; or
 - (iv) a demountable tank complying with the requirements of AS 2809.1 and AS 2809.4.
- (b) A permanently positioned (fixed), static storage tank that is filled and discharged *in situ*.

Comment: it’s assumed that the tank won’t be a portable tank and will instead be a permanently positioned tank.



5.4. LOCATION OF TANKS (CL. 7.4 OF AS 4326)

5.4.1. GENERAL (CL. 7.4.1 OF AS 4326)

Tanks for oxidizing agents shall not be wholly or partly buried.

In determining the location and layout of any tanks, the relevant requirements of Clause 11.2.1 shall be observed.

Comment: it's assumed that the tank won't be buried at all.

5.4.2. SEPARATION AND SEGREGATION (CL. 7.4.2 OF AS 4326)

5.4.2.1. OXIDIZING AGENTS HAVING SUBSIDIARY RISKS (CL. 7.4.2.1 OF AS 4326)

Where the oxidizing agent being kept in bulk has one or more Subsidiary Risks, reference shall be made to the Australian Standards relevant to the Classes or Divisions of those Risks and, the greatest specified separation and segregation distances shall apply.

Comment: in this instance the subsidiary risk is Class 8, and the specified segregation and separation distances will be indicated later in this report. Hydrogen peroxide will be the only Class 5.1 substance being stored within the tank section of this site, so separation distances will be only to other DG tanks and other DG storages.

5.4.2.2. SEPARATION DISTANCES (CL. 7.4.2.2 OF AS 4326)

Tanks shall be separated in accordance with the following requirements:

- (a) The minimum separation distance between tanks shall be 1 m.

Comment: the above distance will apply to any other tank in the facility.

- (b) The minimum separation distance for tanks from protected places and the boundaries of the premises shall be as set out in Table 7.1.

Comment: in this instance, the tank will be well away from protected places and from the boundary of the premises. However, work areas around the tank will come under the definition of "On-site protected places" (OSPPs), and for a tank of 1500 L or less of PG II oxidising liquid, the required separation distance to an OSPP (taken from Table 7.1 of the Standard, which is not reproduced here), is 3 m. In practical terms this requires that personnel who are not specifically engaged any activity relating to operation or maintenance of the tank should not be allowed to come within 3 m of the borders of the tank, or within 3 m of the tank bund (if the tank is not to be a double-walled tank).

Further comment: a note attached to Table 7.1 of the Standard says the following:

"Where the above separation distances are applied to on-site protected places that are an integral part of the storage, processing or handling of oxidizing agents, such distances may be reduced subject to appropriate risk identification, assessment and control".

If space is at a premium, the above note does permit the separation distance to be reduced subject to justification by a detailed risk analysis.



- (c) Where a bund is provided, the minimum distance from the top inside perimeter of the bund to protected places and boundaries shall be 3 m.
~~This requirement does not apply to IBCs that are permitted to be kept within a factory building or to break tanks that are connected to a process.~~

Comment: as the property boundary and any protected places beyond that boundary will be well over 10 m, the above section doesn't apply. It's assumed that IBCs won't be used for storage.

5.4.2.3. MEASUREMENT OF SEPARATION DISTANCES (CL. 7.4.2.3 OF AS 4326)

The separation distances specified above may be measured in a horizontal plane around an intervening screen wall in the following circumstances:

- (a) The screen wall is at least equal to the height of the tank.

Comment: a "screen wall" is defined earlier in the standard as "a structurally-sound wall that is impervious to liquid and vapour and is constructed of materials that are substantially resistant to attack by the substances being separated". Use of such a wall would allow activities surrounding the tank to be brought closer to the borders of the tank if space is at a premium.

- (b) ~~Where IBCs or demountable tanks are kept the screen wall is—~~
~~(i) at least 1 m above the top of the highest item being kept; and~~
~~(ii) marked to indicate the maximum permissible storage height.~~
- (c) Where separation is being measured to a protected place, the intervening screen wall has an FRL of at least 120/120/120.

NOTE: Where an FRL is required, reference should be made to the *Building Code of Australia (BCA)* for guidance.

Comment: by the definition used in the standard, a "protected place" (as opposed to an OSPP) is outside the site boundary so the requirement of Clause (c) above doesn't apply here.

5.4.2.4. SEGREGATION (CL. 7.4.2.4 OF AS 4326)

Tanks containing oxidizing agents, other than in break tanks connected to a process, shall be segregated from substances with which they are incompatible or might react dangerously in accordance with the following:

- (a) Where the substances being kept are incompatible—
(i) they shall be kept in separate compounds; or
(ii) they shall be separated by a distance of not less than 5 m except that, where both of the incompatible substances are solids, the minimum segregation distance may be reduced to 3 m.

Comment: the difference between separation and segregation in this context should be noted. The above requirements are important in this context, because hydrogen peroxide solution is known to be incompatible with strong alkali such as sodium hydroxide or potassium hydroxide, and solutions of these are likely to be stored in the same general area. If either of these are to be stored in tanks at the site then this requirement will apply. It's believed (based on supplier information) that no solid alkali substances are to be stored. As a result, if not in separate compounds (i.e. with their own spillage containment), then tanks of hydrogen peroxide and sodium or potassium hydroxide solutions are to be separated by at least 5 m.

- (b) Where the substances are being kept might react dangerously—



- (i) they shall be segregated by a distance of not less than 5 m; and
- (ii) they shall not be kept within the same compound, or in compounds that share a common drainage system.

Comment: whether the reaction of hydrogen peroxide solution with a strong alkali solution could be described as 'violent' may be open to debate. The reaction is known to lead to rapid decomposition of the peroxide, with rapid generation of oxygen gas. The rapidity of this evolution of gas could at times be violent, depending on the quantities being mixed, and as a result it's recommended that the above steps be taken, or that a documented risk assessment is carried out if those measures are considered impractical. As a minimum, the compounds should be prevented from being discharged into the same drainage system. However, under the standard for corrosive substances (AS 3780), which is discussed in Section 7 of this report, the two substances are considered to "react dangerously".

- (c) Where a tank is installed inside a building, the room in which it is located shall not be used to store any other class of dangerous goods, either in tanks or packages.
~~This requirement does not apply to portable tanks or IBCs of less than 1.6 m³ capacity.~~

Comment: the above requirement prevents tanks containing other classes of DG from being stored within the same room. As it's known that substances of Class 8 are also to be stored in tanks at this facility, this clause is important. However, it's also recognised that an entire warehouse would not be considered to be a "room", and that by necessity tanks of different classes will need to be stored within the same warehouse. As a result, the tanks would need to be subject to the specified separation and segregation requirements discussed in Section 5.4.2.3 and earlier in this section of the report (Section 5.4.2.4)

- (d) Where used, bunds shall comply with Clause 7.5.

NOTES:

1. A large number of proprietary chemicals (e.g. surfactants, brake fluids, lubricating oils) may react with oxidizing agents, and should be appropriately segregated from them. Caution is required in the storage of any unknown materials in the vicinity of oxidizing agents.
2. Some Division 5.1 substances are incompatible with other Division 5.1 substances, e.g. hydrogen peroxide and chlorates.

Comment: the tank of hydrogen peroxide will need to be banded, and this will be discussed. The notes above are important: as an oxidising liquid, hydrogen peroxide can undergo chemical reactions with a wide range of substances, such as oils and lubricants. It can also undergo dangerous chemical reactions with specific substances such as chlorates. CETEC strongly advises that the introduction of any new chemical substance to the area is preceded by a thorough check of the SDSs for the substance and the SDS for the hydrogen peroxide solution. In each case, the SDS must be less than five years and must be fully conforming to all Australian legislative requirements. If not, there's a risk that the SDS will not supply the information required to make a full assessment of their compatibility and of the individual hazards of each substance.



5.4.2.5. MEASUREMENT OF SEGREGATION DISTANCES (CL. 7.4.2.5 OF AS 4326)

The segregation distances specified above may be measured in a horizontal plane around an intervening screen wall.

Where any of the goods being segregated are of Classes, Divisions, or Subsidiary Risks 2.1, 2.3, 3, 4 or 5.2, or combustible liquids, the screen wall shall have an FRL of at least 120/120/120; and either—

- (a) extend a distance of at least equal to the height of the tank; or
- (b) ~~in the case of IBCs or portable tanks, extend at least 1 m above the highest item being kept. In such a case, the wall shall be marked to indicate the maximum permissible storage height.~~

NOTE: Where an FRL is required, reference should be made to the *Building Code of Australia* (BCA) for guidance.

Comment: a “screen wall” is defined in Section 5.4.2.3 above. It’s important to note that “combustible liquids”, which include diesel fuel and lubricating oils” are not classified as dangerous goods but their presence needs to be fully noted. An SDS may not always indicate that a liquid is combustible, although the indication of any flash point in Section 9 of the SDS would confirm that it is. However, the supplier of the liquid should be contacted if there is any doubt. Use of an intervening screen wall to achieved the required segregation distance would allow activities surrounding the tank to be brought closer to the borders of the tank if space is at a premium.

5.5. BUNDS AND COMPOUNDS (CL. 7.5 OF AS 4326)

5.5.1. GENERAL (CL. 7.5.1 OF AS 4326)

Except for break tanks that have been provided with provision for spill containment, all tanks for liquid oxidizing agents shall be provided with a compound complying with the requirements of this Clause. Where it is not possible to provide a compound, the surface around and under the tank shall be graded to a catchment compound elsewhere within the premises. The requirements of this Clause shall also apply to any such remote compound.

Comment: the above requirements will apply. The tank in this instance would not be considered to be a break tank. If the intention is to use a tank with integral secondary containment (also referred to as a “double-walled tank”), these requirements, and those additional requirements applying to hydrogen peroxide (discussed later in this report), will need to apply. If a double-walled tank is to be used, the supplier should be questioned as to their experience in the supply of tanks specifically for hydrogen peroxide, as the composition of surfaces that come into contact with the liquid needs to be controlled to ensure that the surface doesn’t catalyse decomposition. Even the surfaces of the secondary containment shell need to be of the correct material.

5.5.2. CAPACITY OF COMPOUNDS (CL. 7.5.2 OF AS 4326)

The net capacity of a compound shall be—

- (a) for oxidizing agents of PG I, not less than 100% of the total storage capacity of all tanks, located within the compound; or



- (b) for oxidizing agents of PG II or III, not less than 100% of the capacity of the largest tank located within the compound.

NOTE: In order to facilitate the management of emergencies, it is recommended that compound capacities be about 10% greater than the minimal values specified above.

Comment: in this instance, the substance is a PG II oxidising liquid, so Clause (b) above will apply. In any case, there's likely to be only the one tank in the compound. If the tank is to be double-walled, then it would be designed to contain the entire contents of the tank if the inner containment fails.

5.5.3. DESIGN AND CONSTRUCTION (CL. 7.5.3 OF AS 4326)

Compounds and, where they are provided, bunds shall comply with the following requirements:

- (a) The materials of construction shall be substantially resistant to attack by any oxidizing agent that they may be required to contain.
- (b) They shall be sufficiently impervious so as to retain any spillage.
- (c) The bund shall retain its structural integrity in a fire situation.
- (d) The minimum separation distance between the tank and the bund shall be as shown in Figure 7.1. The top inside edge of the bund shall not be inside the crest locus limit, except where—
 - (i) the tank is shielded with compatible material; or
 - (ii) the wall of a building meeting the requirements for separation from a protected place also serves as a bund.

If at any time the tank is to be held under pressure, the distance between the bund and the tank shall be increased accordingly so that any spillage or leakage is not jetted over the bund.

Comment: the requirements of sub-clauses (a) to (d) above must be met, regardless of whether the bund takes the form of a double-walled tank. The compatibility of the material in the case of a double-walled tank of hydrogen peroxide would be especially important

- (e) Where a tank is shielded with a compatible material then, provided that any spillage is prevented from passing over the bund and that free air flow is maintained between the tank and its shielding, the distance between the wall of the tank itself and the bund shall not be less than 1 m.

Comment: in the event that a bund is used as opposed to a double-walled tank, the above requirement would ensure that the pressure on the tank when emptying due to a failure would not result in spillage outside the compound.

- (f) Bunds shall be designed to withstand the hydrostatic pressure expected to be exerted on them when they are full.

Comment: by its design, a double-walled tank would meet the above requirement if the tank is designed to be suitable for the containment of hydrogen peroxide.

- (g) The point at which any pipe passes through the wall of the bund shall be sealed with a compatible material, to prevent leakage from the compound.

Comment: if a bund is used, then the above requirement would need to be met.

- (h) Provisions shall be made for a ready means of entry and exit by personnel into and out of the compound.

Comment: in this instance, the bund (if used) would be fairly small and would not prevent entry and exit. If a double-walled tank is used, then there would be no entry to the outer secondary containment



wall.

- (i) Any pumps or other electrical equipment shall be located above the height of the bund, or in a separate compound. Such equipment shall be protected from flooding.

Comment: if a bund is used, then you'd need to prevent electrical equipment becoming immersed in the liquid following a loss of containment. By its design, a double-walled tank would meet the above requirement.

5.5.4. COMPOUND DRAINAGE (CL. 7.5.4 OF AS 4326)

A compound shall be drained in accordance with the following requirements:

- (a) Substances that might react dangerously shall not be directed into a common compound.

Comment: if a bund is used, then it's essential that a liquid with which it could react dangerously is not allowed to be directed into the same compound. In this instance, as discussed, sodium or potassium hydroxide solutions would come close to the definition of "reacting dangerously" and should not be allowed to drain into the same bund. If a double-walled tank is to be used, then this would not be an issue.

- (b) Any valve controlling the drainage from a compound shall—

- (i) be located outside the bund;
- (ii) be of a type in which the distinction between the open and shut positions is obvious;
- (iii) be resistant to the material contained in the tank and to any possible mixtures resulting from a spill into the compound;
- (iv) incorporate a provision to be locked shut when not actually draining; and
- (v) be kept closed except during the supervised drainage of water.

Comment: whether a bund or a double-walled tank is used for containment, it's essential that contained spillages are prevented from flowing out of the containment area, as the spillage would by its nature be an unforeseen event. Any valves used should meet the above requirements.

Drainage for the compound should slope away from any tank to a sump that, in turn, is drained from the lowest practicable level. Where drainage is achieved by gravity, a manually controlled, normally closed valve shall be provided. Where drainage is achieved by pumping, the pump shall be manually controlled.

NOTES:

1. Prior to any drainage by gravity and subsequent disposal of the waste, consultation with the supplier of the oxidizing agents and the relevant regulatory authorities may be required.
2. The disposal of the wastes is dealt with in Section 13.

Comment: the disposal of the liquid that's escaped its containment needs to be carried out safely and within legislative requirements. Automatic pumping out of the spilt liquid is not permitted.

5.5.5. MAINTENANCE (CL. 7.5.5 OF AS 4326)

All bunds and compounds shall be maintained in such a manner that the compounds are capable of retaining the capacity specified in Clause 7.5.2 and that they continue to prevent the escape of any contained liquid.

Comment: if a bund is used, then accumulation of materials in the containment area will reduce its



effective volume, possibly resulting in overflow. In the case of a double-walled tank, the secondary containment shell needs to be monitored for its condition.

5.6. DESIGN AND CONSTRUCTION REQUIREMENTS FOR ALL TANKS (CL. 7.6 OF AS 4326)

5.6.1. MATERIALS OF CONSTRUCTION (CL. 7.6.1 OF AS 4326)

The materials of construction of a tank, and its fittings and attachments that are likely to come into contact with the liquid oxidizing agent or its vapour, shall be compatible with the liquid oxidizing agent to be contained.

Where tanks are constructed of metallic materials that are neither chemically inert to the oxidizing agent nor passivated by it, then the metallic materials used in construction shall be—

- (a) rendered chemically inactive by forming an impervious ('passivated') surface film that prevents further reaction; or
- (b) protected by a suitable coating that is inert to the oxidizing agent.

Where such film is subjected to conditions that are likely to destroy it (e.g. maintenance work), the passivating procedure shall be repeated, or the coating shall be repaired, after such work.

Comment: the above section is essential in its entirety when applied to hydrogen peroxide. The passivation requirement will be discussed further in this report.

5.6.2. FOUNDATIONS (CL. 7.6.2 OF AS 4326)

A tank shall be positioned on a foundation that is adequate to support, without unacceptable or uneven settling, the following loads and forces:

- (a) The direct load imposed by the tank when full of either water or product, whichever is more dense.
- (b) Any possible overturning forces, in particular those that may be applied by wind when the tank is empty.
- (c) Any uplift or other distorting forces that may occur as a result of lightweight tank being subjected to pressure variations.

Any means of attachment between the tank and its supporting structure or foundation should be adequate to withstand any forces that may be applied to it.

NOTE: Because of the wide variety of surface, sub-surface, and climatic conditions, it is obviously not practicable to establish design data to cover all situations. The allowable soil loading requires a decision for each individual case, having regard to permissible settlement (see AS 1726).

Comment: the above section is essential in its entirety and should be noted during design and installation of the tank.

5.6.3. SUPPORTS (CL. 7.6.3 OF AS 4326)

Where a tank is installed on supports, they shall comply with the following requirements:

- (a) The underside of any part of the tank in contact with concrete foundations or saddles, or other supporting structure, shall be protected from corrosion.
- (b) The supporting structure shall be either constructed of non-combustible, corrosion-resistant materials or suitably protected by coatings.



- (c) The supporting structure shall be designed in accordance with the requirements of the Australian Standard appropriate to the type of construction (e.g. AS 4100 for steel, AS 3600 for concrete).
- (d) Any welded-on support, bracket or other fitting shall be welded in such a manner as to prevent penetration of water that is likely to cause corrosion of the tank (e.g. weepholes shall be at the lowest point of mounting pads).
- (e) Carbon steel shall not be welded directly onto the shell of a stainless steel tank.

NOTE: Carbon steel may be welded to a stainless steel 'doubler' plate.

Comment: the above section is essential in its entirety and should be noted during design and installation of the tank.

5.6.4. BEARING AREA (CL. 7.6.3 OF AS 4326)

The method of support of a tank shall avoid excessive concentration of loads on the supporting portion of the container shell. Legs, cradles or similar methods of support shall be attached in a manner that will prevent possible corrosion of the tank through the build-up of moisture.

Comment: the above section is essential in its entirety and should be noted during design and installation of the tank.

5.6.5. VENTS (CL. 7.6.5 OF AS 4326)

All tanks shall be provided with vents.

The size and number of vents shall be such that pressure or vacuum resulting from filling, emptying, changes in atmospheric temperature, or decomposition of the contents of the tank, will not cause stress in excess of the maximum design stress of the tank.

NOTES:

1. The relevant regulatory authority may require that vents discharge through an appropriate vapour recovery, vapour absorption or scrubber system.
2. The vent discharges should be above the roofline or covering of the tank.

Comment: the above section is important and should be noted during design and installation of the tank. Filling and emptying rates should be used to inform vent capacities. Vapour recovery would not be a requirement in the case of hydrogen peroxide solutions

5.6.6. PRESSURE RELIEF FOR STORAGE SYSTEMS (CL. 7.6.6 OF AS 4326)

The following requirements apply:

- (a) Where liquid can be trapped between shut valves, a safety relief device, rated at the maximum operating pressure defined in the specification for the particular pipework, shall be provided, and the discharge shall be piped to a safe place.
- (b) Where any valve or fitting is capable of trapping liquid oxidizing agent, it shall be fitted with an appropriate pressure-relieving device, such as a small hole, in one shut-off face of a ball valve (see Figure 7.2). Every valve or fitting so affected shall be installed in pipework in such a manner that it shall not cause leakage past the valve or fitting and the installation shall be tested prior to its being put into service.
- (c) The proper position of the relieving device in relation to the valve and the piping system shall be clearly marked on the adjacent valve flange and on the appropriate piping flange.



- (d) The configuration of pumps and pipework shall be designed such as to exclude the possibility of entrapment of oxidizing agent. An appropriate pressure-relieving device, e.g. a recycle line, internal porting, or generous rotor clearances, shall be provided where necessary.

NOTE: Gear pumps, rotary-vane pumps and interlocking-screw pumps require adequate clearances as a means of pressure relief. Positive-displacement pumps of the reciprocating type require relief downstream of the poppet or check-type discharge valves.

Comment: the above section is essential in its entirety and should be noted during design and installation of the tank. Discharge from relief valves shouldn't be allowed to mix with any substance that could undergo a dangerous reaction with hydrogen peroxide, and nor should it be directed so a location where personnel may not be aware of its hazardous properties.

5.6.7. TRANSFER POINTS (CL. 7.6.7 OF AS 4326)

A transfer point (i.e. the point at which liquids are transferred into or out of the tank) shall comply with the following:

- (a) It shall be suitably anchored.
(b) It shall be provided with a quick-action shut-off valve if the transfer point is positioned at or below the highest level of liquid in the tank or the piping system.

Comment: suitable anchoring is essential; in relation to sub-Clause (b) above it's recommended that the transfer point be above the highest liquid level so that reverse flow can't occur.

- (c) Except for break tanks, the tank shall be located at least 2 m from any opening to a protected place.

Comment: the transfer point is likely to be located at least 10 m from any protected place (protected places are off-site by definition).

- (d) It shall be separated from any boundary of the premises on which the oxidizing agents are kept by the following minimum distances:

- (i) For PG I — 5 m.
(ii) For PG II — 3 m.
(iii) For PG III — 3 m.

Such separation distances may be measured around an intervening screen wall, provided that the wall extends at least 1 m above the height of the transfer point.

Comment: in this instance it's a PG II liquid, so the separation distance to the boundary needs to be at least 3 m, which is understood to be the case.

- (e) It shall be located so that any vehicle transferring product into, or receiving product from, the tank—
(i) can stand wholly off any public road; and
(ii) is not required to enter the tank compound.

NOTE: Where practicable, the location should be such that any vehicle transferring product is capable of being driven clear of the transfer point without the need to reverse.

Comment: the above requirements should be noted but from the design drawings it's noted that the likely transfer point at the southern edge of the building is likely to be well off any public road and as the tank compound will be relatively small there is no possibility of the vehicle driving into the compound. It's assumed that removal of the liquid from the tank into a vehicle is not likely to occur.



- (f) A safety shower and eyewash facilities, both complying with AS 4775, shall be located between 2 and 5 m from the transfer point.
- (g) A supply of water from a garden hose or hose reel shall be available nearby for housekeeping purposes.

NOTE: The transfer point may also be referred to as the 'fill point'.

Comment: the above two requirements should be noted. The liquid can cause skin burns and ready access to water would quickly reduce the severity of those burns. The safety shower and eyewash would need to be within uninterrupted distances as shown (i.e. not separated by a wall).

5.6.8. OVERFILL PROTECTION (CL. 7.6.8 OF AS 4326)

Where a tank having a capacity in excess of 10 m³ is being filled, and information on the level inside the tank is not continuously available to the person filling them, the tank shall be fitted with a high-level alarm, an independent extra-high-level alarm and an associated automatic filling cut-off device.

As the tank in this instance is well under 10 m³, the above requirement does not apply. However, the tank will need to be fitted with sensors that indicate the tank level to the person doing the filling.

5.7. ADDITIONAL REQUIREMENTS FOR PORTABLE TANKS (CL. 7.7 OF AS 4326)

As a portable tank is not to be used, this clause of the standard doesn't apply.

5.8. ADDITIONAL REQUIREMENTS FOR FIXED TANKS (CL. 7.8 OF AS 4326)

5.8.1. TANK DESIGN AND CONSTRUCTION (CL. 7.8.1 OF AS 4326)

5.8.1.1. GENERAL (CL. 7.8.1.1 OF AS 4326)

The design and construction of fixed tanks shall be in accordance with the requirements of this Clause, as applicable.

5.8.1.2. PRESSURE VESSELS (CL. 7.8.1.2 OF AS 4326)

The tank to be used is assumed not to be classifiable as a pressure vessel and as a result this clause of the standard is not included or discussed.

5.8.1.3. OTHER VESSELS (CL. 7.8.1.3 OF AS 4326)

A tank that is intended to be operated at atmospheric pressure, or at vapour pressures up to and including 17 kPa gauge (whether under normal or emergency operating conditions) shall be designed to meet all of the relevant requirements of AS 1692. BS EN 14015 or API Standards 650 or 620, or other appropriate Standards.

NOTES:

1. Despite the statement in AS 1210 that limits its intended applicability, that Standard may be used in conjunction with the above-cited Standards to determine principal stresses, combined stresses, weld joint factors, non-destructive testing of welds, weld repairs and allowable design stresses for materials other than the carbon steels listed in the selected Standard.
2. Provision of such items as liquid seals (see AS 1692) should be disregarded where they are not applicable to the storage of liquid oxidizing agents.

A corrosion allowance, consistent with the designed service life, shall be adopted where so required. After completion of all forming, grinding, dressing, polishing or other fabrication work, finished wall thickness shall



be not more than 0.4 mm below any required nominal thickness and not less than any calculated actual minimum thickness.

Tanks made from suitable plastics or other appropriate materials shall be designed and constructed in accordance with appropriate Standards, in such a manner as to provide a minimum service life of five years.

Break tanks should be designed in accordance with AS 1692 or other appropriate design Standards.

5.8.1.4. TANK SHELL THICKNESS (CL. 7.8.1.4 OF AS 4326)

The required shell thickness of metallic tanks should initially be determined for a minimum service life of 10 years.

5.8.2. OUTLET VALVE (CL. 7.8.2 OF AS 4326)

Tanks having a capacity exceeding 100 m³ shall be fitted with an outlet valve, which shall be either coupled to the tank outlet branch or be incorporated into the tank shell or bottom.

The outlet valve shall be capable of being operated either—

- (a) from a point that is above the bund wall height and which does not require entry to the compound floor; or
- (b) from a point outside the bund.

5.8.3. LEVEL INDICATION (CL. 7.8.3 OF AS 4326)

Except in the case of a break tank fitted with a high level alarm or overflow line, every fixed tank shall be fitted with an appropriate means of indicating the level of its contents. The safe fill level of a tank shall be clearly marked on the level-indicating device.

Where a sight glass is used as a level indicator, the following conditions apply:

- (a) The oxidizing agent shall not be of Packing Group I (PG I).
- (b) The capacity of the tank shall not exceed 10 m³.
- (c) Where the sight glass is fitted externally to the tank, it shall have a self-closing shut-off valve and a manual isolation valve on the line that connects the sight glass to the tank below liquid level.
- (d) The sight glass and fitting materials shall be impervious to, and compatible with, the liquid being kept.
- (e) The sight glass shall be protected from all potential damage.
- (f) The length of the sight glass shall not exceed 1800 mm.
- (g) Where the sight glass does not have the same coefficient of linear expansion as the tank wall, a flexible connection shall be used for attachment of the upper section of the sight glass.

NOTE: The flexible connection is to ensure that damaging stresses are not applied to the site glass.

Comment: as the tank is of less than 10 m³ capacity, the above requirements apply to the design of the level indication system for the tank.

5.8.4. NOZZLES (CL. 7.8.4 OF AS 4326)

Where nozzles are used to lead liquid into a tank, they may be provided with internal projections to prevent liquid splashing or running down the internal wall of the tank.

5.8.5. OVERFLOW LINES (CL. 7.8.5 OF AS 4326)

Every fixed tank that is not fitted with a high-level alarm and an independent extra-high-level cut-off device shall have an overflow line installed. Such overflow lines shall comply with the following requirements:



- (a) Except in the case of a break tank having a return line to the storage tank, the overflow line shall discharge at ground level to a safe place that will contain any spill (e.g. a sump or gully inside the tank bund) and is in full view of the person filling the tank.
- (b) The nominal diameter of the overflow line shall not be less than—
 - (i) for tanks filled by pump, 1.5 times the filling line diameter; or
 - (ii) for tanks filled from an air or gas padded tank, 2.0 times the filling line diameter.
- (c) The overflow line shall have no valves or significant restrictions, except that, if desired, it is permissible to incorporate—
 - (i) a seal pot;
 - (ii) a seal bend filled with a compatible liquid; or
 - (iii) a screen mesh having an open area greater than the cross-section of the overflow.

5.8.6. IN-BREATHING VENT (CL. 7.8.6 OF AS 4326)

The tank shall be equipped with an in-breathing vent, sized to cater for intake of air of an amount equal to the sum of the maximum allowable pump emptying rate and thermal in-breathing, in accordance with the requirements of Appendix I of AS 1+940-2004. The overflow line shall be deemed to be not contributing to in-breathing capacity.

5.8.7. EMERGENCY VENTING (CL. 7.8.7 OF AS 4326)

The emergency venting capacity to the atmosphere shall be not less than the fire-engulfment requirements of AS 1940.

Additional venting capacity shall be installed to provide for gases and vapours that might be generated due to the nature of the liquid, any inherent instability, or any reasonably foreseeable fault conditions. The overflow line shall be deemed to be not contributing to venting capacity.

5.9. ANCILLARY EQUIPMENT FOR ALL TANKS (CL. 7.9 OF AS 4326)

5.9.1. PIPES AND FLEXIBLE HOSES (CL. 7.9.1 OF AS 4326)

The following requirements and recommendations apply to the pipes and flexible hoses:

- (a) Pipes and pipe joints shall be constructed of a material that is resistant to attack by, and is compatible with, the liquid oxidizing agent under all service conditions.

NOTE: Plastics may be subject to environmental stress cracking, 'ageing' and UV degradation. They are more susceptible to physical damage than steel, aluminium or stainless steel. Their physical properties can be seriously affected by extremes of ambient temperature, particularly where used above ground.

- (b) Care should be taken to ensure that galvanic corrosion does not occur between dissimilar metals if used in pipework.
- (c) Where plastics pipework is used, it shall be adequately protected from physical damage, fire exposure, and ultraviolet (UV) light. If plastics pipework cannot be so protected, metallic pipework shall be used.
- (d) All pipes shall be identified in accordance with AS 1345.
- (e) Pipe runs shall be well supported, and protected from damage by traffic.
- (f) Flexible hoses of plastics material shall only be used at transfer points and where the nominal diameter of the line is less than 15 mm.
- (g) Pipes should either be welded or be flanged. Although screw fittings may be used, they should be avoided wherever possible.



5.9.2. LIQUID LINES (CL. 7.9.2 OF AS 4326)

Liquid lines shall comply with the following:

- (a) All liquid lines shall be adequately supported and provision shall be made for the purpose of draining the lines.
- (b) All liquid lines connected at or below the liquid level of the tank shall be fitted with a shut-off valve at the nozzle through which liquid is transferred into or out of the tank.
- (c) Where a tank has its filling point at or below the highest level of liquid in the tank or piping system and is to be filled, a stop valve shall be provided near the filling end of the line.
- (d) Provision shall be made to prevent ingress of contaminants, e.g. by use of a vented cap or closure on the end of the filling line.

NOTE: Where a vent cap is used, a vent hold of diameter 1.5 mm may be used to provide adequate pressure relief.

5.9.3. ACCESSORIES (CL. 7.9.3 OF AS 4326)

Valves, pumps, flow meters, other accessories and lubricants shall be suitable for use with the liquid oxidizing agent to be handled.

5.9.4. TRANSFER SYSTEMS (CL. 7.9.4 OF AS 4326)

Where a tank will be pressurized for the purpose of product transfer, the fittings and pipework shall be designed for the maximum pressures that might develop.

5.9.5. FILLING CONNECTIONS (CL. 7.9.5 OF AS 4326)

The filling connection to a tank shall—

- (a) be for dedicated use;
- (b) be kept in a clean condition;
- (c) be clearly and legibly labelled in such a manner as to identify the contents of the tank to which it is connected;
- (d) form a liquid-tight connection with the transfer-hose fittings;
- (e) be fitted with a vented closure, in order to prevent dust ingress when not in use; and
- (f) be provided with a means for draining the contents of the filling connection to a safe place.

5.9.6. TRANSFER HOSES (CL. 7.9.6 OF AS 4326)

Transfer hoses shall comply with the following:

- (a) The length of any hose connecting a road or rail tank vehicle to a filling point shall not exceed 6 m. Where necessary to permit compliance with this requirement, a permanent filling line shall be installed.
- (b) A transfer hose shall not be run across any area normally accessible to vehicles unless adequate precautions are taken to prevent any vehicle from driving over the hose or striking its connections.
- (c) During transfer operations, hoses shall be adequately restrained.
- (d) Transfer hose assemblies shall be visually inspected and hydrostatically tested in compliance with the ADG Code. Hoses that fail such inspections or tests shall be either disposed of immediately, or repaired and retested prior to further use.
- (e) Provision shall be made to enable the draining of the contents of the transfer hose to a safe place.



5.9.7. FILLING (CL. 7.9.7 OF AS 4326)

Requirements and recommendations for filling of tanks are given in Clause 10.7.

5.9.8. ELECTRICAL EQUIPMENT (CL. 7.9.8 OF AS 4326)

All electrical equipment on a tank and its ancillary equipment shall have a rating of not less than IP55 in accordance with AS 60529.

Plastics conduits and enclosures are preferred. Where used, metallic conduit and electrical fittings shall be adequately protected from corrosion.

Where electrical, equipment, motors and other electrical appliances are in hazardous areas, they shall comply with AS/NZS 2381.1.



6. SPECIFIC REQUIREMENTS FOR INSTALLATION OF A FIXED TANK OF HYDROGEN PEROXIDE

In this section, the specific additional requirements applying to a fixed tank of hydrogen peroxide from AS 4326 are discussed.

6.1. SCOPE OF SECTION (CL. 8.1 OF AS 4326)

It's assumed that the tank to be used for the storage of hydrogen peroxide will not be classified as a pressure vessel.

This Section sets out requirements and recommendations for the storage of hydrogen peroxide, and mixtures of hydrogen peroxide, in fixed tanks. These requirements and recommendations are additional to those in Section 7 of this Standard.

Comment: the requirements of Part 7 of AS 4326 are discussed in the previous section of this report.

This section applies to hydrogen peroxide of strengths up to and including 75% (m/m) and to hydrogen peroxide mixtures. Should there be any conflict between the requirements of this Section and those of Section 7, the requirements of this Section (Section 8) shall prevail.

NOTE: Where the concentration of hydrogen peroxide exceeds 75% (m/m), reference should be made to the relevant regulatory authority.

Comment: it's assumed that the hydrogen peroxide concentration will be close to 50% by weight and that it will be well under 70% by weight.

6.2. TANK CLASSIFICATION (CL. 8.2 OF AS 4326)

Tanks within the scope of this Section shall be classified as set out below:

- (a) Category 1— horizontal cylindrical tanks up to 5 m³ working capacity.
- (b) Category 2— vertical cylindrical tanks, having a flat or conical bottoms and either flat or conical roofs, of up to 10 m³ working capacity.
- (c) Category 3— vertical cylindrical tanks, having flat bottoms and conical roofs, of up to 150 m³ working capacity.
- (d) Category 4— horizontal cylindrical tanks of up to 150 m³ working capacity.
- (e) Category 5— vertical cylindrical tanks, having flat bottoms, of up to 500 m³ working capacity.
- (f) Category 6— tanks that are not covered by categories 1 to 5 inclusive, and which may be of an unusual design or size.

Comment: the design of the tank may not yet have been finalised, and CETEC will complete this section when that information is available. It's likely that it will be a Category 1 or 2 tank from the above list.

This section of the report is to be presented in greater detail in a later version.

6.3. MATERIALS OF CONSTRUCTION (CL. 8.3 OF AS 4326)

6.3.1. TANKS HAVING A WORKING CAPACITY OF GREATER THAN 10 m³ (CL. 8.3.1 OF AS 4326)

As the tank is to have a capacity of 1500 L (1.5 m³)m this clause of the standard does not apply.



6.3.2. TANKS HAVING A WORKING CAPACITY OF LESS THAN 10 m³ (CL. 8.3.1 OF AS 4326)

Tanks having a working capacity of less than 10 m³ shall be constructed of one of the following types of materials:

- (a) The materials specified in Clause 8.3.1.

Comment: as Clause 8.3.1 of the standard isn't reproduced from Section 8.3.1, the requirements are listed below (other than a requirement applying to pressure vessels, which is assumed not to be relevant in this context):

- Tanks shall be constructed of either aluminium or stainless steel.
- Tanks, pumps and instruments shall not contain any materials that are known to react adversely with hydrogen peroxide.
- Where steel is used for non-pressure vessels, the grade chosen shall be one of those specified above, or BS EN 10029 or EN 10088-2.
- Where aluminium is used for such tanks, it shall be high purity grade, either conforming to AS 1734 Grades 1080A, 1050 or 5251, or other compatible grade.
- Nozzles for steel tanks shall be made of—
 - ASTM A213M Grades TP304L or TP316L; or
 - where the formation of ferrite and deposits of chrome carbide in heat-affected weld zones is limited, ASTM A213 Grades or 316, or other fully austenitic grades.

- (b) Provided that the tank is of Category 2 only, and that it is for hydrogen peroxide of strength not exceeding 50% (*m/m*), plastics of compatible polymeric grade, i.e. specially formulated grades of high-density polyethylene or potable-water grade PVC.

NOTES:

1. 'Chemical grade' PVC containing a lead-based stabilizer is not suitable for use.
2. Plastics are subject to embrittlement, environmental stress cracking and 'ageing'. They are more susceptible to physical damage than aluminium or stainless steel. Their physical properties can be seriously affected by extremes of ambient temperature, and it is difficult to obtain satisfactory quality control during fabrication.

Comment: the average concentration of the hydrogen peroxide to be used may not necessarily be precisely set at less than 50% by weight (as 'm/m' implies), and in fact there may be variation around an average of 50%. As a result, if a Category 2 tank is to be used, and there is an intention to use a tank composed of a specially formulated plastic, that the specifications of the tank are discussed with the supplier of the tank.

6.3.3. TANK DESIGN CRITERIA (CL. 8.3.3 OF AS 4326)

The following criteria shall be applicable to the design of tanks:

- (a) Tanks shall be designed in accordance with Clause 8.2, having due regard to wind and seismic loads, dead and live roof loads and any other superimposed loads.

Comment: Clause 8.2 of the standard is reproduced as Section 6.2 above. It's likely that a Category 1



or 2 tank would be used.

- (b) The nominal thicknesses of tops of Category 2 and Category 3 tanks shall be determined from Table 8.1, and of shells and bottoms of such tanks from Table 8.2. Those thicknesses shall be deemed to be sufficient to cater for wind loads in Region B, Terrain Category 3, as defined in AS/NZS 1170.

Comment: the supplied drawings suggest that all tanks are to be within an indoor location and as a result will not be subject to winds. However, it's assumed that if the final location leads to the tank being subject to wind loads, that the AS/NZS series of standards will be consulted.

It's not yet known whether the tank would be Category 1 or 2, but if Category 2 then the Table 8.1 requirements from the standard would apply. It's further assumed that for a 1.5 m³ tank, the diameter (if cylindrical) would be 1.5 m or less. The Table 8.1 minimum thicknesses for the dished or coned top of a cylindrical a tank of 1.5 m diameter or less would be:

- 2.5 mm if stainless steel
- 4.0 mm if aluminium grade 1080A or 1050
- 4.0 mm if aluminium grade 5251

It's not yet known whether the tank would be Category 1 or 2, but if Category 2 then the Table 8.2 requirements from the standard would apply. If so, it's assumed that the tank would have a 'factor' of 4.6 or less (with the 'factor' being the internal diameter in m multiplied by the cylinder height in m), and that as a result the Table 8.2 minimum nominal plate thicknesses for the flat or coned bottoms of the cylindrical tanks would be as follows:

- For stainless steel, 2.5 mm for the shell, and 4 mm for a flat bottom, 3 mm for a coned bottom
- For aluminium grade 1080A or 1050, 6 mm for the shell, and 6 mm for a either a flat or coned bottom
- For aluminium grade 5251, 5 mm for the shell, and 6 mm for a either a flat or coned bottom

- (c) Where other loads are superimposed, plate thicknesses shall be checked in accordance with the requirements of BS EN 14015 or API Codes 650 or 620, using allowable design stresses for aluminium set out therein and using the lower of the allowable design stresses for the appropriate stainless steels set out in the relevant design tensile tables of AS 1210 for the design temperature of 100°C.

Comment:

- (d) Joint efficiencies shall be appropriate to the weld type and radiographic testing conditions set out in AS 1210.
- (e) The tank shall be capable of withstanding an internal vapour-space pressure of 10.3 kPa under emergency venting conditions.
- (f) The design and construction of the interior of the tank shall be such as to leave a clean and smoothly contoured interior, devoid of crevices other than those at flange gaskets, and free of all deleterious inclusions within welds of ground into the surfaces of the plate. Full specifications relating to the fabrication, construction, quality control and inspection shall be prepared and, where required, by the relevant authorities, submitted for approval prior to commencement of work.
- (g) Where a vertical tank has a capacity of greater than 70 m³, an internal ladder shall be provided to enable entry to the vessel.



NOTE: An internal safety platform should also be provided.

- (h) All pipework used to transfer liquid from the tank shall be designed in such a manner as to permit complete drainage of the tank.

6.3.4. VENTING REQUIREMENTS (CL. 8.3.4 OF AS 4326)

Venting requirements for tanks shall be as follows:

- (a) *General* An atmospheric vent shall be provided on every tank. Dust filters shall be provided on all vents other than emergency vents.
- (b) *Emergency vents* Tanks shall be fitted with emergency vents to cater for rapid decomposition of their contents.

Emergency vents for tanks to contain hydrogen peroxide shall be sized according to the following equation:

$$Nd^2 = 246.4 \times C \times \rho \times r$$

where

- N = number of emergency vents fitted
d = internal diameter of the vents, in millimetres
C = maximum fill capacity of tank, in cubic metres
 ρ = density of the hydrogen peroxide, relative to water, at 20°C
r = strength of the hydrogen peroxide, in percent m/m

A tank access-way may serve as an emergency vent, provided that it is not less than 500 mm in diameter. Each of the vents shall be fitted with stainless steel safety grids, of grid size sufficient to exclude the entry of objects of 10 mm diameter or greater, and shall have a lid capable of making a dust-free seal.

Comment: in the case of 50% hydrogen peroxide, the density would be 1.20 relative to water and the value of $246.4 \times C \times \rho \times r$ in the above equation, for a 1.50 m³ tank, would be 22176.

6.3.5. PIPEWORK AND CONNECTIONS (CL. 8.3.5 OF AS 4326)

Plastics pipes are not recommended for use with hydrogen peroxide.

All pipework of diameter exceeding 25 mm that is associated with the storage tank shall be welded and flanged, except that small instruments and fittings that are capable of being isolated from the main pipework by flanged valves may be of the screwed type. All materials, welding techniques, interior pipe finish and testing procedures shall be appropriate to hydrogen peroxide service.

All direct connections to the tank that are below the liquid level shall be flanged.

6.3.6. TEMPERATURE INDICATION (CL. 8.3.6 OF AS 4326)

This clause of the standard applies only to tanks having a capacity exceeding 5 m³. However, if there's an inclination to use temperature indication so as to be alerted to the possibility of a run-away decomposition reaction, the following advise would apply:

Tanks having a capacity exceeding 5 m³ shall be provided with a means of temperature indication. A resistance temperature device (RTD) mounted in a thermowell is the most convenient means, but a gas-filled local gauge inserted through a port in the top of the tank is also suitable for the purpose.

It is essential that the sensor be located as low as practicable in the tank, so that it is in contact with the liquid at all times.



NOTE: The ideal installation, which would give the best warning of any incipient problems in the tank, comprises an RTD mounted in a thermowell, a local RTD/mA converter and a local indicator with transmission to a control panel. The control panel alarm should be set to 40°C for the high-temperature alarm; if the facility exists, an alarm should be set to provide warning of any rate of temperature increase in excess of 2°C per hour.

6.3.7. CHEMICAL TREATMENT (PASSIVATION) (CL. 8.3.7 OF AS 4326)

A tank, including its vapour spaces and all of its ancillary equipment (see Clause 7.6 and 7.9), having surfaces that could come in contact with hydrogen peroxide, shall be polished and cleaned to a standard suitable for passivation treatment prior to the tank being taken into service. These surfaces shall then be passivated in such a manner that they cannot be attacked by hydrogen peroxide and that the stability of the hydrogen peroxide cannot be significantly affected by contact with them.



7. SPECIFIC REQUIREMENTS FOR INSTALLATION OF A FIXED TANK CONTAINING CORROSIVE LIQUID

This section addresses the requirements for storage of corrosive liquids in tanks under the AS 3780¹⁰ Australian Standard.

It's assumed, in the context of this section, that a corrosive liquid or liquids are to be stored in tanks with dimensions of 1500 L or more, and that these liquids are likely to comprise:

- Sodium hypochlorite solution, with a concentration of roughly 12.5%, and which is classified as UN Number 1791, Class 8 and Packing Group II.
- Phosphoric acid solution in water, which is classified as UN Number 1805, Class 8 and Packing Group III.
- A caustic aqueous solution – either sodium hydroxide solution or potassium hydroxide solution; the solution would be Class 8 and Packing Group II.

CETEC is not aware of any other Class 8 substance to be stored on the site in any quantity greater than minor storage (as defined in AS 3780), and CETEC assumes that there are no Class 8 solids or gases with subsidiary Class 8 to be stored on the site.

It's pointed out that there is a very high degree of incompatibility between the two substances listed above. Any mixing of the sodium hypochlorite solution and phosphoric acid solution would result in the evolution of chlorine gas. Depending on the quantities of liquids mixed, this could lead to a serious environmental incident. As a result, it's essential that the storage systems for the two liquids are designed so that the risk of the liquids mixing, whether by a delivery error or by the spillage from tanks into the same spillage compound, is minimised.

In this section of the report, text that is reproduced verbatim from AS 3780 is shown with a coloured background. Each clause of Section 5 of AS 3780 is addressed. Section 5 addresses the storage of Class 8 (corrosive) liquids in tanks of greater than 450 L, as is believed to be the case here. If a later decision was to be made that the liquids will be supplied in packages (for example in 20 L plastic drums) then that would change the storage requirements under the standard and the advice in this section would need to be modified.

The location where the tanks are to be located is shown as a cut-out reproduced from Drawing TP22-000 (dated 25/11/2021) in Figure 4. Although similar to Figure 3, this cut-out focusses on slightly different detail. It's assumed that the six concentric circles of identical size indicate tank locations, with the inner circle indicating the outline of the tank itself and the outer circle assumed to indicate the area allocated as the base of the tank. According to Figure 4:

- There are a total of five tanks allocated, five within an enclosure on the southwest-facing wall

¹⁰ AS 3780:2008 The storage and handling of corrosive substances



and one outside the enclosure at a distance of 1.4 m from the enclosure but still within the building (see Figure 3 mark-ups).

- Five tanks are within an enclosure bound by the southwest-facing wall, a north-western wall that separates the enclosure from a lobby, and a wall separating the enclosure from the laundry area of the facility (to be referred to as “the partition”).
- The outer cores of the five tanks are separated by 0.6 m.
- The tanks each have a diameter of 1.0 m, with the base area having a diameter of 1.5 m.
- The tank enclosure has a width of 1.4 m and a length of 10.1 m.
- Access to the tanks furthest from the south-eastern enclosure would be through a space between the tanks and the building wall, which is about 0.3 m wide.
- There is a 3.6 m long opening in the southwest-facing wall of the building that’s assumed to allow access to the tank enclosure.

The usage of the six tanks is not identified in the drawings. It’s assumed that some of these tanks are for the storage of liquids that don’t have a dangerous goods classification. For example, liquids in this category may include the following (as notified to CETEC in the form of a chemical manifest):

- Neutral detergent solution (likely to be non-hazardous also)
- Surfactant emulsifier in water (likely to be non-hazardous also)

7.1. DEFINITION OF “PROTECTED PLACE” & “ON-SITE PROTECTED PLACE” IN AS 3780

AS 3780 defines a “Protected Place” as any of the following:

- (a) A dwelling, place of worship, public building, school or college, hospital, theatre, or any building or open area in which persons are accustomed to assemble, whether within or outside the property boundary of the installation.
- (b) A factory, workshop, office, store, warehouse, shop, or building where persons are employed.
- (c) An accumulation of flammable or combustible materials of a type and quantity sufficient to constitute a significant heat-radiation hazard in the event of fire in those materials.
- (d) ~~A ship lying at permanent berthing facilities.~~
- (e) Any storage facility for dangerous goods, other than minor storage, outside the property boundary of the installation.
- (f) An environmentally sensitive area.

The definition of a “Protected place” does not exclude on-site locations where personnel may assemble, and it also includes factories and workshops where people are employed. As a result, in this instance it would include areas surrounding the proposed tank locations. Clause (e) would, depending on the contents of the tank that’s to be located outside of the five-tank enclosure, need to be considered as well.

AS 3780 defines an “On-site Protected Place” as follows:



A building where people are employed within the property boundary of the installation, including warehouses, manufacturing or processing areas, amenities or other dangerous goods stores where quantities exceed minor storage.

In many ways, “On-site protected place” is, at least within the AS 3780 standard, a subset of a “Protected place” and as a result when “protected place” is referred to in the discussion within this section, it’s assumed to refer to components of sub-clauses (a), (b), (c) and (e) of the “Protected places” definition above.

7.2. DEFINITIONS OF “INCOMPATIBLE” AND “REACT DANGEROUSLY” IN AS 3780

“Incompatible goods” are defined in the standard as follows:

In relation to dangerous goods and other goods, goods that are—

- (a) likely to interact with the dangerous goods so as to increase the risk when mixed or otherwise brought into contact with the dangerous goods;
- (b) listed in the ADG Code as being incompatible; or
- (c) declared by the regulatory authority as being incompatible.

In relation to packaging or transfer equipment, a container or item of equipment that is constructed of a material that is likely to interact with the dangerous goods such that it is weakened or damaged, to the extent that risk increases.

NOTES:

- 1 This definition should be read in conjunction with Clause 1.4.26.
- 2 Acids and gas cylinders are an example of incompatibility.

Comment: Clause 1.4.26 of the standard defines “react dangerously” and is reproduced below.

The term “React dangerously” is defined in the standard as follows:

In relation to the reaction of substances, to react in a manner that directly creates a hazard due to the reaction—

- (a) being violent;
- (b) producing an explosion;
- (c) producing a potentially explosive combination of products;
- (d) producing fire or rapid evolution of heat; or
- (e) producing toxic vapour or toxic gas.

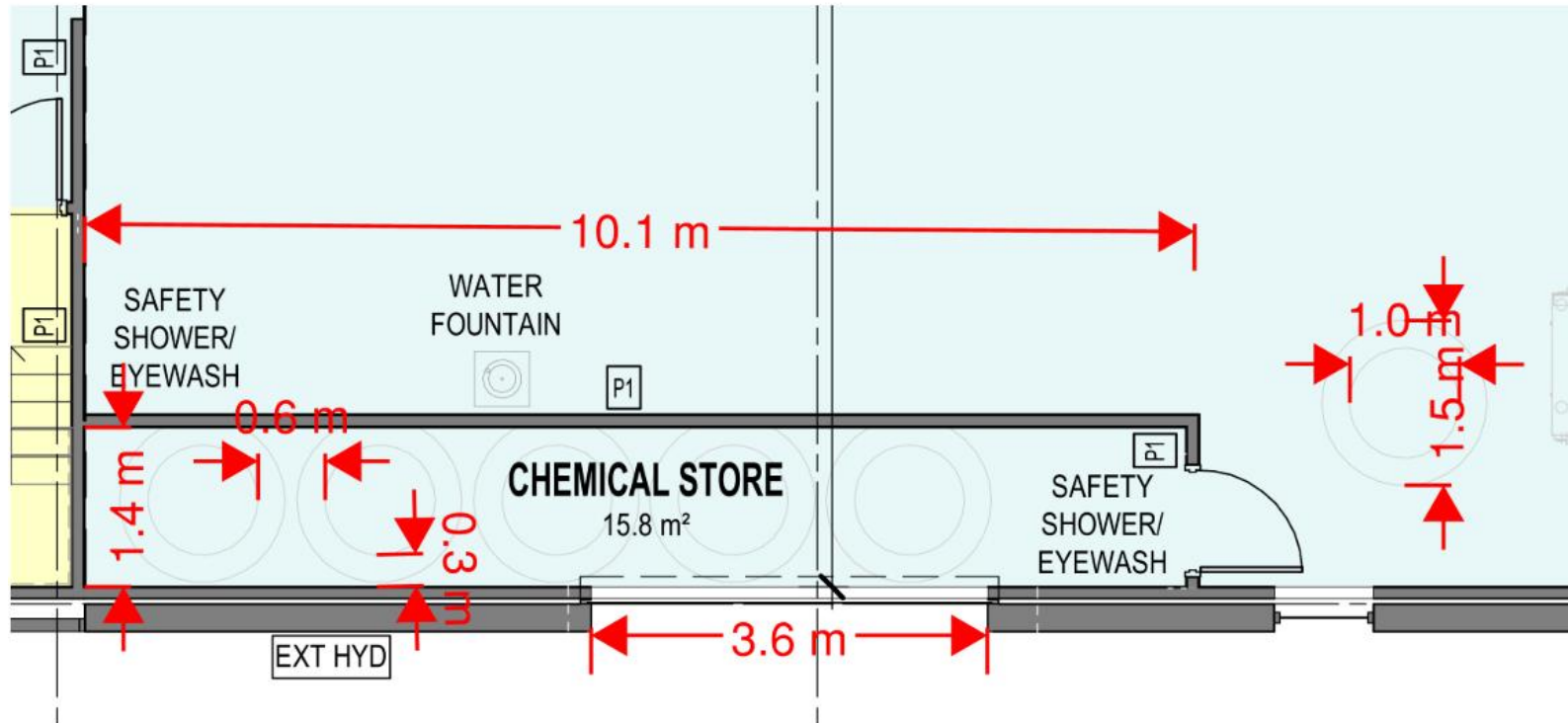
NOTES:

- 1 This definition should be read in conjunction with Clause 1.4.11.
- 2 Examples of substances that react dangerously are acids and cyanides; concentrated, strong acids and alkalis; and acids and hypochlorites.

Comment: Clause 1.4.11 of the standard defines “Incompatible” and is reproduced above. Note 2 above makes it clear that acids and hypochlorites react dangerously, and as a result they will be considered as reacting dangerously in this report.



Figure 4: cut-out from Drawing TP22-000 showing intended locations of tanks





7.3. SCOPE AND APPLICATION OF SECTION (CLAUSE 5.1 OF AS 3780)

This Section sets out requirements and recommendations applicable to the storage and handling of corrosive substances in tanks and other bulk containers.

Clauses 5.2 to 5.5 apply to all bulk containers. Clause 5.6 provides requirements that apply to portable bulk containers that are additional to those in Clauses 5.2 to 5.5. Clause 5.7 provides requirements that apply to fixed tanks, in addition to those in Clauses 5.2 to 5.5. Clause 5.8 applies to the filling of all tanks.

Comment: the above clause of AS 3780 are discussed in this section as relevant to this context.

7.4. CONTAINER TYPES (CLAUSE 5.2 OF AS 3780)

A container for the storage or handling of corrosive substances in bulk shall be one of the following:

- (a) A portable bulk container, being—
 - (i) an intermediate bulk container (IBC) complying with the requirements of the ADG Code;
 - (ii) an ISO container complying with the requirements of the IMDG Code and bearing a current CSC/IMO or RID approval; or
 - (iii) a demountable tank complying with the requirements of AS 2809.1 and AS 2809.4.
- (b) A fixed bulk container, being a permanently-positioned tank, hopper or silo (i.e. a fixed tank) that is filled and discharged in situ.

Comment: it's assumed that in this context fixed tanks will be used for storage as opposed to a portable tank such as an IBC, and as a result Clause (b) above applies.

7.5. LOCATION OF BULK CONTAINERS (CLAUSE 5.3 OF AS 3780)

7.5.1. GENERAL (CLAUSE 5.3.1 OF AS 3780)

Bulk containers for corrosive substances shall not be wholly or partly buried.

Comment: the above is assumed to be the case.

7.5.2. SEPARATION (CLAUSE 5.3.2 OF AS 3780)

7.5.2.1. CORROSIVE SUBSTANCES HAVING SUBSIDIARY RISKS (CLAUSE 5.3.2.1 OF AS 3780)

Where the corrosive substance being kept has one or more Subsidiary Risks, reference shall be made to the Australian Standards relevant to the Classes or Divisions of those Risks and the greatest specified separation and segregation distances shall apply.

Comment: it's assumed that in this context the liquids to be stored will have no subsidiary risks. These liquids are believed to be sodium hypochlorite solution and phosphoric acid solution. The absence of subsidiary risks needs to be verified by the supplier of each product, but CETEC is aware that these two products are normally supplied commercially with no subsidiary risks. If an additional subsidiary risk applies to either of these products then the advice within this section would need to be reviewed by CETEC.

7.5.2.2. SEPARATION DISTANCES (CLAUSE 5.3.2.2 OF AS 3780)

Bulk containers shall be separated in accordance with the following requirements:



- (a) The minimum separation distance between containers shall be 0.6 m (see also Clause 7.2.1(a)).

Comment: from the drawings, it's clear that the tanks are to be separated by 0.6 m only, which is the minimum required distance. The reference to Clause 7.2.1(a) of the standard is in relation to designing the premises for emergencies and the clause comprises the following instruction:

The design and layout of the facility shall include consideration of the following: ..."Sufficient space between bund walls, storage areas and other structures as will allow access for maintenance and during emergencies".

It has already been pointed out that access to the tanks within the enclosure, particularly those furthest from the door of the enclosure, would be by means of a space that's 0.3 m wide. It would be up to the client to risk assess the location of the tanks but CETEC would strongly advise that if there are to be two tanks of liquid containing non-dangerous goods then these should be the two tanks with the poorest access (i.e. furthest to the north-west and closest to the adjoining lobby). If these tanks were to contain liquid with a dangerous goods classification then there may be a risk of personnel carrying out maintenance being prevented from escaping during a loss of containment event.

- (b) The minimum separation distances for bulk containers from protected places and the boundaries of the premises shall be as set out in Table 5.1.

Comment: Table 5.1 from the standard is not reproduced here but instead the required separation distances are discussed. As each tank has been stated to have a capacity of 1.5 m³, the minimum separation distances to protected places and boundaries are specified to be 3 m. The boundary is roughly 12 m from each tank and as a result distances to the boundary are not discussed. The question of separation distances in this context only arises in relation to protected places and on-site protected places (OSPPs), which would include work areas within the building and also areas outside the building where staff may carry out work. The note to Table 5 of the standard states:

"NOTE: Where separation distances are applied to an on-site protected place that is an integral part of the storage, processing or handling of corrosive substances, such distances may be reduced subject to appropriate risk identification, assessment and control."

Arguably the area within the building around the location of the tanks could be described as an "OSPP that is an integral part of processing or handling of corrosive substances" and as a result it would be up to the client to determine separation distances based on risk identification. However, CETEC would strongly advise that the hazardous properties of each corrosive substance are reviewed, as there are incompatibilities within the group of substances to be stored and the some of those substances are also capable of causing serious burns.

The sixth tank (i.e. the tank located outside of the 5-tank enclosure in Figure 4) may contain hydrogen peroxide. If so, then it would be regarded as a protected place and its separation distance would need to be 3 m or more, unless a screen wall separates it (see later discussion on screen walls). Any vegetation outside the building would also be considered a protected place and would need to be subject to the appropriate separation.



- (c) Where a bund is provided, subject to the concession in the Note to Table 5.1, the minimum distance between the top inside perimeter of the bund and any protected place or boundary shall be 3 m (see also Clause 7.2.1(a)).

The proposed locations of the tanks would suggest that there's an intention to use double-walled tanks for storage (as there appears to be no indication in the drawings of any bunded area). A double-walled tank refers in this context to a tank with integral secondary containment that meets all secondary containment requirements of this section. For the moment, this assumption will be applied. The Clause 7.2.1(a) provision was discussed in relation to sub-clause (a) above and it's further pointed out that access to tanks during an emergency needs to be considered in the design stage.

- (d) Where a double-walled tank has an FRL of at least 240/240/240, the following separation distances apply (see also Clause 5.7.8):

- (i) To on-site and off-site protected places, the distances given in Table 5.1 may be halved.
- (ii) To boundaries and protected places—2 m.
- (iii) To any security fence—1 m.

Comment: in the above sub-clauses (i) to (iii), only the proximity of OSPPs is of any relevance in this context and the boundary, security fence and any protected places are well away from the tanks. If double-walled tanks are used, and they have an FRL of 240/240/240 or more, then the specified separation distance to an OSPP can be halved, in this case to 1.5 m for any 1.5 m³ tank. However, in relation to Clause (a) above, it has already been stated that the distance to an OSPP may be reduced subject to appropriate risk identification.

7.5.2.3. MEASUREMENT OF SEPARATION DISTANCES (CLAUSE 5.3.2.3 OF AS 3780)

Separation distances may be measured in accordance with the following:

- (a) Where bulk containers are not located within a building, separation distances to protected places may be measured laterally around an intervening screen wall, provided that—

The provisions of Clause (a) above are not discussed here as the bulk containers (the tanks in this instance) are to be located within the building.

- (b) Where a bulk container is located inside a building, separation distances may be measured laterally around an intervening wall, which may be a wall of the building, provided that such a wall—

- (i) meets the requirements specified for screen walls (see Clause 1.4.30);

Comment: the separation distance to protected places and OSPPs can be measured around a screen wall and that would include the walls that enclose the five tanks (as shown in Figure 4). The requirements for a screen wall are reproduced from Clause 1.4.30 of the Standard below:

A screen wall is a structurally-sound wall that—

- (a) is impervious to liquid and vapour;*
- (b) is constructed of materials that are substantially immune to attack by the corrosive substances kept; and*
- (c) may act as a shield or deflection barrier.*



(ii) extends to a height of 1 m above the bulk container or to the roof of the building, whichever is the lesser; and

Comment: in this instance the height of the tank is likely to take it to well below the roof of the building (or in this case the ceiling of ground level) and as a result the height of the screen wall will need to extend 1 m above the height of the tank.

(iii) where separation is being measured to a protected place, has an FRL of at least 120/120/120.

It's assumed that "protected place" is as for the definition within the Standard, which makes it clear that a protected place is any area outside the building where personnel may work (such as engaging in the act of filling a tank) or mowing a lawn or even parking a truck or car. CETEC would also interpret the "Lobby" to the northwest as a protected place. As a result, the external southwest-facing wall as well as the wall separating the tank enclosure from the lobby should have a minimum FRL as indicated above. In the strictest definition of the standard, CETEC would consider the work areas inside the building (and outside the tank enclosure) to also be protected places. However, earlier in this section it was noted that the note attached to Table 5 of the standard allows for the operator of the facility to determine actual separation distances for an OSPP that's an "integral part of the storage, processing or handling of corrosive substances". Regardless of how the standard is interpreted, CETEC would strongly recommend that the entire walls of the five-tank enclosure are constructed with an FRL of at least 120/120/120. Considering the liquids that may be stored within the enclosure, and their potential incompatibilities, CETEC would consider it good design practice to protect them from an external fire that may start within the laundry area. As Figure 4 indicates a 3.6 m break in a section of the building wall that's adjacent to the five-tank compound, it would not be possible to measure separation distances around this section of wall. As a result, this gap in the wall would need to be taken into account when determining separation distances to externally located filling points on that wall.

NOTE: Where an FRL is required, reference should be made to the Building Code of Australia (BCA) for guidance.

7.5.3. SEGREGATION (CLAUSE 5.3.3 OF AS 3780)

The distinction should be made between the terms "separation" and "segregation". Segregation refers to the separation of incompatible substances.

At this point, CETEC makes the following statement: phosphoric acid would not be considered to be a "strong acid", and as a result the ADG Code does not phosphoric acid and sodium or potassium hydroxide solutions (which are strong alkalis) to be incompatible. However, the following may react dangerously:

- Phosphoric acid and sodium hypochlorite solution
- Sodium or potassium hydroxide solution and hydrogen peroxide solution

In the latter case, if it can be shown by scientific means that the sodium or potassium hydroxide



solution as supplied is too dilute to react dangerously with 50% hydrogen peroxide, then the requirements in the ensuing discussion may be relaxed to some degree.

Corrosive substances that are kept in bulk shall be segregated from incompatible goods and goods with which they might react dangerously in accordance with the following:

- (a) Where the substances being kept are incompatible, they shall be—
- (i) kept in separate compounds; or
 - (ii) segregated by a distance of not less than 5 m, except that, where both of the incompatible substances are solids, the minimum segregation distance may be reduced to 3 m.

Comment: there are two pairs of substances that CETEC would consider to react dangerously (listed above) and no other incompatibilities so sub-Clause (b) below would apply.

- (b) Where the substances being kept react dangerously, they shall—
- (i) be segregated by a distance of not less than 5 m; and
 - (ii) not be kept within the same compound, or in compounds that share a common drainage system.

Comment: the above requirements would apply to tanks containing:

- Phosphoric acid and sodium hypochlorite solution
- Sodium or potassium hydroxide solution and hydrogen peroxide solution

7.5.3.1. MEASUREMENT OF SEGREGATION DISTANCES (CLAUSE 5.3.3.2 OF AS 3780)

Segregation distances may be measured laterally around an intervening screen wall provided that, where any of the goods being so segregated are of Classes or Divisions 2.1, 3, 4 or 5, the screen wall shall extend a distance at least equal to the height of the higher store and have an FRL of at least 120/120/120.

NOTE: Where an FRL is required, reference should be made to the Building Code of Australia (BCA) for guidance.

Comment: the above requirement would apply to the segregation of sodium or potassium hydroxide solution and hydrogen peroxide solution (because the hydrogen peroxide is Class 5.1).

7.6. BUNDS AND COMPOUNDS (CLAUSE 5.4 OF AS 3780)

7.6.1. GENERAL (CLAUSE 5.4.1 OF AS 3780)

All above-ground tanks for corrosive substances shall be provided with a compound complying with the requirements of this Clause (5.4).

It's highly recommended that double-walled tanks are used for all secondary containment purposes and as a result the discussion in this section of the report will be steered in that direction.

7.6.2. CAPACITY OF COMPOUNDS (CLAUSE 5.4.2 OF AS 3780)

The net capacity of a compound shall be—

- (a) ~~for corrosive substances of PG I, not less than 100% of the total storage capacity of all containers located within the compound; or~~
- (b) for corrosive substances of other Packing Groups, not less than 100% of the capacity of the largest container located within the compound.



NOTE: In order to facilitate the management of emergencies, it is recommended that compound capacities be about 10% greater than the minimum values specified above.

Comment: no PG I compounds are to be stored. For a double-walled tank, by design the entire contents are captured during a loss of containment.

7.6.3. DESIGN AND CONSTRUCTION (CLAUSE 5.4.3 OF AS 3780)

Compounds and, where they are provided, bunds shall comply with the following requirements:

- (a) The materials of construction shall be substantially immune to attack by any corrosive substance that they may be required to contain.
- (b) They shall be sufficiently impervious to retain and to enable the recovery of any spillage.
- (c) Except where the containers are double-skinned, the minimum separation distance between a tank and the bund shall be as shown in Figure 5.1, i.e. the top inside edge of the bund shall not be inside the crest locus limit. If, at any time, the container is to be held under pressure, the so-determined minimum separation distance between the bund and the container shall be increased appropriately.

The distance between the tank and the bund may be less than 1 m where the tank has a capacity—

- (i) for liquids of PG II or PG III, not greater than 3000 L; or
- (ii) for liquids of PG I, not greater than 1500 L.

In such cases, the compound capacity shall be 100% of the total volume and the 'tan theta' rule shall apply.

Comment: it's assumed that double-skinned tanks are to be used.

- (d) For containers that are double-walled, and where the secondary containment has an FRL of at least 240/240/240, Clause 5.3.2.2(d) shall apply.

Comment: Clause 5.3.2.2(d) (which is discussed earlier in this section) states that if the secondary containment is at least FRL 240/240/240, then the distance to protected places and OSPPs can be halved, which in this case would reduce that distance to 1.5 m.

- (e) They shall be designed to withstand the hydrostatic pressure expected to be exerted on them when they are full.

Comment: the above would apply to the secondary containment of a double-walled tank.

- (f) The point at which any pipe passes through the wall of a bund shall be sealed to prevent leakage from the compound.
- (g) Provision shall be made such that entry and exit by personnel into and out of the compound, under both normal conditions and emergency conditions, shall be ergonomically safe.

If secondary containment is used (i.e. double-walled tanks for all tanks requiring bunding) then the above two sub-classes need not apply (except that any pipe passing through the secondary containment would need to be constructed so that leakage can't occur).

7.6.4. COMPOUND DRAINAGE (CLAUSE 5.4.4 OF AS 3780)

A compound shall be drained in accordance with the following requirements:

- (a) Substances that might react dangerously shall not be directed into a common compound.
- (b) Any valve controlling the drainage from a compound shall be located outside the bund. The valve shall be of a type for which the distinction between the open and shut positions is obvious, and shall be



resistant to the material contained in the tank and to any possible mixtures resulting from a spill into the compound.

- (c) Except during the supervised drainage of water, any compound drain valve shall be kept closed.

The drainage provision for the compound should slope away from any bulk container to a sump which, in turn, is drained from the lowest practicable level. Where drainage is achieved by gravity, a manually-controlled, normally-closed valve shall be provided. Where drainage is achieved by pumping, the pump shall be manually controlled.

NOTE: Drainage by gravity, and the subsequent disposal of the waste, may require consultation with the relevant regulatory authority.

Comment: as CETEC is recommending secondary containment for each tank containing dangerous goods, the above discussion would apply to the emptying of the secondary containment in the event of a loss of containment of the primary tank.

7.6.5. 5.4.5 MAINTENANCE (CLAUSE 5.4.5 OF AS 3780)

All bunds and compounds shall be maintained so that they are capable of retaining the capacity specified in Clause 5.4.2 and continue to prevent the escape of any contained liquid.

Comment: as CETEC is recommending secondary containment for each tank containing dangerous goods, the above discussion would apply to the emptying of the secondary containment in the event of a loss of containment of the primary tank.

7.7. DESIGN & CONSTRUCTION REQUIREMENTS APPLICABLE TO ALL BULK CONTAINERS (CLAUSE 5.5 OF AS 3780)

7.7.1. PROTECTION AGAINST CORROSION (CLAUSE 5.5.1 OF AS 3780)

All bulk containers, including their bases, shall be designed and constructed in such a manner as to be resistant to all likely sources of corrosion. Particular attention shall be paid to areas where accidental spillage is likely to affect the external surface of the container (e.g. around vents or surfaces adjacent to filling points).

Comment: the above requirement is particularly important for tanks with integral secondary containment as failure of that containment could result in substances that react dangerously coming into contact.

7.7.2. FOUNDATION (CLAUSE 5.5.2 OF AS 3780)

The bulk container shall be positioned on a foundation that is adequate to support, without unacceptable or uneven settling, the following loads and forces:

- (a) The direct load imposed by the bulk container when full of either water or product, whichever is the more dense.
- (b) Any possible overturning forces, in particular those that may be applied by wind when the container is empty.
- (c) Any uplift or other distorting forces that may occur in a light container being subjected to pressure variations.

Any means of attachment between the tank and its supporting structure or foundation should be adequate to withstand any such forces that may be applied to it.



NOTE: Because of the wide variety of surface, subsurface, and climatic conditions, it is not practicable to specify design data to cover all situations. The allowable soil loading requires a decision to be made for each case, having regard to permissible settlement (see AS 1726).

Comment: in relation to the above, it should be remembered that some aqueous solutions are substantially denser than water (for example concentrated phosphoric acid solutions).

7.7.3. SUPPORTS (CLAUSE 5.5.3 OF AS 3780)

Every bulk container shall be installed on supports or a properly prepared plinth complying with the following requirements:

- (a) The supporting structure shall either be constructed of non-combustible, corrosion resistant materials or be suitably protected by coatings.
- (b) The supporting structure shall be designed in accordance with the requirements of the Australian Standard appropriate to the type of construction (e.g. AS 4100 for steel, AS 3600 for concrete).
- (c) Any welded-on support, bracket or other fitting shall be welded in such a manner as to prevent penetration of water that is likely to cause corrosion of the tank (e.g. weep holes shall be at the lowest point of mounting pads).

Comment: the above requirements need to be followed.

7.7.4. BEARING AREA (CLAUSE 5.5.4 OF AS 3780)

The method of support of a tank shall avoid excessive concentration of loads on the supporting portion of the container shell. Legs, cradles or similar methods of support shall be attached in a manner that will prevent possible corrosion of the container through the build-up of moisture.

Comment: the above requirements need to be followed.

7.7.5. VENTS (CLAUSE 5.5.5 OF AS 3780)

All tanks shall be fitted with vents of design and capacity such that—

- (a) blockage by corrosive residues or deposits is avoided; and
- (b) the pressure or vacuum resulting from filling, emptying or atmospheric changes cannot cause the maximum allowable operating stresses of the tank to be exceeded.

NOTE: The relevant regulatory authority may require that vents discharge through an appropriate vapour recovery, vapour absorption or scrubber system.

Comment: the above requirements need to be followed.

7.7.6. LIQUID LINES (CLAUSE 5.5.6 OF AS 3780)

Liquid lines shall comply with the following:

- (a) All liquid lines connected at or below the liquid level of the bulk container shall be fitted with a shut-off valve at the nozzle through which liquid is transferred into or out of the container. Where the capacity of the container exceeds 100 m³, all liquid outlet shut-off valves shall also be fitted with a remote means of activation. In all cases, the open and closed positions for the valves shall be clearly marked.
- (b) Provision shall be made to enable the complete and safe draining of transfer hoses and filling lines prior to decoupling them.
- (c) Where the fill tube is to extend below the surface of the liquid, it shall be provided with a siphon breaker.



NOTE: A splash plate may also be fitted.

Filling through the top of the tank should be used wherever possible.

Comment: the above requirements need to be followed.

7.7.7. TRANSFER POINTS (CLAUSE 5.5.7 OF AS 3780)

Any transfer point (the point where the pipework from a bulk container terminates) shall comply with the following:

- (a) It shall be suitably anchored.
- (b) It shall be provided with a quick-action shut-off valve if the transfer point is positioned at or below the highest level of liquid in the container or pipework.

NOTE: This valve should be of a self-closing type.

- (c) It shall be separated from any protected places, or the boundary of the premises on which the corrosive substances are kept, by the following minimum distances:

- (i) For PG I10 m.
- (ii) For PG II.....5 m.
- (iii) For PG III3 m.

Comment: sub-clause (ii) above would apply to sodium hypochlorite solution as well as to sodium or potassium hydroxide solutions so that would dictate a 5 m separation from protected places to the transfer point which are discussed earlier in this section. sub-clause (iii) above would apply to phosphoric acid.

Such separation distances may be measured laterally around an intervening screen wall, provided that the wall extends at least 1 m above the height of the transfer point.

Comment: screen walls are discussed earlier in this section. It may be necessary to use screen walls to achieve the separation distance, depending on uses immediately outside the wall where the five-tank enclosure is located.

- (d) It shall be located in such a manner that any vehicle transferring product into, or receiving product from the container—
 - (i) can stand wholly off any public road;
 - (ii) is not required to enter the container compound; and
 - (iii) is capable of being driven clear of the transfer point without the need to reverse.

Comment: the above requirements need to be followed.

- (e) Where a transfer point is fitted with a liquid-tight cap, provision shall be made such as will give an immediate warning should an attempt be made to remove the cap while the filling line valves are open, e.g. a witness hole or a try-cock in the filling cap.

Comment: the above requirements need to be followed.

- (f) A safety shower complying with AS 4775 (or a plunge bath) and eye-wash facilities (also complying with AS 4775) shall be located within 7 m of, but not closer than 2 m to, any product transfer point.

7.7.8. ANCILLARY EQUIPMENT FOR TANKS (CLAUSE 5.5.8 OF AS 3780)

All of the requirements of this clause of the standard are presented below for design purposes.



7.7.8.1. PIPES AND FLEXIBLE HOSES (CLAUSE 5.5.8.1 OF AS 3780)

The following requirements apply to pipes and flexible hoses:

- (a) All pipes shall be colour coded in conformity with AS 1345.
- (b) Pipework shall be well supported, and protected from potential damage by traffic.
- (c) Flexible hoses shall not be used, except at transfer points.

7.7.8.2. ACCESSORIES (CLAUSE 5.5.8.2 OF AS 3780)

Valves, pumps, flow meters, other accessories and lubricants shall be suitable for use with the corrosive substance to be handled.

7.7.8.3. SCREW FITTINGS (CLAUSE 5.5.8.3 OF AS 3780)

The use of screw fittings should be avoided wherever possible.

7.7.8.4. TRANSFER SYSTEMS (CLAUSE 5.5.8.4 OF AS 3780)

Where a bulk container will be pressurized for the purpose of product transfer, the fittings and the pipework shall be designed for the maximum pressures that might develop.

7.7.8.5. HEATING OF TANKS (CLAUSE 5.5.8.5 OF AS 3780)

Where a tank is provided with a means of heating, such heating shall be provided on the external surface of the tank if there is—

- (a) a risk of a dangerous reaction between the corrosive substance and the heating medium; or
- (b) a risk of danger should the heating element fail and come into contact with the corrosive substance.

In such cases, a means of thermostatic control shall also be fitted to the container shell.

7.7.8.6. ELECTRICAL EQUIPMENT (CLAUSE 5.5.8.6 OF AS 3780)

Where the corrosive substance is capable of forming a hazardous zone (see AS/NZS 2430.3 series), electrical equipment installed in such a zone shall comply with the requirements of those Standards.

Electrical equipment shall be suitably protected against corrosion. Where such equipment is attached to a fixed tank, it shall be protected from exposure by use of a suitable enclosure (see AS 60529).

NOTE: A corrosive substance may be capable of forming a hazardous zone as a result of its having a Class 3 Subsidiary Risk or as a result of a reaction that forms flammable gases or vapours.

7.8. ADDITIONAL REQUIREMENTS FOR PORTABLE BULK CONTAINERS (CLAUSE 5.6 OF AS 3780)

It's assumed that portable bulk containers won't be used in the proposed installation and as a result Clause 7.8 is not reproduced here.

7.9. ADDITIONAL REQUIREMENTS FOR FIXED TANKS (CLAUSE 5.7 OF AS 3780)

All of the requirements of this clause of the standard are presented below for design purposes.

7.9.1. GENERAL (CLAUSE 5.7.1 OF AS 3780)

The requirements of this Clause (Clause 5.7) shall apply to fixed tanks in addition to those in Clauses 5.2 to 5.5.



7.9.2. MATERIALS OF CONSTRUCTION (CLAUSE 5.7.2 OF AS 3780)

The materials of construction of fixed tanks, their fittings and any attachments that are likely to come into contact with a corrosive substance, shall be either—

- (a) substantially immune from attack by the corrosive substance under all service conditions; or
- (b) lined in a manner such as enables compliance with Item (a).

NOTES:

- 1 Materials of construction may be considered to be substantially immune from attack if, after an initial reaction with the corrosive substance, an impervious (passivating) film, which prevents further reaction, is formed, provided that such a film is not subjected to conditions likely to destroy it (e.g. regular cleaning, product changes).
The design thickness of construction materials should allow for any losses associated with regular cleaning or product changes over the service life of the tank.
- 2 Where the loss of tank material is considered to be an acceptable operating condition and is incorporated into the tank design, e.g. where concentrated sulfuric acid is kept in mild steel, the required material thicknesses should be designed for a 10-year service life. The thickness should be checked at least annually, and the tank maintained appropriately. Detailed records of such tests should be kept for the lifetime of the tank.

7.9.3. TANK DESIGN AND CONSTRUCTION (CLAUSE 5.7.3 OF AS 3780)

The design and construction of fixed tanks shall comply with the following requirements, as applicable:

- (a) Steel tanks intended to be operated at atmospheric pressure or at pressures not exceeding 100 kPa (gauge) shall be designed and constructed in accordance with the relevant requirements of AS 1692, API Standard 620, API Standard 650 or other appropriate Standard.
- (b) Steel tanks intended to be operated at pressures exceeding 100 kPa (gauge) shall be designed and constructed in accordance with AS 1210 or other appropriate Standard.
- (c) Glass-fibre reinforced plastic tanks for operation at atmospheric pressure shall be designed and constructed in accordance with an appropriate Standard.
- (d) Rotationally-moulded polyethylene tanks for operation at atmospheric pressure shall be designed and constructed in accordance with ASTM D1998.

7.9.4. TANK LINING (CLAUSE 5.7.4 OF AS 3780)

Any lining material for a fixed tank shall be substantially immune from attack by the contents of the tank, and shall be not less elastic than the metal of the tank.

When applied to a tank, the lining shall be homogeneous, non-porous, and free from perforations. Joints and seams in the lining shall be made by fusing the material together or by other suitable means, and shall be tested for continuity using a non-destructive testing method (e.g. spark testing).

7.9.5. LEVEL INDICATION (CLAUSE 5.7.5 OF AS 3780)

Every fixed tank shall be fitted with an appropriate means of indicating the level of its contents. The safe fill level of a tank shall be clearly marked on the level-indicating device.

Where the tank capacity exceeds 50 m³, and indication of the liquid level is not continuously available to the person filling the tank, the tank shall be fitted with a high-level alarm and an extra-high-level cut-off device capable of stopping the filling operation immediately.

Where a sight glass is used as a level indicator, the following conditions apply:

- (a) The corrosive substance shall not be of Packing Group I.



- (b) The tank capacity shall not exceed 10 m³.
- (c) If the sight glass is fitted externally to the tank, it shall have a self-closing shut-off valve and a manual isolation valve on the line that connects the sight glass to the tank below liquid level.
- (d) The sight glass shall be protected from all potential damage.
- (e) If the sight glass does not have the same coefficient of linear expansion as the tank wall, a flexible connection shall be used for attachment of the upper section of the sight glass.

NOTE: The flexible connection is to ensure that damaging stresses are not applied to the sight glass.

7.9.6. NOZZLES (CLAUSE 5.7.6 OF AS 3780)

Where nozzles are used to lead liquid into a tank, they may be provided with internal projections to prevent liquid splashing or running down the internal wall of the tank.

7.9.7. OVERFLOW LINES (CLAUSE 5.7.7 OF AS 3780)

Every fixed tank shall have an overflow line installed. Such overflow lines shall comply with the following requirements:

- (a) The line shall discharge at ground level, in full view of any person filling the tank. Where the filling line terminates below the overflow point (i.e. the filling point is below the overflow orifice in the tank), the tank shall be fitted with a separate vent.

Where the overflow line does not terminate in full view of the person filling the tank, the tank should be fitted with—

- (i) a high level alarm; and
 - (ii) an extra-high level cut-off device, capable of immediately stopping the filling operation.
- (b) The diameter of the line shall be not less than 1.5 times the diameter of the filling line.
 - (c) The line shall have no valves or restrictions and shall discharge into the tank compound.
 - (d) Where overflow lines terminate with an (optional) seal bend or seal pot—
 - (i) the sealing medium shall be compatible with the product being kept; and
 - (ii) the design of the seal leg shall be such that, during tank discharge, the tank is not subjected to a vacuum in excess of that for which it was designed and the seal liquid cannot be drawn into the tank under any conditions.

NOTE: It may be appropriate to use a small overflow tank rather than to discharge directly into the compound.

7.9.8. ADDITIONAL REQUIREMENTS FOR TANKS WITH EXTERNAL FIRE-RATED COVERING (CLAUSE 5.7.8 OF AS 3780)

The following requirements and recommendations apply to tanks that have an external, fire-rated covering on both the tank and its supports:

- (a) The secondary covering shall be of concrete or a material having an equivalent fire rating.
- (b) Emergency venting for the interstitial space may be provided by a weak seam incorporated into the tank's external cover. This seam shall fail preferentially if the pressure within the interstitial space builds up excessively, without compromising the integrity of the secondary containment.
- (c) The separation distances given in Clause 5.3.2.2 Item (d) shall apply.

7.10. FILLING OF BULK CONTAINERS (CLAUSE 5.8 OF AS 3780)

All of the requirements of this clause of the standard are presented below for design purposes.



7.10.1. GENERAL (CLAUSE 5.8.1 OF AS 3780)

The following general requirements apply to the filling of bulk containers with corrosive substances:

- (a) A bulk container shall not be filled with a corrosive substance unless the container is in good condition and complies with the requirements of this Standard.
- (b) A container shall not be filled in excess of its safe filling level.
- (c) Hand-held hoses shall not be used for filling.
- (d) Product transfer shall not be commenced until all essential gauges, valves, fittings and connections are illuminated to a level of at least 50 lx.
- (e) At least one person who is trained in the product transfer procedures shall remain in attendance during the transfer operation, from the time that the first delivery connection is made until the last hose has been disconnected.

NOTES:

- 1 Where corrosive liquids are to be transferred from a road or rail tank vehicle, the requirements of the ADG Code apply in addition to the requirements of this Clause (5.8).
- 2 The requirements applicable to transfer points for the filling of bulk containers are provided in Clause 5.5.7.

7.10.2. FILLING CONNECTIONS (CLAUSE 5.8.2 OF AS 3780)

The filling connection to a storage container shall be liquid tight.

7.10.3. TRANSFER HOSES (CLAUSE 5.8.3 OF AS 3780)

Transfer hoses shall comply with the following:

- (a) The length of any hose required to connect a tanker vehicle to a filling point shall not exceed 6 m. Where necessary to permit compliance with this requirement, a permanent filling line shall be installed.
- (b) A transfer hose shall not be run across any area normally accessible to vehicles unless adequate precautions are taken to prevent any vehicle from driving over the hose or striking its connections.
- (c) Transfer hose assemblies shall be visually inspected and hydrostatically tested in compliance with the ADG Code. Hoses that fail such inspections or tests shall either be disposed of immediately or be repaired and retested prior to further use.

7.10.4. SPILLAGE CONTROL FOR CORROSIVE LIQUIDS (CLAUSE 5.8.4 OF AS 3780)

7.10.4.1. GENERAL REQUIREMENTS (CLAUSE 5.8.4.1 OF AS 3780)

The filling area, including tanker vehicle loading and unloading areas, shall have a system for collecting any spilt liquid and draining it to a containment tank or compound.

The following requirements apply to such a system:

- (a) The vehicle standing area shall be graded so that any spillage will drain away to a dedicated tank or compound, and not spread to other loading or filling areas.
- (b) The surface of the system shall be impervious to any liquids that might be spilt.
- (c) The tank or compound in which the spillage is retained shall be constructed and located similar to that described in Clause 5.4.
- (d) Substances that are incompatible or might react dangerously shall not be directed into a common compound (see Clause 5.4.4).

Alternatively, a system based on a documented risk assessment, and providing an equivalent level of protection, may be used.



7.10.4.2. CAPACITY OF SYSTEM (CLAUSE 5.8.4.2 OF AS 3780)

The capacity of the spillage control system shall be the greater of—

- (a) the capacity of the largest compartment of any tank vehicle using the facility, or 9000 L, whichever is less; or
- (b) the maximum volume of liquid that can be discharged from the two filling points having the greatest flow rates, over two minutes.

The capacity shall be increased where necessary to provide for rain, clean-up or dilution water, or output from fire protection systems.

7.11. SUMMARY OF REQUIREMENTS FOR THE USE OF FIXED TANKS TO STORE CORROSIVE LIQUIDS, INCLUDING ACCOUNTING FOR LIQUIDS THAT MAY REACT DANGEROUSLY.

This chapter considers the case of corrosive liquids being stored in 1.5 m³ tanks that are likely to include phosphoric acid, sodium hypochlorite solution and either sodium or potassium hydroxide solution. Sodium hypochlorite solution will react dangerously with phosphoric acid solution and as a result the separation distances applying to tanks and to filling locations need to be considered. In addition, the potential for sodium or potassium hydroxide solutions to react dangerously with hydrogen peroxide solutions needs to be considered in relation to the requirements of Sections 5 and 6 of this report. There are required segregation distances of 5 m to be considered, and this may affect the order of tanks to be stored in the five-tank enclosure shown in Figure 4, as well as determining what tank is to be stored at the location outside the enclosure (also shown in that figure).

Possibilities for achieving necessary separations by the use of fire-rated walls or by the use of screen walls that are composed of material resistant to the liquids they are likely to be in contact with are discussed.

Access to tanks at the northwest end of the compound appears to be limited and as result the locating of tanks of dangerous goods in tanks at that end may require careful risk assessment to determine whether the limit access represents an unacceptable risk to personnel who may need to escape that area rapidly.



8. DISCUSSION OF DANGEROUS GOODS STORAGE IN ENGINEERING STORE AND WORKSHOP

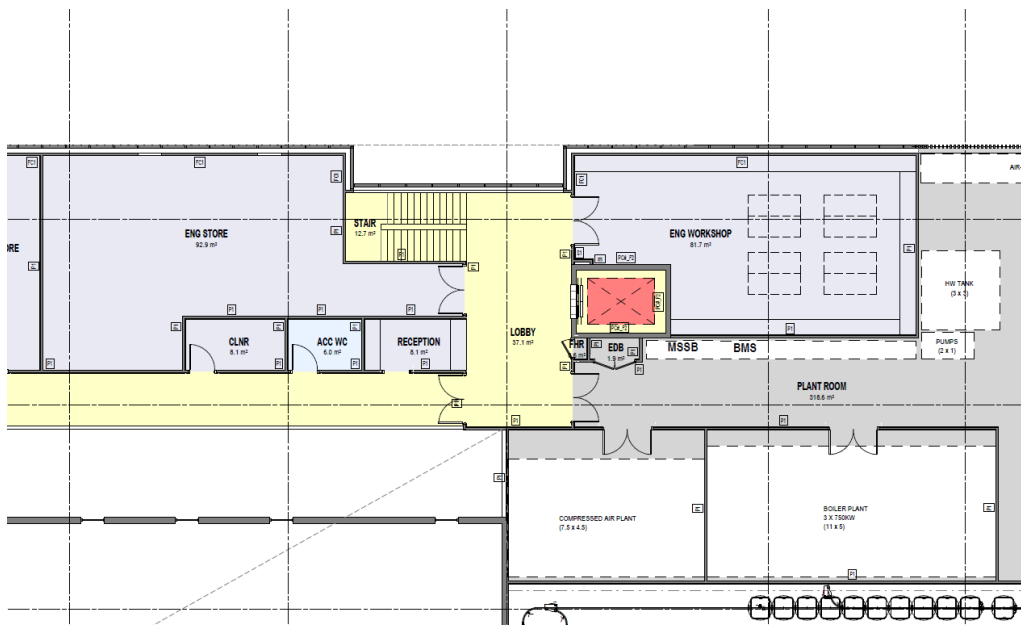
The Engineering Store and Workshop are to be located on Level 1. A cut-out of Drawing TP22-001 (Nov. 18th version) is shown in Figure 5.

Smaller quantities of dangerous goods may be stored in the Store and possibly also in the workshop.

Minor storage of flammable liquids (Class 3) would allow the following quantities:

- In the Engineering store on open shelving: 46 L maximum of PG II flammable liquids or 93 L maximum of PG III flammable liquids
- In the Engineering Workshop on open shelving: 41 L maximum of PG II flammable liquids or 82 L maximum of PG III flammable liquids
- In any AS 1940 storage cabinet within each room: a maximum of 250 L total capacity.

Figure 5: cut-out of Dwg. TP22-001 showing locations of Engineering Store and Workshop



There are specific location requirements for AS 1940 storage cabinets and CETEC will supply this information when storage quantities are better known. These requirements include a 3 m ignition source exclusion zone around the opening of each cabinet.

For minor storage of other classes of dangerous goods, CETEC will supply maximum allowable storage capacities once specific information becomes available.



9. HAZARDOUS AREAS CLASSIFICATION

The definition of a hazardous area is discussed in Section 2.5 of this report.

Once specific locations are allocated for the storage of flammable liquids and (if applicable) the storage of compressed flammable gases, CETEC will mark up drawings to indicate hazardous areas to be observed. This will inform designers on the type of electrical protection that would be appropriate in these areas (for example lighting and GPOs).



10. CONCLUSION

CETEC has, based on information supplied, outlined construction and design requirements for the storage of dangerous goods at the logistics centre for Warrnambool Hospital. CETEC continues to review the information on the types of substances that are likely to be stored in the laundry facility and is working to specify the requirements for tanks that are to contain Class 8 and Class 5.1 (subsidiary class 8) liquids. These liquids include a number of mutual incompatibilities, as well as potential incompatibilities with other types of substance that may be stored at the facility and all aspects of the requirements of the standards will be specifically addressed by reference to appropriate Australian Standards and to Victorian legislation. Design input will minimise the probability of these incompatibilities leading to an incident when the site becomes operational.

In particular the potential for dangerous reactions to occur between sodium hypochlorite and phosphoric acid and between sodium or potassium hydroxide solutions and hydrogen peroxide solution needs to be considered. Current required segregation distances may require some re-design of the tank enclosure on the southwest-facing wall of the facility.



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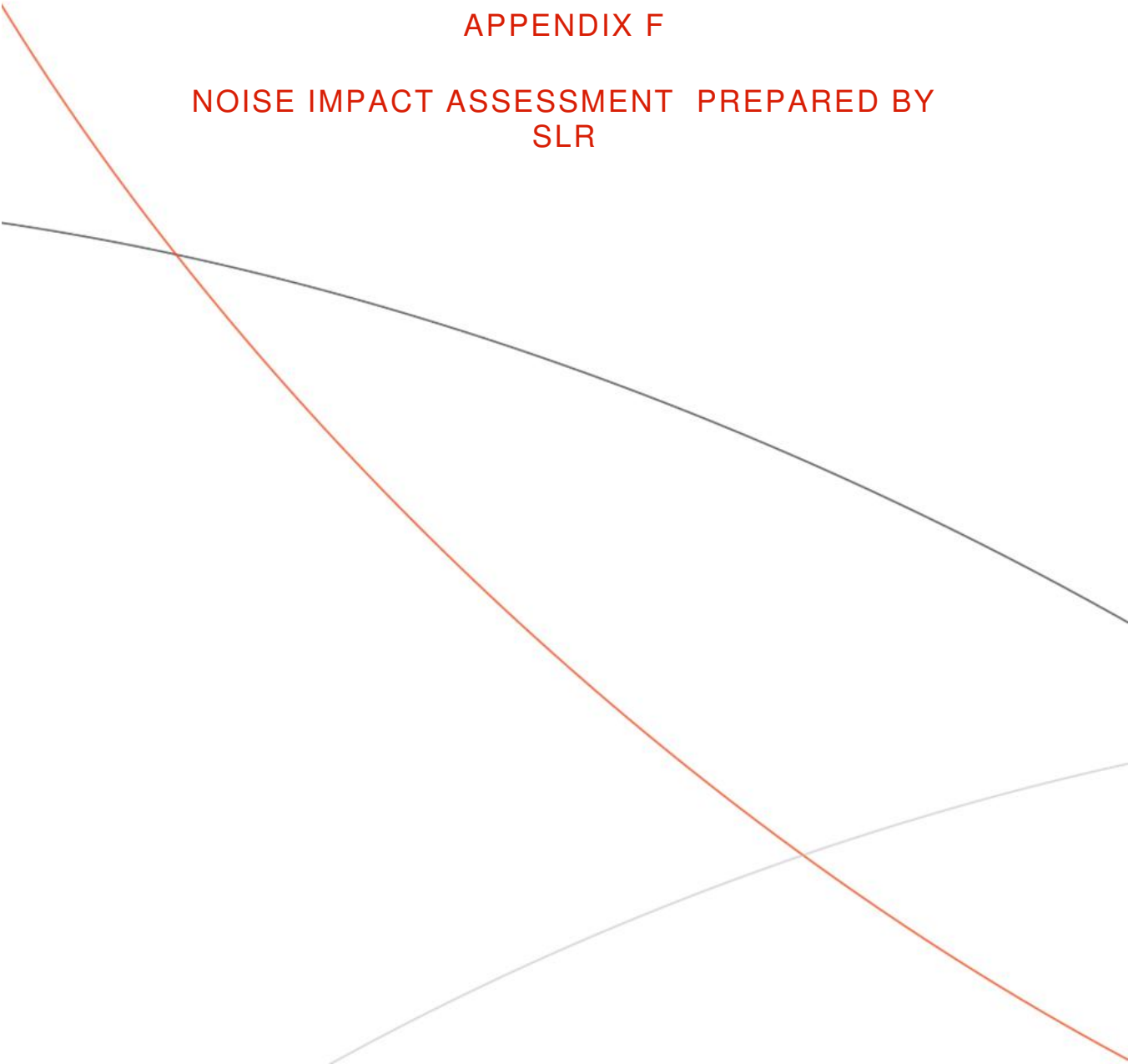
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APPENDIX F

NOISE IMPACT ASSESSMENT PREPARED BY
SLR



1-5 COOPER ST, WARRNAMBOOL

SWH Regional Logistics Centre Noise Impact Assessment

Prepared for:

South West Healthcare
Ryot Street
WARRNAMBOOL VIC 3280

SLR Ref: 640.30079.00000-R01
Version No: -v4.0
December 2021



South West Healthcare
1-5 Cooper St, Warrnambool
SWH Regional Logistics Centre
Noise Impact Assessment

SLR Ref No: 640.30079.00000-R01-v4.0-20211210.docx
December 2021

PREPARED BY

SLR Consulting Australia Pty Ltd
ABN 29 001 584 612
Level 11, 176 Wellington Parade
East Melbourne VIC 3002 Australia

T: +61 3 9249 9400
E: melbourne@slrconsulting.com www.slrconsulting.com

BASIS OF REPORT

This report has been prepared by SLR Consulting Australia Pty Ltd (SLR) with all reasonable skill, care and diligence, and taking account of the timescale and resources allocated to it by agreement with South West Healthcare (the Client). Information reported herein is based on the interpretation of data collected, which has been accepted in good faith as being accurate and valid.

This report is for the exclusive use of the Client. No warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from SLR.

SLR disclaims any responsibility to the Client and others in respect of any matters outside the agreed scope of the work.

DOCUMENT CONTROL

Reference	Date	Prepared	Checked	Authorised
640.30079.00000-R01-v4.0	10 December 2021	Arvind Deivasigamani	Jim Antonopoulos	Jim Antonopoulos
640.30079.00000-R01-v3.0	2 October 2020	Minh Nguyen	Adrian White	Adrian White
640.30079.00000-R01-v2.0	24 September 2020	Minh Nguyen	Adrian White	Adrian White
640.30079.00000-R01-v1.0	24 September 2020	Minh Nguyen	Adrian White	Adrian White

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1 Introduction

SLR Consulting Australia Pty Ltd (SLR) was engaged by South West Healthcare to undertake a noise and air quality adverse amenity impact assessment relating to the proposed Regional Logistics Centre (the Development) at 1-5 Cooper Street, Warrnambool. It is understood that a Regional Logistics Centre is proposed in Warrnambool in partnership with South West Healthcare that will involve commercial laundry and distribution of clean linen to surrounding hospitals and health service providers. This report presents the outcomes of a noise impact assessment study; a separate report has been prepared to address air quality impacts.

The objectives of this study were to:

1. Determine noise limits applicable at the closest noise sensitive receiver in accordance with the *Noise limit and assessment protocol for the control of noise from commercial, industrial and trade premises and entertainment venues*, Publication 1826 (the Noise Protocol).
2. Predict noise from the proposed facility to these dwellings based on provided information from the feasibility report.
3. Assess noise from the facility at the nearest potentially affected noise sensitive receivers to determine the likelihood of compliance or otherwise. Where the predicted noise levels exceed relevant noise criteria, conceptual noise control advice will be provided.

2 Project Description and Site Details

2.1 Site Location and Surroundings

The site is located at 1-5 Cooper Street, Warrnambool in an Industrial 1 Zone land use planning zone in the Warrnambool City Council. The location of the site and the nearest resident at 51 McMeekin Rd, Warrnambool are identified in the aerial photograph presented in **Figure 1**.

Figure 1 Site Location and Nearest Sensitive Receivers (Source: NearMap®)



2.2 Hours of Operation

The currently proposed operating hours will be from 7am to 5pm Monday to Friday. These hours could increase to include a Saturday from 7 am to 12pm in the first 12-24 months (laundry only).

3 Operational Noise Criteria

The following sections provide an overview of the acoustic requirements and criteria that are applicable to the development and will inform the acoustic design as the project progresses.

3.1 Environmental Noise Emissions

The amended Environment Protection Act 2017 (the Act) came into effect on 1 July 2021. The [General Environmental Duty](#) (GED) is at the centre of the new laws and requires all Victorians to reduce the risk of activities potentially harming the environment or human health through pollution or waste.

Subordinate legislation – the Environment Protection Regulations (Regulations) and Environment Reference Standard (ERS) – have been released to support the new environment protection laws.

The Regulations incorporate the new *Noise limit and assessment protocol for the control of noise from commercial, industrial and trade premises and entertainment venues*, Publication 1826 (the Noise Protocol). This will effectively replace *State Environment Protection Policy No. N-1 (Control of Noise from Commerce, Industry and Trade)*, (SEPP N-1), *State Environment Protection Policy No. N-2 (Control of Music Noise from Public Premises)*, (SEPP N-2) and the *Noise from Industry in Regional Victoria (NIRV)*.

The setting of noise limits and assessment methodologies in the new Noise Protocol are the same as those in the previous SEPPs and NIRV in most instances.

3.1.1 Commercial Noise Emissions

Commercial noise from the development such as noise from mechanical plant and typical commercial activity will be required to comply with the requirements of the Act and associated Regulations and Noise Protocol.

The Noise Protocol sets noise limits at residential premises and there are separate noise limits for the day, evening, night and weekends, with the lowest limits normally applying at night. Definitions of day, evening and night periods used for determining noise limits under the Noise Protocol are provided in the Environment Protection Regulations, paragraph 116 and are reproduced in **Table 1**.

Under the Noise Protocol, noise limits are based on the land-use zoning of the area surrounding the residence, as defined by the relevant authority (see Appendix A), and on the measured background noise levels at the residence when those levels are especially high or low. Review of the land-use zoning maps in the area as shown in **Figure 2** indicate that the Development and nearest residence are within the urban growth boundary for Warrnambool and therefore the urban method is applicable for establishing noise limits under the Protocol.

The Noise Protocol requires noise to be assessed for a 30-minute period and to be adjusted for character, including tonality, intermittency and duration. The adjusted noise level is compared with the noise limit to determine whether or not the premise complies with the limits.

Table 1 Noise Protocol Definitions of Day, Evening and Night Periods for Commercial Noise

Period	Day	Evening	Night
Monday to Saturday	7 am to 6 pm	6 pm to 10 pm	10 pm to 7 am the following day
Sunday and public holidays		7 am to 10 pm	

The closest noise-sensitive receiver is identified to be 51 McMeekin Rd, Warrnambool. It is acknowledged that there are other sensitive receivers adjacent to this sensitive receiver, but for the purposes of the assessment, zoning levels are calculated based on 51 McMeekin Rd, Warrnambool due its residential zone influence and proximity to potential noise sources.

Figure 2 Major Urban Area Boundary Map Warrnambool



Noise monitoring was not undertaken at the closest receiver during the time of this assessment due to COVID restrictions. In this regard, a ‘neutral’ background level condition is assumed for this assessment. This assumption is considered conservative considering the location of the receiver adjacent industrial and road noise sources.

The determined zoning levels and established noise limits are provided in **Table 2**. The limits are conservatively assumed to be applicable to all sensitive receivers for assessment purposes.

Table 2 Noise Limits for Commercial Industrial and Trade Noise Emissions

Description	Noise Protocol Commercial and Trade Noise Limits (dBA)		
	Day (Mon – Sat; 7am – 6pm)	Evening (Mon – Sat; 6pm – 10pm) (Sun; 7am – 10pm)	Night (10pm – 7am)
Zoning Level	59	53	48
Background Level description	Assumed ‘Neutral’		
Noise Limit (L_{eq,30min})	59	53	48

3.1.2 Waste Collection Noise Emissions

EPA Publication 1254.2 Noise Control Guidelines provides guidance and recommendations to minimise the likelihood of complaint due to waste collection from commercial premises. Publication 1254.2 states:

Annoyance created by industrial waste collection tends to intensify in the early-morning period. To this end, early-morning collections should be restricted to non-residential areas to minimise early morning disturbances. Where a residential area is impacted by noise from the collection of refuse, then collections should be restricted to the times contained within the schedule.

- *Refuse bins should be located at sites that provide minimal annoyance to residential premises.*
- *Compaction should be carried out while the vehicle is moving.*
- *Bottles should not be broken up at collection site.*
- *Routes which service predominantly residential areas should be altered regularly to reduce early morning disturbances.*
- *Noisy verbal communication between operators should be avoided where possible.*

Table 3 presents the allowable time periods for waste collection to minimise noise impacts.

Table 3 Industrial Waste Collection – Time Periods

Schedule: Industrial Waste Collection	
One Collection per Week	Two or More Collections per Week
6:30 am – 8 pm Monday to Saturday	7 am – 8 pm Monday to Saturday
9 am – 8pm Sunday and public holidays	9 am – 8pm Sunday and public holidays

4 Noise Assessment

A noise model was prepared using SoundPLAN v8.1 noise modelling software to calculate potential noise impacts at the nearest residential receivers.

Noise modelling calculation of the proposed operations was in accordance with the ISO 9613 algorithm as implemented in the SoundPLAN noise modelling package. Elevation for the site was assumed flat ground, with other inputs to the model including noise source data from equipment on site (see **Table 4**), ground cover, shielding by barriers / residential property boundaries, and/or adjacent buildings and atmospheric information.

4.1 Mechanical Noise Sources

The estimated noise data for the identified dominant mechanical plant items is provided in **Table 4** and provides a reasonable estimation of potential noise sources from the Development based on available information. As the project progresses and noise generating equipment selections are finalised, it is recommended that noise data is compared to the assumptions outlined in this report to ensure the assumptions remain valid.

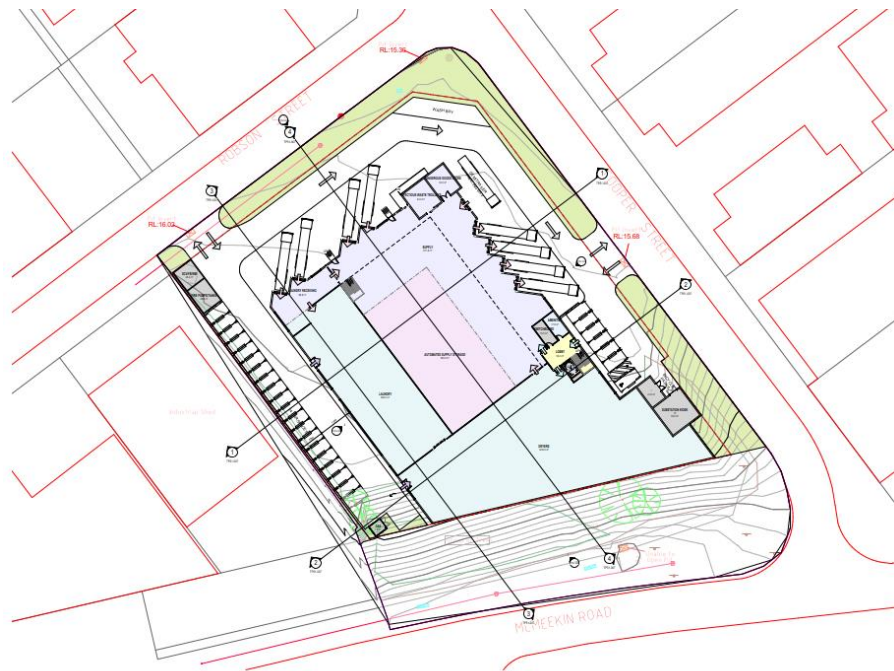
Table 4 Sound Power Data for Major Mechanical Plant Items

Name	Sound Power Level (SWL) dBA	Location
Mechanical plant		
VRV outdoor condenser	110 ¹	Mechanical Plant area on Level 1
Exhaust fans		
Steam boilers		
Compressor		
Industrial evaporative air cooler	92 ²	Warehouse rooftop
Standby generators, standby boilers and fire pump³		
Standby generators	104 ⁴	Mechanical Plant area on Level 1
Fire pumps	111 ⁵	Southern corner of the site on ground

- Note 1: Assumed total SWL of VRV outdoor condenser, exhaust fans, steam boilers and compressor in a single area source
- Note 2: Estimated SWL based off a 5kW industrial evaporative air cooler
- Note 3: For plant which are either on standby or for emergency, a -10 dB correction has been applied when predicting and assessing compliance against daytime criteria
- Note 4: Estimated SWL based off a 75kW Cummins genset
- Note 5: Estimated SWL based off a 150 kW Cummins fire pump

Site plans showing the layout of the facility are provided in **Figure 3** and **Figure 4**. The plans show the mechanical plan area and driveways (Drawing reference: TP01-101_SITE PLAN; TP22-001_LEVEL 1; received 26 November 2021).

Figure 3 Site Plan

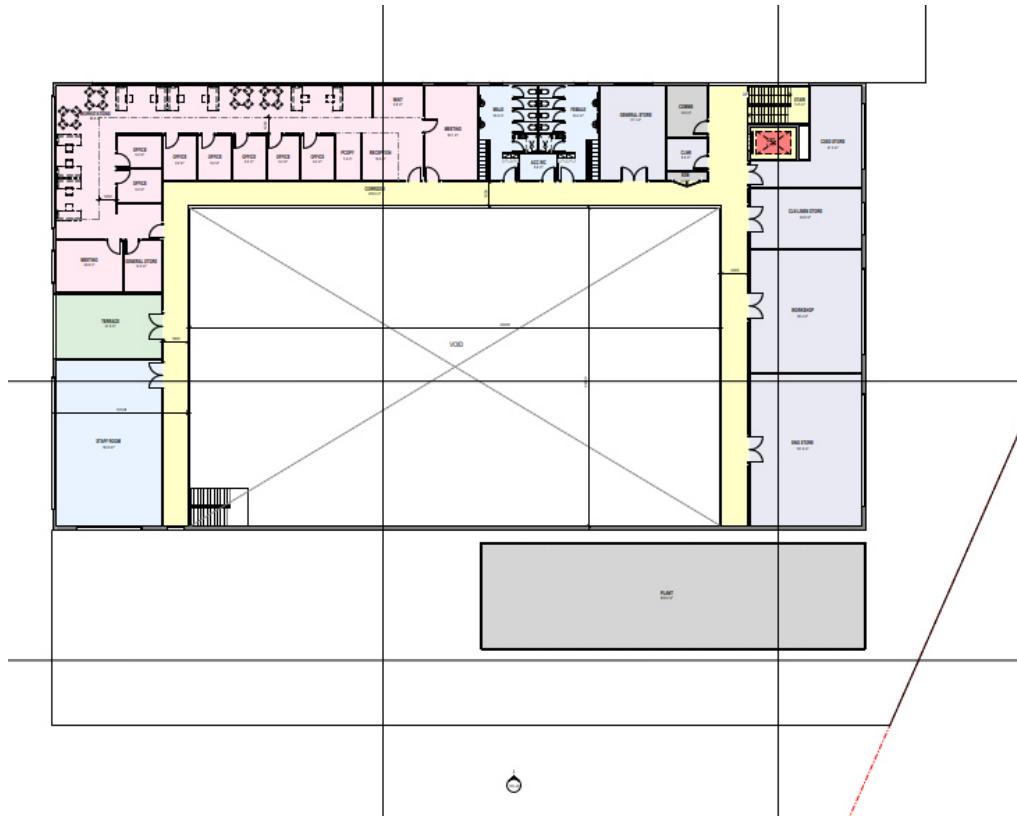


SITE PLAN

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Noise Impact Assessment

SLR Ref No: 640.30079.00000-R01-v4.0-20211210.docx
December 2021

Figure 4 Level 1 Plan



Note: Drawings not to Scale

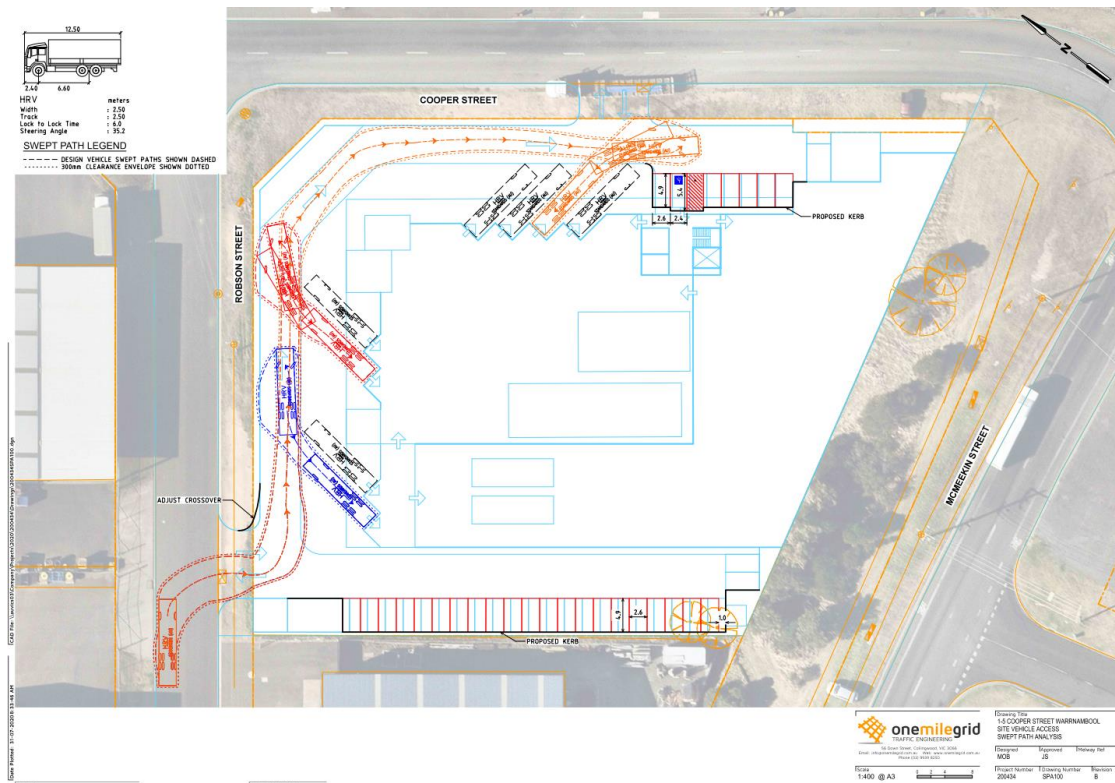
4.2 On-site Traffic Sources

The on-site traffic movement path is shown in **Figure 5** extracted from One Mile Grid's traffic report, dated 31 July 2020.

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Figure 5 Vehicle Access Path



The traffic report predicts that there will be 23 traffic movements in peak hour. This assessment has been assumed six heavy vehicles and six light vehicles to operate on-site during a 30-minute period. Sound power levels and assumptions for the modelled vehicle movements are outlined in **Table 5**.

Table 5 Vehicle Movement Noise Sources

Activity	Sound power level, dB	Source Height, m	Expected duration (single event), seconds	No. events per 30 mins	Expected duration (all events), seconds	Duration adjustment dBA	Adjusted Sound Power Level, dBA
Heavy vehicle entering the property	106	2	180	6	1080	-2.2	104
Airbrakes	115	1	1	6	6	-24.8	90
Reverse beeper	107	2	15	6	90	-13.0	94
Unloading	95	2	1200	6	7200	6.0	101
Truck Idling	102	2	300	6	1800	0.0	102
Light vehicle	96	1.5	180	6	1080	-2.2	94

5 Noise Modelling Results

Table 6 shows the predicted noise levels from the operation of the proposed facility for typical operations including mechanical plant and on-site traffic movements

Table 6 Predicted Noise Levels

Receiver	Predicted noise level, $L_{eq,30min}$ dBA	Day Period Noise Limit	Compliance Status
51 McMeekin Road – Ground floor	56	59	Complies
51 McMeekin Road – 1st floor	56	59	Complies

From **Table 6** it can be seen that the predicted noise levels at 51 McMeekin Road (the closest dwelling to the south) comply with the Day period Protocol noise limit. Note that the facility is not expected to operate during the Evening and Night Periods.

The noise modelling results indicate that noise from the facility would comply with the Noise Protocol at all nearby dwellings, including the property at 51 McMeekin Road. However, this is still subjected to the actual unit selections of the mechanical plant, which will be finalised in later stages.

6 Conclusion

SLR Consulting Australia Pty Ltd (SLR) was engaged by South West Healthcare to undertake a noise adverse amenity impact assessment relating to the proposed Regional Logistics Centre (the Development) at 1-5 Cooper Street, Warrnambool. It is understood that a Regional Logistics Centre proposed in Warrnambool is in partnership with South West Healthcare that will involve commercial laundry and distribution of clean linen to surrounding hospitals and health service providers. The currently proposed operating hours will be from 7 am to 5 pm Monday to Friday.

Allowable noise emissions from the proposed site were established in accordance with the *Noise limit and assessment protocol for the control of noise from commercial, industrial and trade premises and entertainment venues*, EPA Publication 1826 (the Noise Protocol). Noise limits for the Day, Evening and Night period have been established, and noise from the facility was modelled using SoundPLAN noise modelling software.

Indicative noise emissions from the Development have been calculated based on available information and conservative assumptions regarding mechanical plant and vehicle movements. Predicted noise emissions from the Development comply with the Day Period noise limits at all surrounding sensitive residential receivers.




Based on the outcomes of our assessment, the Development is predicted to comply with relevant environmental noise limits. The Development is likely to have a low level of noise impact at surrounding residences due to the proposed hours of operation (Day period operations), separation distance to sensitive receivers, and acoustic shielding to the nearest residence. It is recommended that general waste collection from site follows the EPA Publication 1254.2 Guidelines.

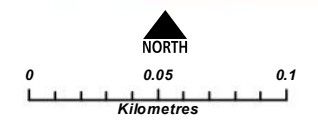
As the project progresses, further detailed design assessments are recommended to validate the assumptions in this report and ensure the design continues to achieve compliance with established noise requirements.

APPENDIX A

Planning Map

Planning Map

- Property**
-  Properties
 -  Parcel
 -  Properties proposed
 -  Parcel proposed
 -  All Zones
- Planning Scheme Zones**
- Residential Zones**
-  GRZ - General Residential Zone
- Industrial Zones**
-  IN1Z - Industrial 1 Zone
 -  IN3Z - Industrial 3 Zone
- Public Land Zones**
-  PUZ1 - Public Use Zone-Service and Utility
 -  PUZ4 - Public Use Zone-Transport
 -  PPRZ - Public Park and Recreation Zone
 -  RDZ2 - Road Zone-Category 2



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ASIA PACIFIC OFFICES

BRISBANE

Level 2, 15 Astor Terrace
Spring Hill QLD 4000
Australia
T: +61 7 3858 4800
F: +61 7 3858 4801

CANBERRA

GPO 410
Canberra ACT 2600
Australia
T: +61 2 6287 0800
F: +61 2 9427 8200

DARWIN

Unit 5, 21 Parap Road
Parap NT 0820
Australia
T: +61 8 8998 0100
F: +61 8 9370 0101

GOLD COAST

Level 2, 194 Varsity Parade
Varsity Lakes QLD 4227
Australia
M: +61 438 763 516

MACKAY

21 River Street
Mackay QLD 4740
Australia
T: +61 7 3181 3300

MELBOURNE

Suite 2, 2 Domville Avenue
Hawthorn VIC 3122
Australia
T: +61 3 9249 9400
F: +61 3 9249 9499

NEWCASTLE

10 Kings Road
New Lambton NSW 2305
Australia
T: +61 2 4037 3200
F: +61 2 4037 3201

PERTH

Ground Floor, 503 Murray Street
Perth WA 6000
Australia
T: +61 8 9422 5900
F: +61 8 9422 5901

SYDNEY

2 Lincoln Street
Lane Cove NSW 2066
Australia
T: +61 2 9427 8100
F: +61 2 9427 8200

TOWNSVILLE

Level 1, 514 Sturt Street
Townsville QLD 4810
Australia
T: +61 7 4722 8000
F: +61 7 4722 8001

TOWNSVILLE SOUTH

12 Cannan Street
Townsville South QLD 4810
Australia
T: +61 7 4772 6500

WOLLONGONG

Level 1, The Central Building
UoW Innovation Campus
North Wollongong NSW 2500
Australia
T: +61 404 939 922

AUCKLAND

68 Beach Road
Auckland 1010
New Zealand
T: +64 27 441 7849

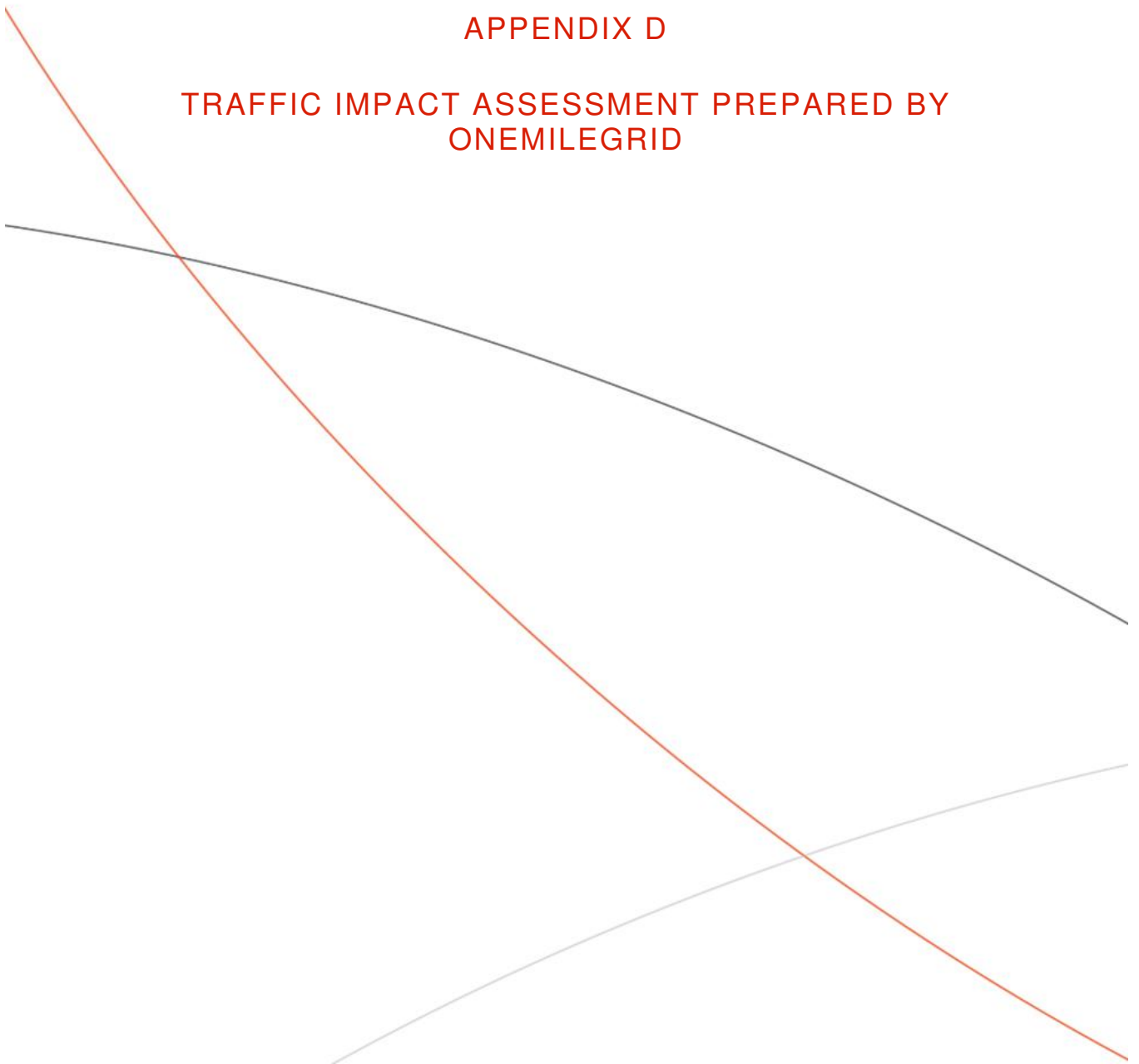
NELSON

6/A Cambridge Street
Richmond, Nelson 7020
New Zealand
T: +64 274 898 628



APPENDIX D

TRAFFIC IMPACT ASSESSMENT PREPARED BY
ONEMILEGRID





1-5 Cooper Street, Warrnambool Transport Impact Assessment



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8 December 2021





onemilegrid

ABN: 79 168 115 679

(03) 9939 8250
56 Down Street

COLLINGWOOD, VIC 3066
www.onemilegrid.com.au

DOCUMENT INFORMATION

Prepared for	South West Healthcare		
File Name	210792TIA001A-F.docx	Report Date	8 December 2021
Prepared by	Adam Gardiner	Reviewed by	Jamie Spratt
Signature		Signature	

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1 INTRODUCTION

onemilegrid has been requested by South West Healthcare to undertake a Transport Impact Assessment of the proposed Distribution Centre development at 1-5 Cooper Street, Warrnambool.

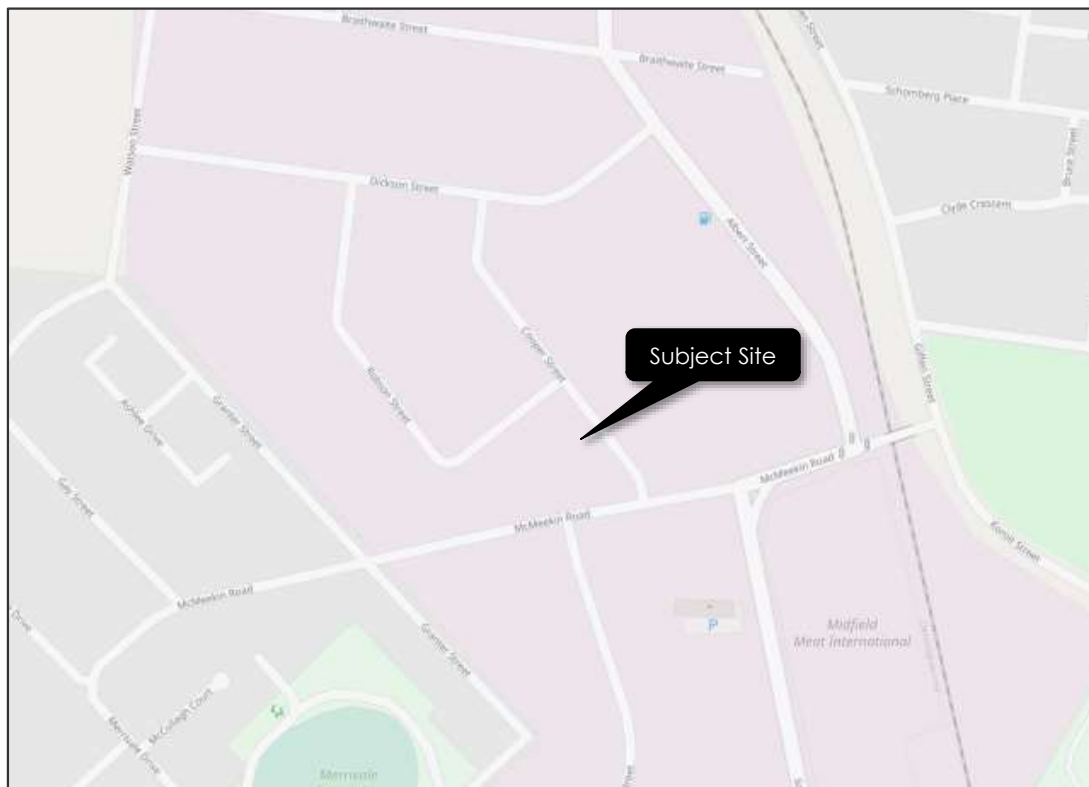
As part of this assessment the subject site has been inspected with due consideration of the development proposal, traffic and parking data has been sourced and relevant background reports have been reviewed.

2 EXISTING CONDITIONS

2.1 Site Location

The subject site is bound to the north and east by Robson Street and Cooper Street respectively, with a vegetation reserve separating the site from McMeekin Road at the southern boundary. The site is located at 1-5 Cooper Street, Warrnambool, as shown in Figure 1.

Figure 1 Site Location



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The site is currently vacant, and no site access has yet been established.

Land use in the immediate vicinity of the site is commercial in nature and includes primarily industrial and warehouse uses.

An aerial view of the subject site in the context of its surrounds is provided in Figure 2.

Figure 2 Site Context (27 September 2021)



Copyright Nearmap



3 DEVELOPMENT PROPOSAL

3.1.1 General

It is proposed to develop the subject site for the purposes of a mixed-use development, containing industrial and warehouse uses with ancillary administration space, as detailed in Table 1.

Table 1 Proposed Development

<i>Use</i>	<i>Total Area</i>
Warehouse	1,596 m ²
Industry	1,940 m ²
Office	510 m ²
Total	4,046 m²

It is noted that the above floor areas exclude areas for mechanical plant, loading, lifts, stairs, access and car parking.

It is proposed to provide a total of 29 car parking spaces on-site, comprising 22 spaces along the western boundary and 7 spaces along the eastern side of the building including one accessible space.

It is proposed to provide two on-ground bicycle hoops at the southwest corner of the site for staff use. The two racks provide a total of four bicycle parking spaces and include electric bicycle charging points.



3.1.2 Loading

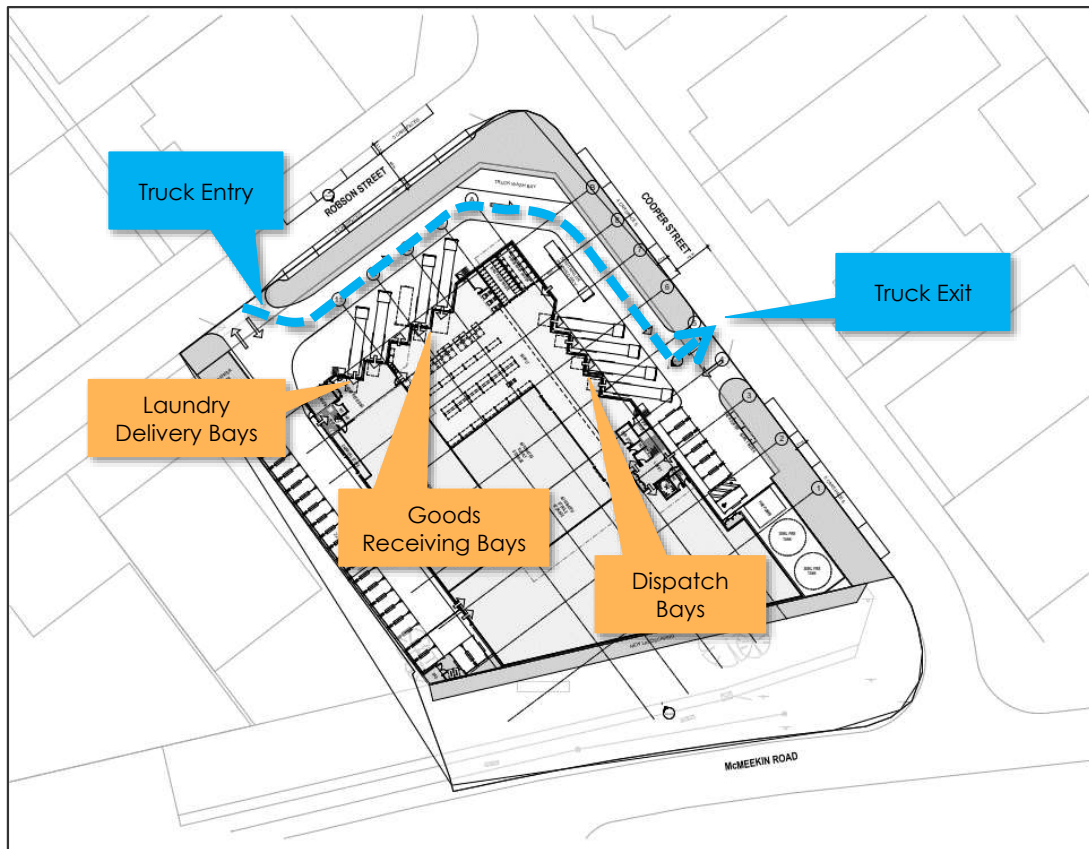
It is proposed to facilitate the delivery and dispatch of goods on-site, using 12.5 metre length Heavy Rigid Vehicles (HRV) and 19-metre semi-trailers.

Trucks will enter the site from the western end of the Robson Street frontage via a double width crossover and circulate within the site to the delivery or dispatch loading bays. Trucks will exit the site in a forward direction to Cooper Street via a double width crossover.

Most loading activity will be undertaken using vehicles up to 12.5 metre HRVs with 19-metre semi-trailers required on occasion. When semi-trailers are required to attend the site, the loading areas will be kept clear of other loading vehicles.

The proposed truck entry, exit and loading locations are shown below in Figure 3.

Figure 3 Loading Arrangements





4 DESIGN ASSESSMENT

4.1 Warrnambool Planning Scheme – Clause 52.06

onemilegrid has undertaken an assessment of the car parking layout and access for the proposed development with due consideration of the Design Standards detailed within Clause 52.06-9 of the Planning Scheme. A review of those relevant Design Standards is provided in the following section.

4.1.1 Design Standard 1 – Accessways

A summary of the assessment for Design Standard 1 is provided in Table 2.

Table 2 Clause 52.06-9 Design Assessment – Design Standard 1

Requirement	Comments
Be at least 3 metres wide	Satisfied
Have an internal radius of at least 4 metres at changes of direction or intersection or be at least 4.2 metres wide	Satisfied
Allow vehicles parked in the last space of a dead-end accessway in public car parks to exit in a forward direction with one manoeuvre	N/a – private car park
Provide at least 2.1 metres headroom beneath overhead obstructions, calculated for a vehicle with a wheel base of 2.8 metres	Satisfied
If the accessway serves four or more car spaces or connects to a road in a Road Zone, the accessway must be designed so that cars can exit the site in a forward direction	Satisfied
Provide a passing area at the entrance at least 6.1 metres wide and 7 metres long if the accessway serves ten or more car parking spaces and is either more than 50 metres long or connects to a road in a Road Zone	Satisfied – the Robson Street and Cooper Street accessways facilitate two-way movements
Have a corner splay or area at least 50 per cent clear of visual obstructions extending at least 2 metres along the frontage road from the edge of an exit lane and 2.5 metres along the exit lane from the frontage, to provide a clear view of pedestrians on the footpath of the frontage road. The area clear of visual obstructions may include an adjacent entry or exit lane where more than one lane is provided, or adjacent landscaped areas, provided the landscaping in those areas is less than 900mm in height.	Satisfied
If an accessway to four or more car parking spaces is from land in a Road Zone, the access to the car spaces must be at least 6 metres from the road carriageway.	N/a – does not connect to a Road Zone



4.1.2 Design Standard 2 – Car Parking Spaces

All car spaces on-site are proposed with a minimum width of 2.6 metres, length of 4.9 metres and are accessed from aisles of no less than 6.4 metres in accordance with the Planning Scheme.

The accessible bay is provided with a length of 5.4 metres and a width of 2.4 metres, and an adjacent shared area of the same dimensions, in accordance with the Australian Standard for Off-Street Parking for People with Disabilities AS2890.6.

4.2 Access

Access to the site has been designed to accommodate the largest expected design vehicles.

The access points have been designed to accommodate up to 19 metre trucks (semi-trailers) with typical use expected to consist of deliveries by Heavy Rigid Vehicles (HRV).

For trucks to access the site, they will approach from the west along Robson Street in order to provide the most comfortable access arrangement. To ensure that truck drivers are aware of this requirement for access a Loading Management Plan will be prepared inducting drivers on appropriate access routes.

onemilegrid has prepared swept paths, attached in Appendix A, demonstrating the design vehicles circulating the site and accessing the loading bay.

The access to the general parking areas can accommodate two B99 passenger vehicles passing at the entrance.

The proposed access has been designed to accommodate the largest expected vehicles and is considered appropriate.

5 LOADING

Clause 65 (Decision Guidelines) of the Warrnambool Planning Scheme identifies that *"Before deciding on an application or approval of a plan, the responsible authority must consider, as appropriate: The adequacy of loading and unloading facilities and any associated amenity, traffic flow and road safety impacts."*

The proposed warehouse development provides significant area for loading and unloading, specifically designed for the proposed use.

onemilegrid has undertaken swept path analysis for the proposed loading areas for the development, attached in Appendix A. The swept paths demonstrate that a 12.5m length HRV and 19.0m semi trailers are generally able to circulate within the site and access the loading bays.

The proposed provision for loading is considered appropriate for the proposed use.



6 BICYCLE PARKING

The bicycle parking requirements for the subject site are identified in Clause 52.34 of the Warrnambool Planning Scheme. The Planning Scheme does not specifically refer to parking requirements for warehouse uses, therefore, no bicycle parking is required for that portion of the use. However, the Planning Scheme does identify bicycle parking requirements for industry uses as detailed in Table 3 below

Table 3 Clause 52.34 – Bicycle Parking Requirements

Component	No/Area	Requirement	Total
Industry	1,940 m ²	1 space per 1,000m ² for employees	2
Total		Employees	2

Based on the above, the proposed development is required to provide two bicycle parking spaces for employees.

Considering the above, the proposed provision of bicycle parking exceeds the requirements of the Planning Scheme, and is therefore considered appropriate.

7 CAR PARKING

7.1 Statutory Car Parking Requirements

The car parking requirements for the subject site are identified in Clause 52.06 of the Warrnambool Planning Scheme, which specifies the following requirements for the different components of the proposed development.

In relation to the proposed floor areas, it is noted that the Planning Scheme rates are based on Net floor area, which is noted to exclude the area of stairs, loading bays, accessways, or car parking areas, or any area occupied by machinery required for air conditioning, heating, power supply, or lifts. As a consequence, the loading bays, stairs, lifts and mechanical plant have been excluded from the floor areas, with the resultant requirements noted below.

Table 4 Clause 52.06 – Car Parking Requirements

Use	No/Area	Rate	Car Parking Measure	Total
Industry	1,940 m ²	2.9	to each 100m ² of net floor area	56
Warehouse	1	2	to each premises, plus	2
	2106 m ²	1.5	to each 100m ² of net floor area	31
Total				89

**The proposed office floor area has been assessed as part of the warehouse use*

Based on the above calculations, a total of 89 car parking spaces are required for the proposed development under Clause 52.06 of the Warrnambool Planning Scheme.

It is proposed to provide a total of 29 car parking spaces on-site, which equates to a shortfall of 60 spaces when compared to the Planning Scheme requirements.

In this regard, Clause 52.06-7 of the Warrnambool Planning Scheme indicates that an application to reduce (including reduce to zero) the requirement for car spaces must be accompanied by a Car



Parking Demand Assessment. The Assessment must assess the car parking demand likely to be generated by the proposed development, having consideration to:

- The likelihood of multi-purpose trips within the locality which are likely to be combined with a trip to the land in connection with the proposed use.
- The variation of car parking demand likely to be generated by the proposed use over time.
- The short-stay and long-stay car parking demand likely to be generated by the proposed use.
- The availability of public transport in the locality of the land.
- The convenience of pedestrian and cyclist access to the land.
- The provision of bicycle parking and end of trip facilities for cyclists in the locality of the land.
- The anticipated car ownership rates of likely or proposed visitors to or occupants (residents or employees) of the land.
- Any empirical assessment or case study.

An assessment of the likely parking demands and the appropriateness of reducing the car parking provision below the Planning Scheme requirements is set out below.

7.2 Car Parking Demand Assessment

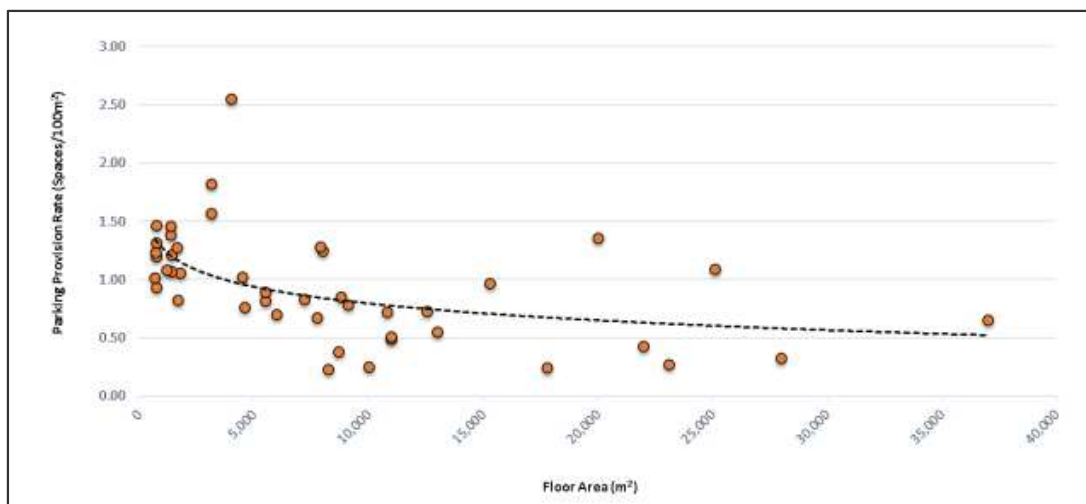
7.2.1 Industrial Park Parking Study

onemilegrid has undertaken a review of car parking provision and parking demands at existing warehouse and industry uses within typical industrial parks. A total of 44 sites in and around Melbourne with floor areas from 690m² to 37,000m² were analysed.

Parking provision for these sites varied and is typically provided at a rate lower than specified in the Planning Scheme. Provision of parking is typically higher for smaller developments and gets lower as the size of the development increases. Parking provision varied between 0.23 spaces per 100m² and 2.55 spaces per 100m², with an average provision of 0.94 spaces per 100m².

The provision for each site assessed is shown in Figure 4.

Figure 4 Parking Provision Rate – Case Study Sites

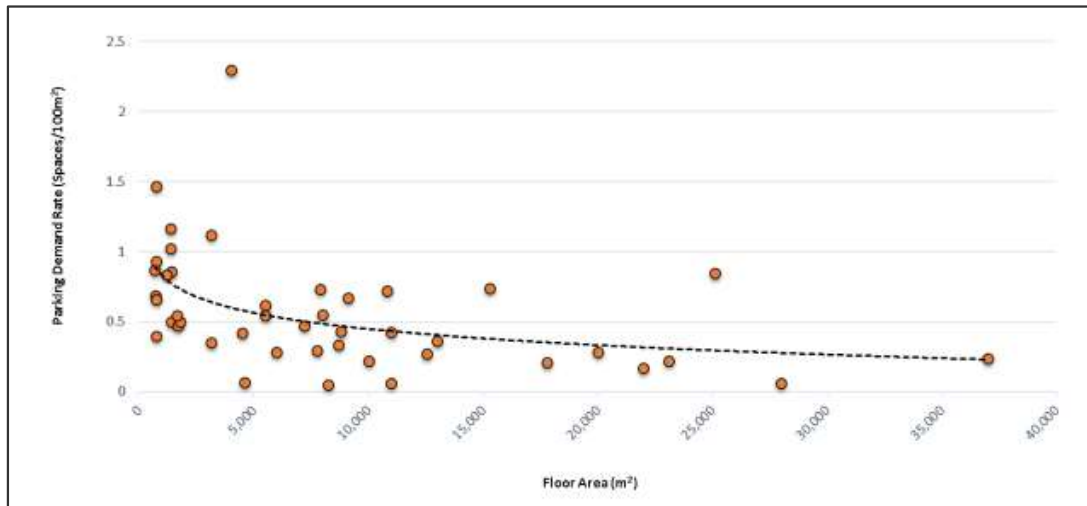




Parking demand for the developments was either at or below the provision of parking for the developments. Demand for parking as a function of floor area is typically higher for smaller developments and gets lower as the size of the site increases, in line with the trends observed with parking provision. Parking demand across the sites varied between 0.05 spaces per 100m² and 2.3 spaces per 100m², with an average demand of 0.57 spaces per 100m².

The parking demand for each site assessed is shown in Figure 5.

Figure 5 Parking Demand Rate – Case Study Sites



As shown in Figure 4 and Figure 5, the need for parking in larger developments is demonstrably lower than the Planning Scheme requirements. The proposal contemplates the development of a combined industry and warehouse use with a floor area of 4,046m².

Considering both sets of data above, parking provision for developments of similar size are typically between 0.70 and 1.02 spaces per 100m² with demand for parking between 0.07 and 0.62 spaces per 100m². The average demand for parking is 0.39 spaces per 100m².

Based on the trend observed in Figure 5, it is anticipated that for warehouse developments with an area of approximately 5,000m² a demand of 0.55 spaces per 100m² is likely to occur. For the purposes of a conservative assessment a demand of 0.6 parking spaces per 100m² will be adopted.

Application of the anticipated parking demand rates to the proposed development would result in a likely demand for 24 car parking spaces.

7.2.2 Empirical Assessment

Staffing information provided indicates that there will be a maximum of 50 staff on site at any given time. Based on discussions with the applicant it is understood that with robotics and automation of the warehousing staffing numbers will reduce, as retirements of the existing workforce occur.

Journey to work data from the City of Warrnambool indicates 84% of work trips within the LGA are by car drivers.

Based on the above, this would lead to an initial peak demand for 42 car parking spaces which will reduce over time.



7.2.3 Anticipated Parking Demand

Based on the above, it is anticipated the proposed development may typically generate a demand for between 24 and 42 car parking spaces, resulting in a peak shortfall of 13 spaces. It is noted that the peak parking demands are expected to diminish over time, reducing the peak shortfall.

7.3 Review of Car Parking Provision

The subject site is located within an industrial area with wide access streets that allow for unrestricted kerbside parking in the vicinity of the site.

This kerbside parking is suitable for long-term employee parking should it be required.

The signage and line marking plan prepared by **onemilegrid**, attached in Appendix B, proposes minor modifications to the on-street parking and formalising it with the provision of line marking. It is also proposed to indent parking along the southern kerb of Robson Street to allow for on-street parking to occur on both sides.

The proposed development is expected to provide a surplus of parking above the anticipated industrial demands of 24 parking spaces. However, the short term empirical demands may temporarily exceed the provision of parking and result in employees parking on-street.

Given the nature of the surrounding developments this is considered to be acceptable, with plans to accommodate additional on-street parking should it be required, however, this is not expected to be necessary.

The proposed provision of 29 parking spaces for the development is therefore considered acceptable.

7.4 Accessible Car Parking

The Building Code of Australia (BCA) specifies the minimum requirements for provision of accessible car parking.

The proposed warehouse development, classified as a Class 7 land-use, requires provision of one accessible car spaces for every 100 car parking spaces or part thereof.

It is recommended that the development be provided with at least one accessible parking space and associated shared area.

Noting the proposed provision of 30 car spaces on-site, the BCA requires at least one accessible car space on-site.

The proposed provision of one space thus satisfies the BCA requirements.



8 TRAFFIC

8.1 Traffic Generation

The New South Wales Roads and Traffic Authority (now the Department of Transport, Roads and Maritime Services) produced the document "Guide to Traffic Generating Developments" dated October 2002, which aims to assist with the assessment and preparation of development applications. The guide identifies peak traffic rates for a variety of land uses based on surveys of existing facilities.

For warehouse land uses, the Guide to Traffic Generating Developments suggests trip generation rates of 4 trips per 100m² per day, and 0.5 trips per 100m² during the morning peak hour.

More recently, updated surveys were undertaken by the Department of Transport, Roads and Maritime Services. The surveys of 11 business parks and industrial estates in 2012 indicated an average trip generation rate of 0.52 and 0.56 trips per 100m² in the AM and PM peak periods respectively, and a daily traffic generation rate of 4.60 trips per 100m².

It is noted that the surveys above typically involved locations with smaller average lot areas than the proposed development, and also included office-based business parks. The updated surveys are therefore also expected to overestimate the actual traffic generation of the subject site.

Based on the above, and assuming that traffic is generated at a rate of 0.5 vehicle trips per 100m² during the peak periods, the proposed development is expected to generate a total of up to 20 vehicle trips during the AM and PM peak hours.

8.2 Traffic Impact

It is shown above that the expected traffic volumes to be generated by the proposed development are limited, with a peak of no more than 20 vehicles per hour generated during the AM and PM peak hours. This is low in traffic engineering terms and is equivalent to less than 1 vehicle trip every three minutes during the peak periods.

The anticipated traffic generation of the proposed development is therefore to be easily accommodated by the surrounding road network, with a minimal impact on the existing conditions.



9 CONCLUSIONS

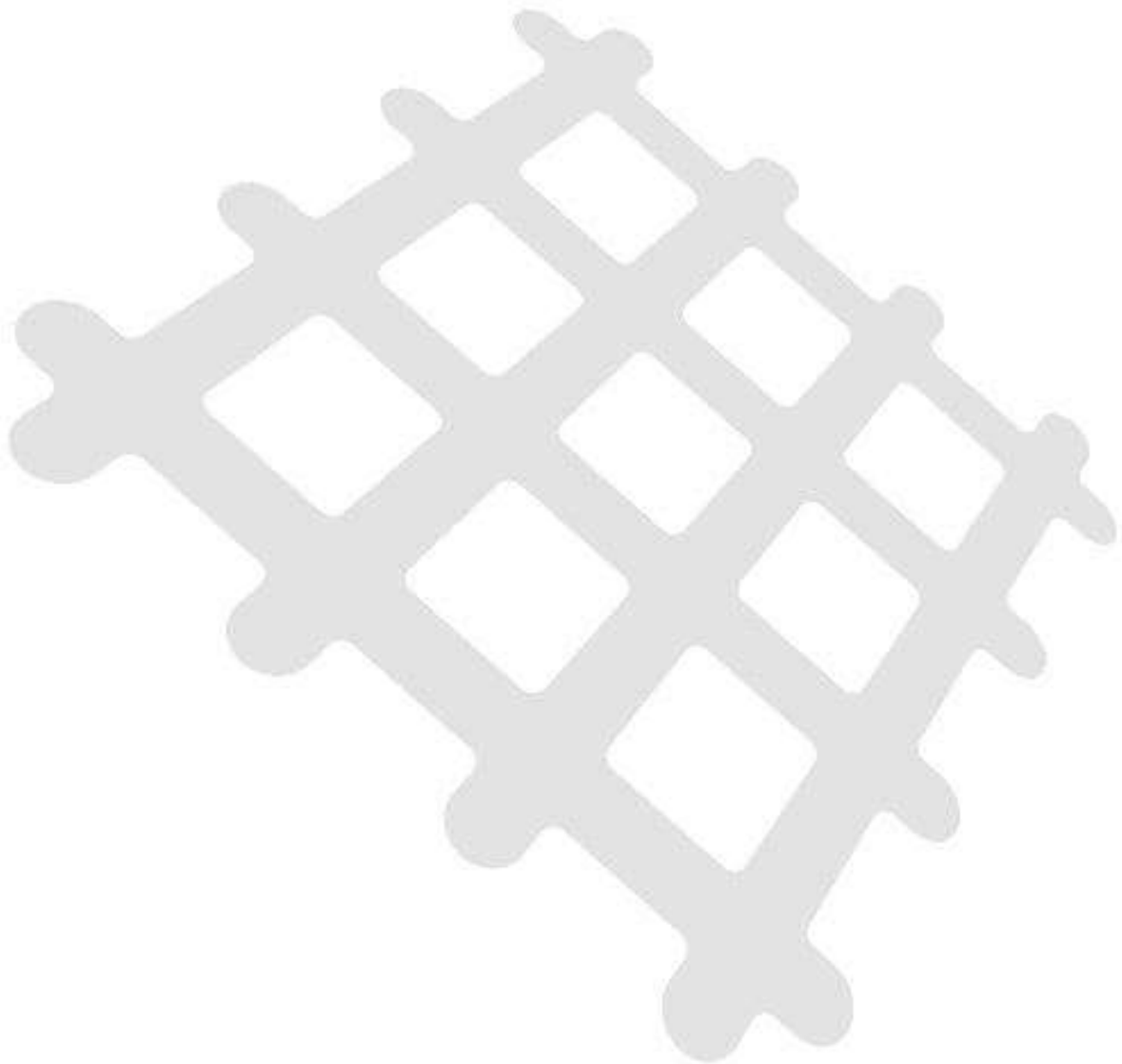
It is proposed to develop the subject site for the purposes of a mixed-use industry and warehouse development.

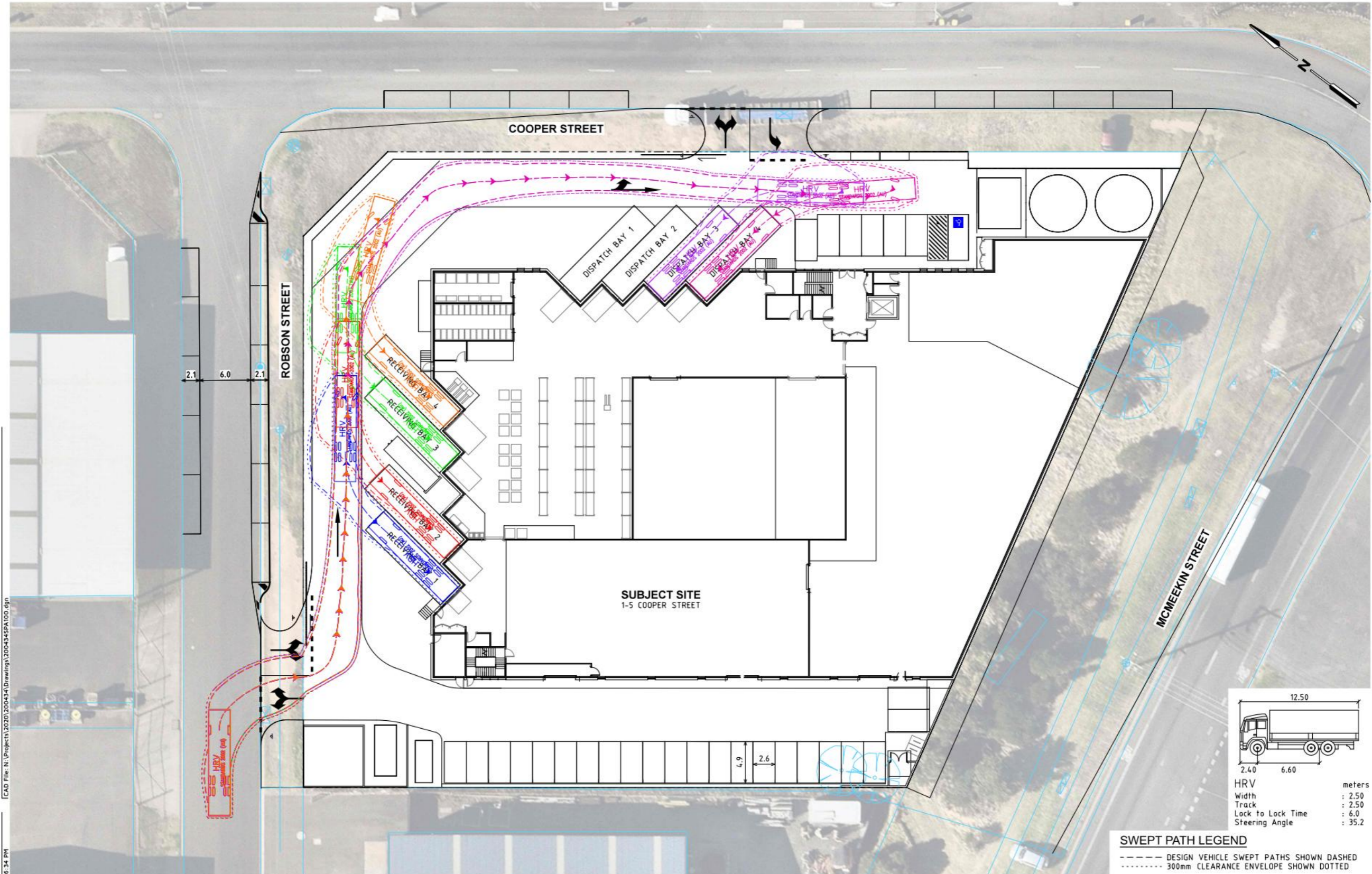
Considering the analysis presented above, it is concluded that:

- The car parking and access have been designed in accordance with the Planning Scheme and Australian Standards;
- The proposed provision of bicycle parking is considered appropriate;
- The proposed loading facilities have been designed for the needs of the development and are considered appropriate;
- The proposed development generates a statutory requirement to provide 89 car parking spaces;
- The proposed development is anticipated to generate a parking demand for 24 to 42 car parking spaces, it is noted that as staff retirement and changes in technology are implemented this number will reduce over time;
- Based on the current proposed on-site parking provision of 29 parking spaces this results in a peak anticipated shortfall of 13 spaces. Based on a review of on-street parking, these 13 spaces could be accommodated on-street along the abutments of the site if the demand arises;
- The proposed supply of car parking is appropriate for the proposed development; and
- The anticipated traffic generation is low in traffic engineering terms and is expected to have a marginal impact on the surrounding network.



Appendix A Swept Path Diagrams





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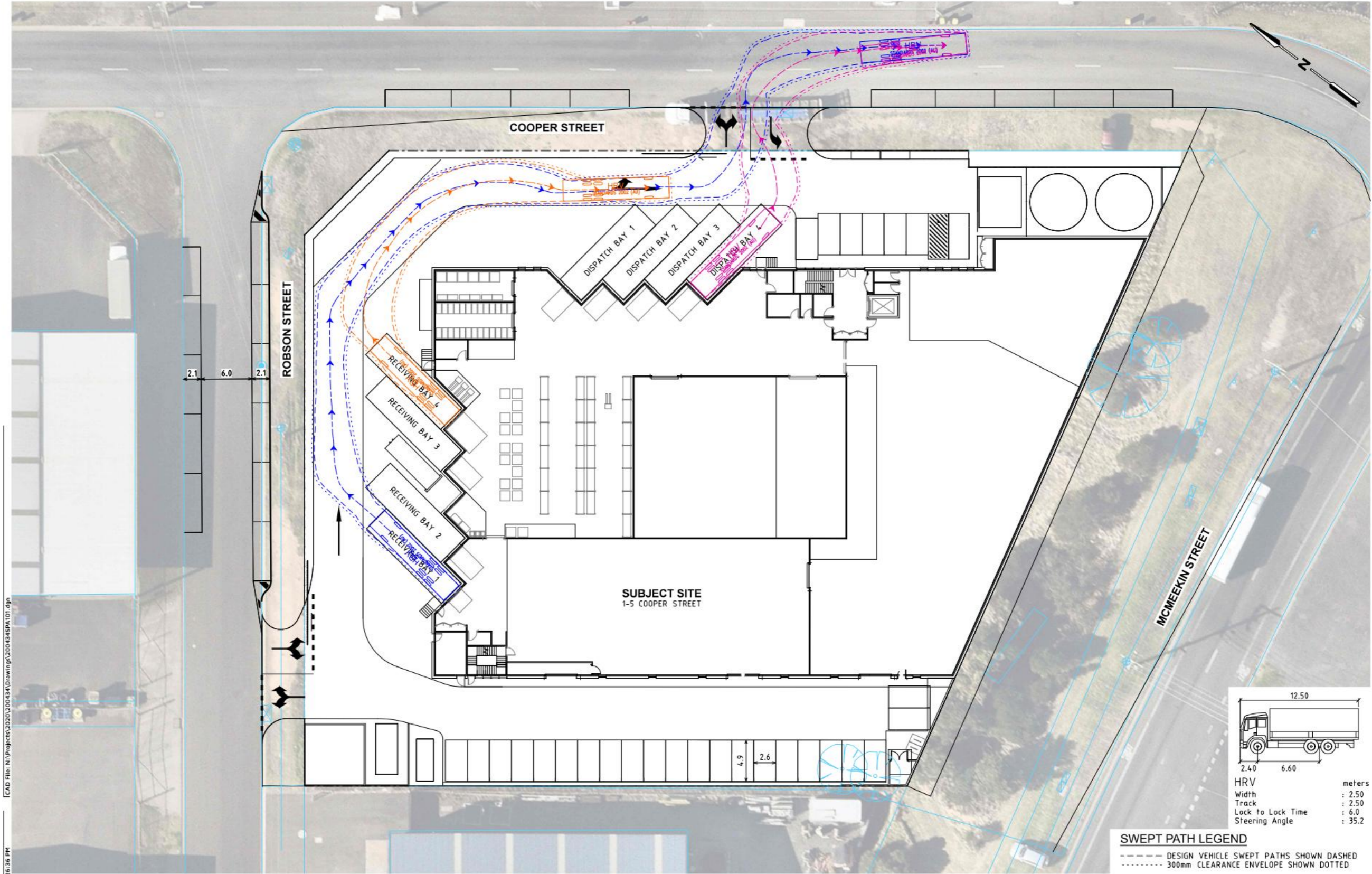
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 56 Down Street, Collingwood, VIC 3066
 Email: info@onemilegrid.com.au Web: www.onemilegrid.com.au
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Drawing Title 1-5 COOPER STREET, WARRNAMBOOL VEHICLE SITE ACCESS - INGRESS SWEPT PATH ANALYSIS		
Designed MOB	Approved JS	Metway Ref X926 D8
Project Number 200434	Drawing Number SPA100	Revision G



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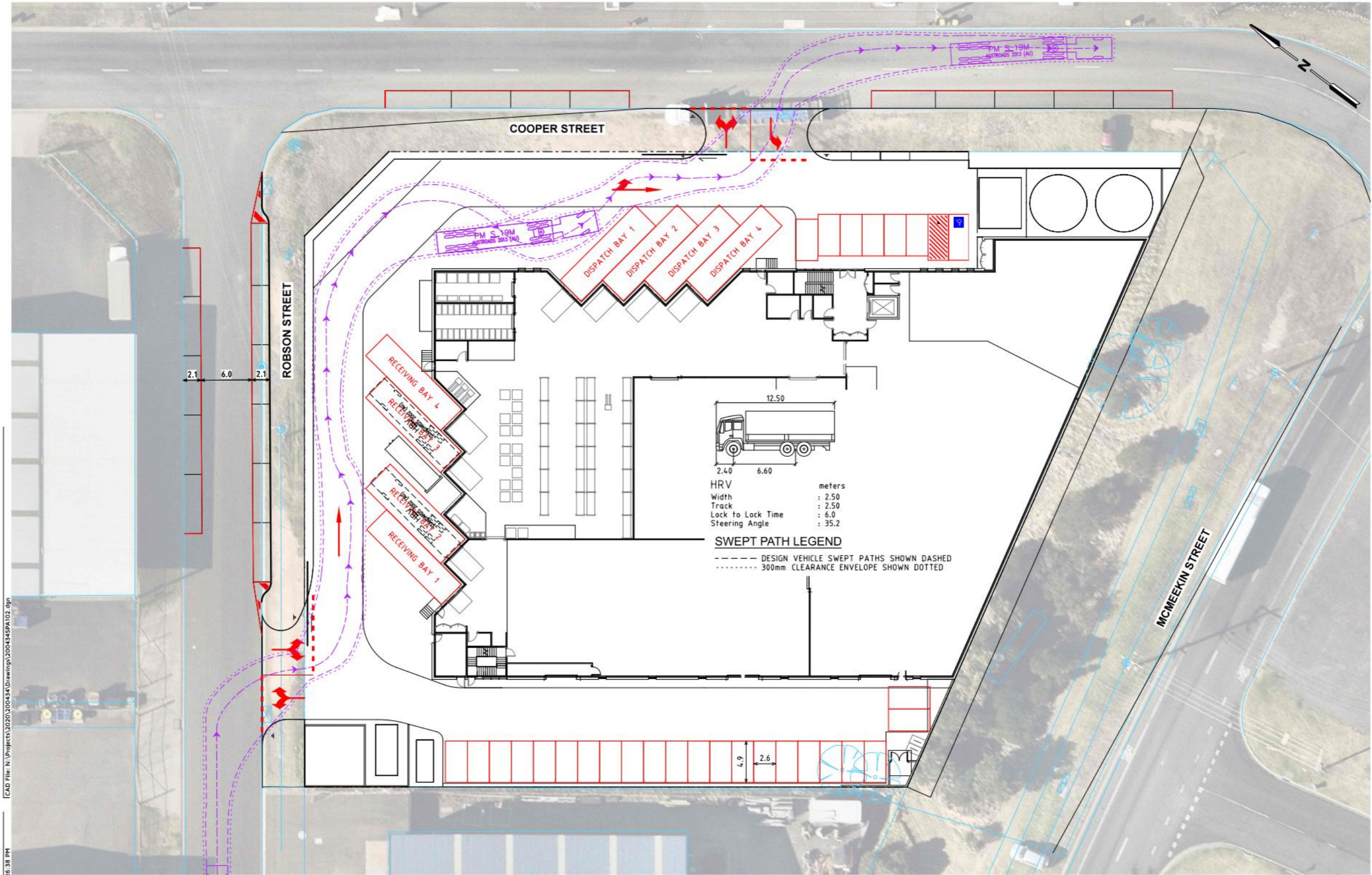
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Drawing Title
1-5 COOPER STREET, WARRNAMBOOL
VEHICLE SITE ACCESS - EGRESS
SWEPT PATH ANALYSIS

Designed MOB	Approved JS	Melway Ref X926 D8
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Project Number 200434	Drawing Number SPA101	Revision G
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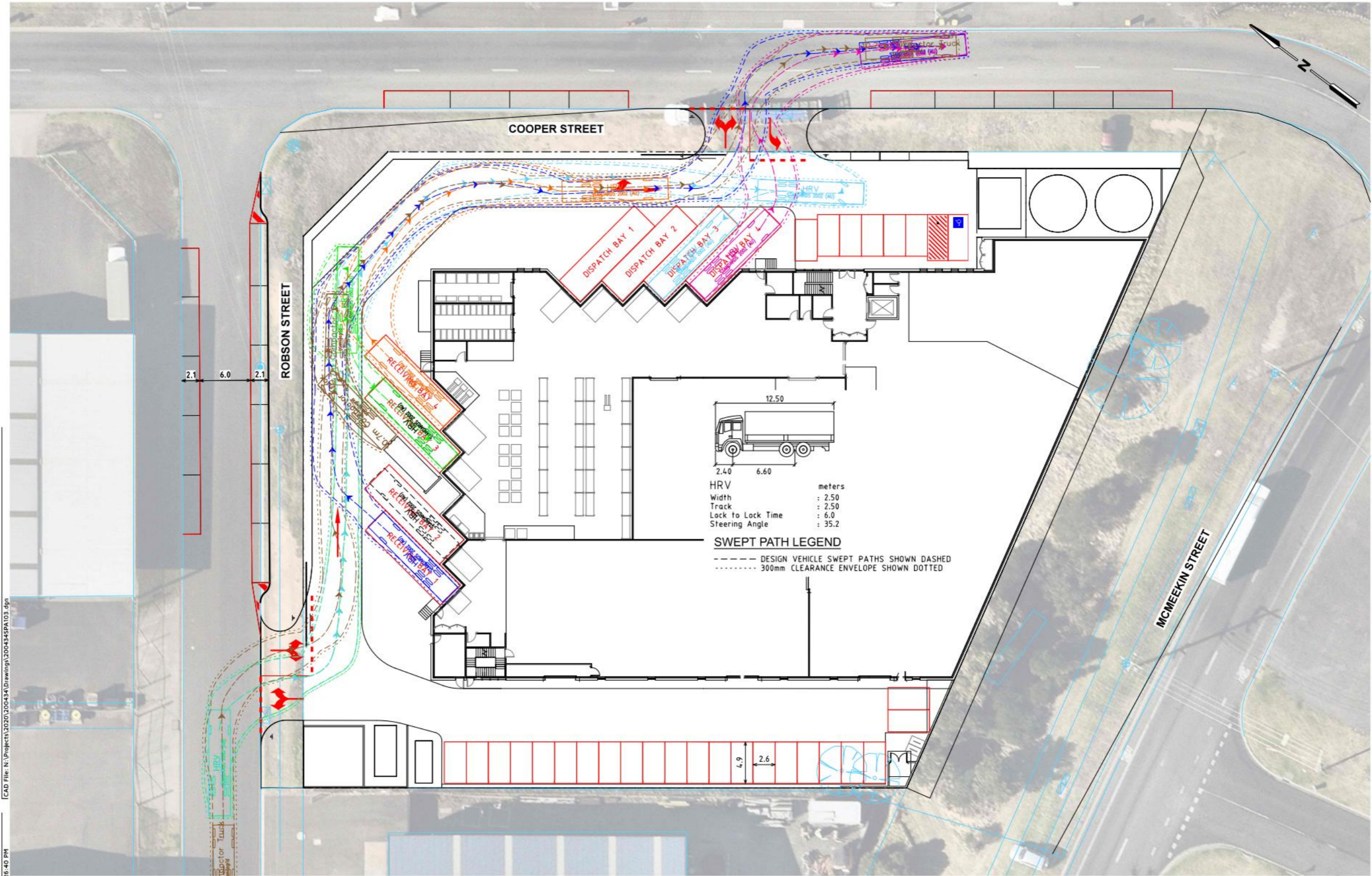
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Phone: (03) 9939 8250

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Drawing Title:
1-5 COOPER STREET WARRNAMBOOL
SITE VEHICLE ACCESS
SWEEP PATH ANALYSIS

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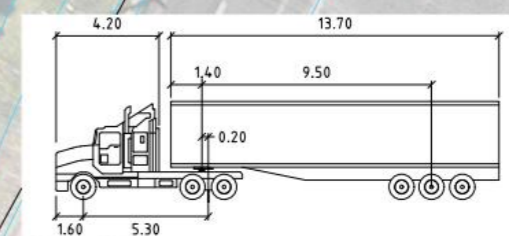
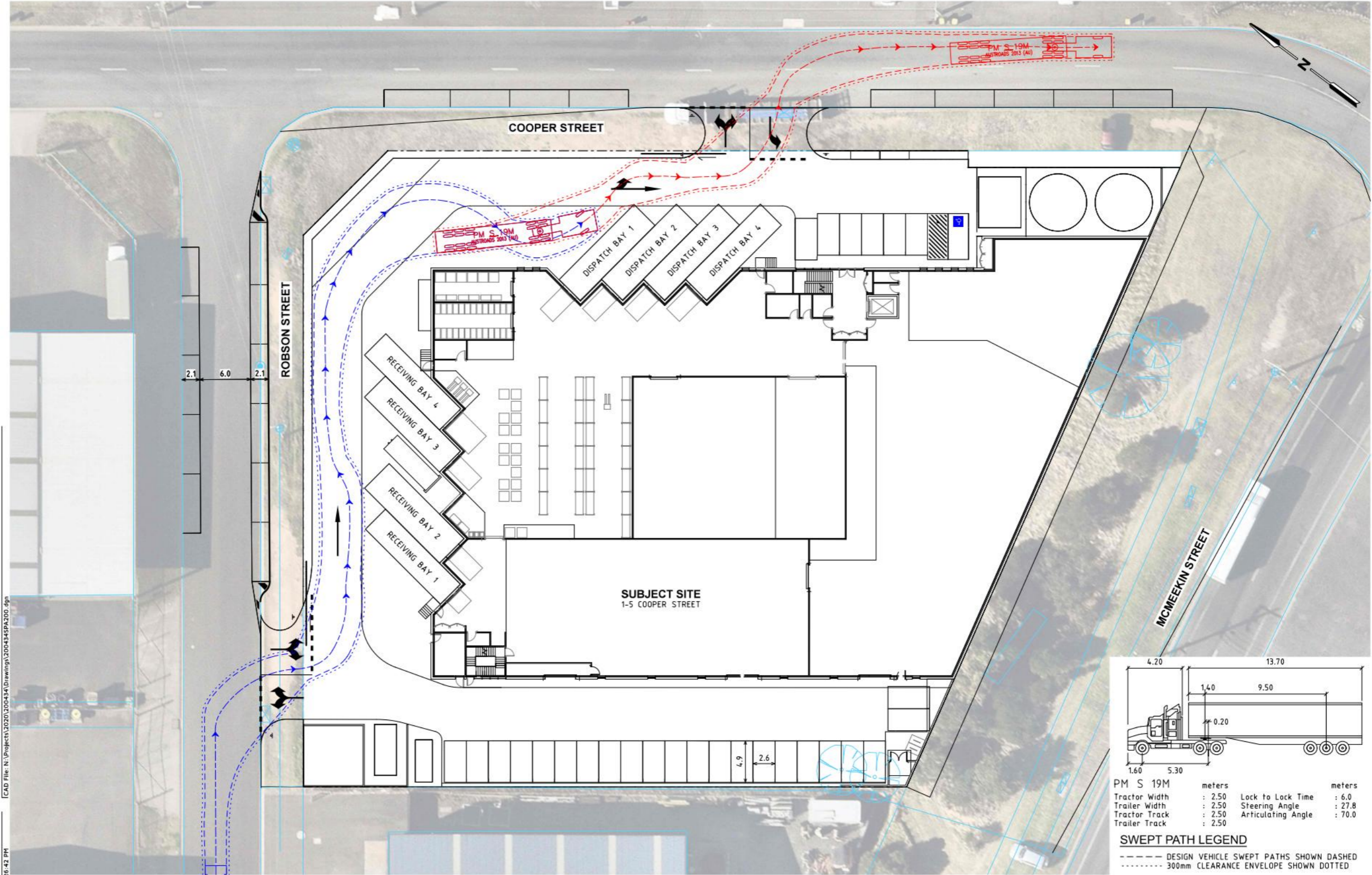
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Email: info@onemilegrid.com.au Web: www.onemilegrid.com.au
Phone: (03) 9939 8250

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Drawing Title:
1-5 COOPER STREET WARRNAMBOOL
SITE VEHICLE ACCESS
SWEEP PATH ANALYSIS

Designed MOB	Approved JS	Metway Ref
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Project Number 200434	Drawing Number SPA103	Revision G
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PM S 19M		Tractor Width	Tractor Track	Trailer Width	Trailer Track	Lock to Lock Time	Steering Angle	Articulating Angle
	Tractor Width	: 2.50				: 6.0		
	Tractor Track	: 2.50					: 27.8	
	Trailer Width	: 2.50						: 70.0
	Trailer Track	: 2.50						

SWEPT PATH LEGEND
 - - - - DESIGN VEHICLE SWEEP PATHS SHOWN DASHED
 ······ 300mm CLEARANCE ENVELOPE SHOWN DOTTED

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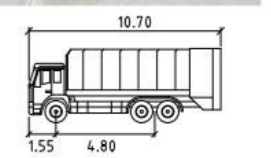
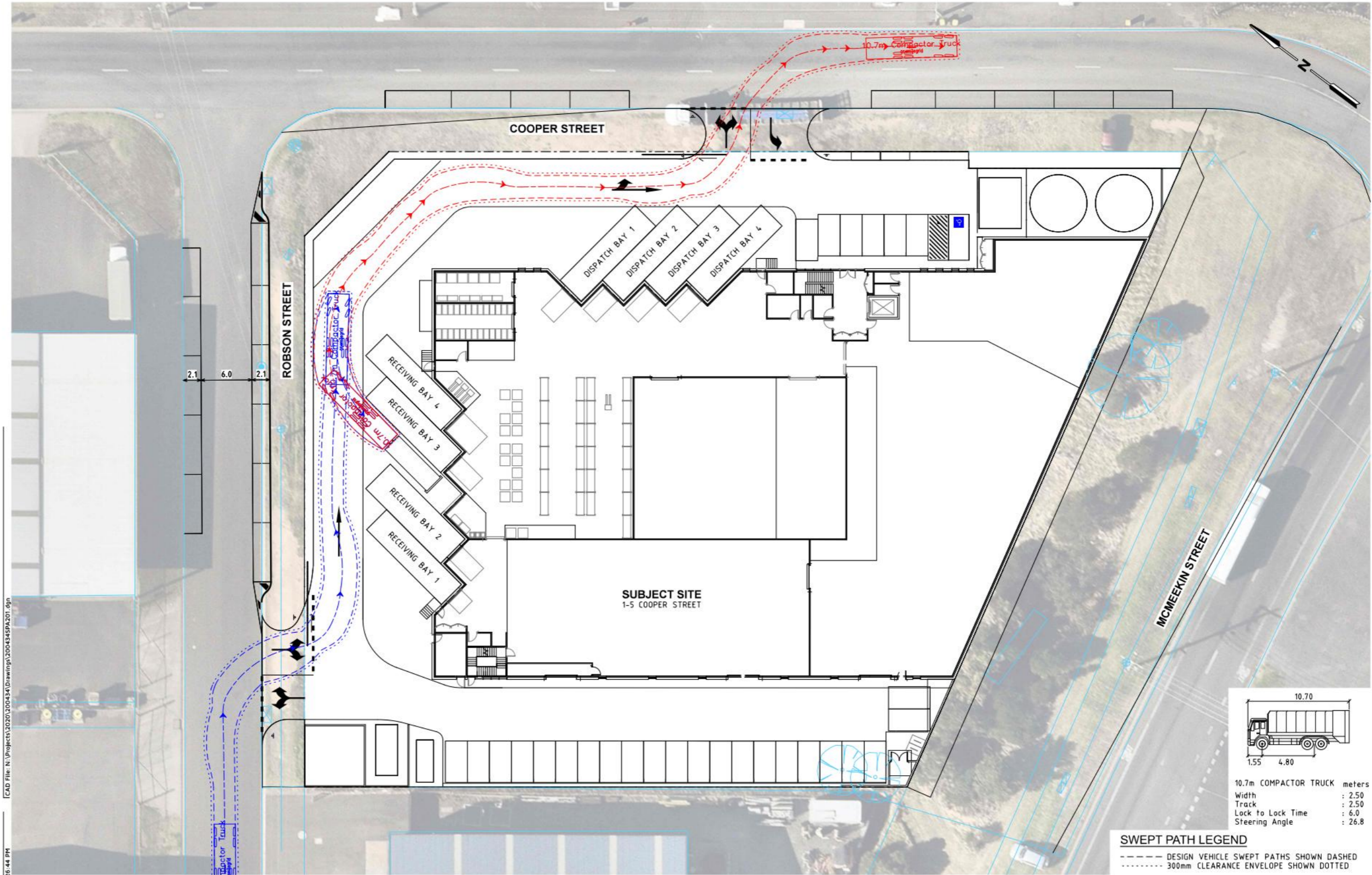
56 Down Street, Collingwood, VIC 3066
 Email: info@onemilegrid.com.au Web: www.onemilegrid.com.au
 Phone: (03) 9939 8250

Scale: 1:400 @ A3

Drawing Title
 1-5 COOPER STREET, WARRNAMBOOL
 VEHICLE SITE ACCESS
 SWEPT PATH ANALYSIS

Designed MOB	Approved JS	Melway Ref X926 D8
-----------------	----------------	-----------------------

Project Number 200434	Drawing Number SPA200	Revision G
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10.7m COMPACTOR TRUCK meters	
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 26.8

SWEPT PATH LEGEND

---	DESIGN VEHICLE SWEEP PATHS SHOWN DASHED
.....	300mm CLEARANCE ENVELOPE SHOWN DOTTED

CAD File: N:\Projects\2020\200434\Drawings\200434SPA201.dgn

Date Plotted: 06-12-2021 2:26:44 PM

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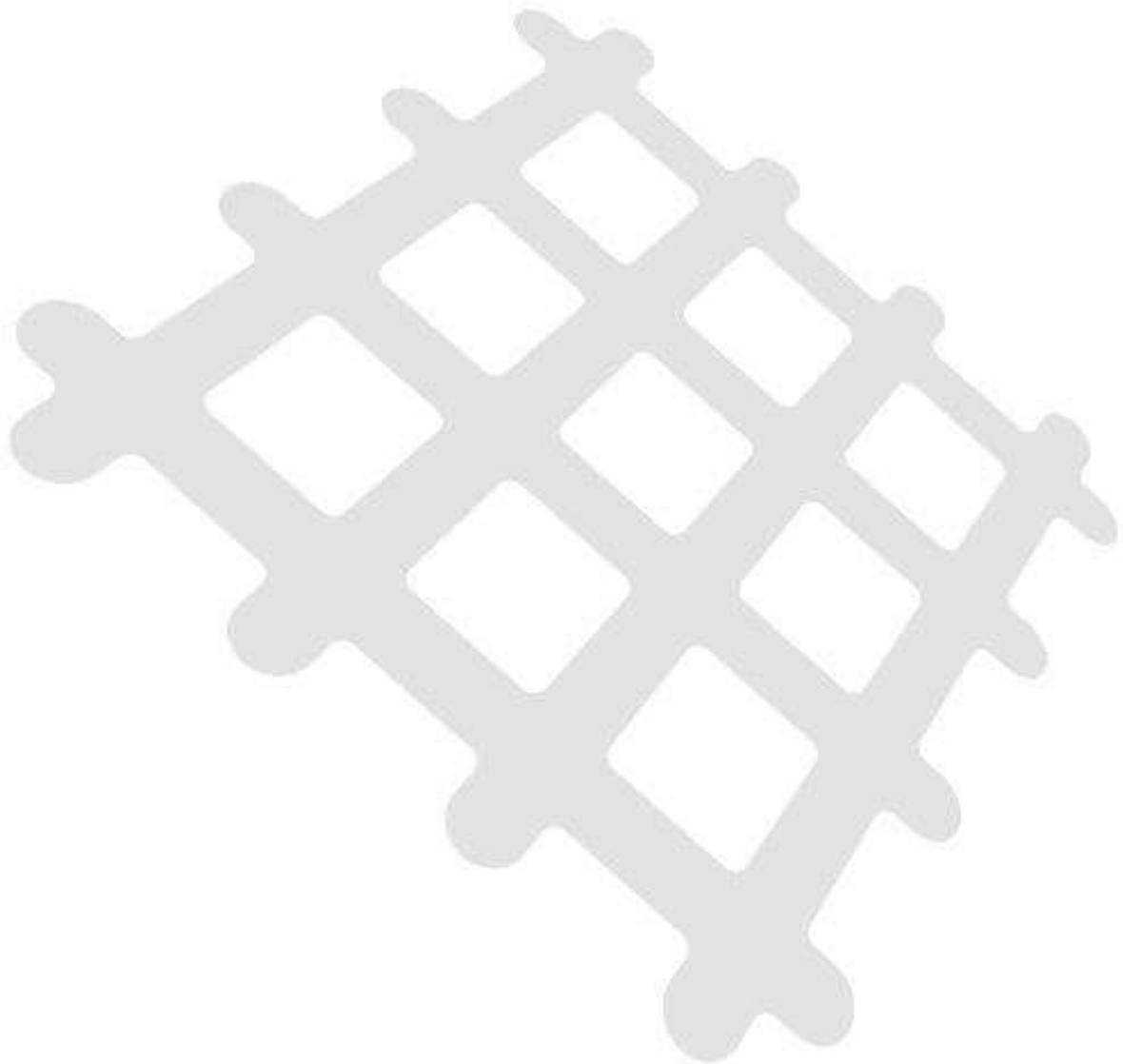
Drawing Title
1-5 COOPER STREET, WARRNAMBOOL
WASTE VEHICLE SITE ACCESS
SWEPT PATH ANALYSIS

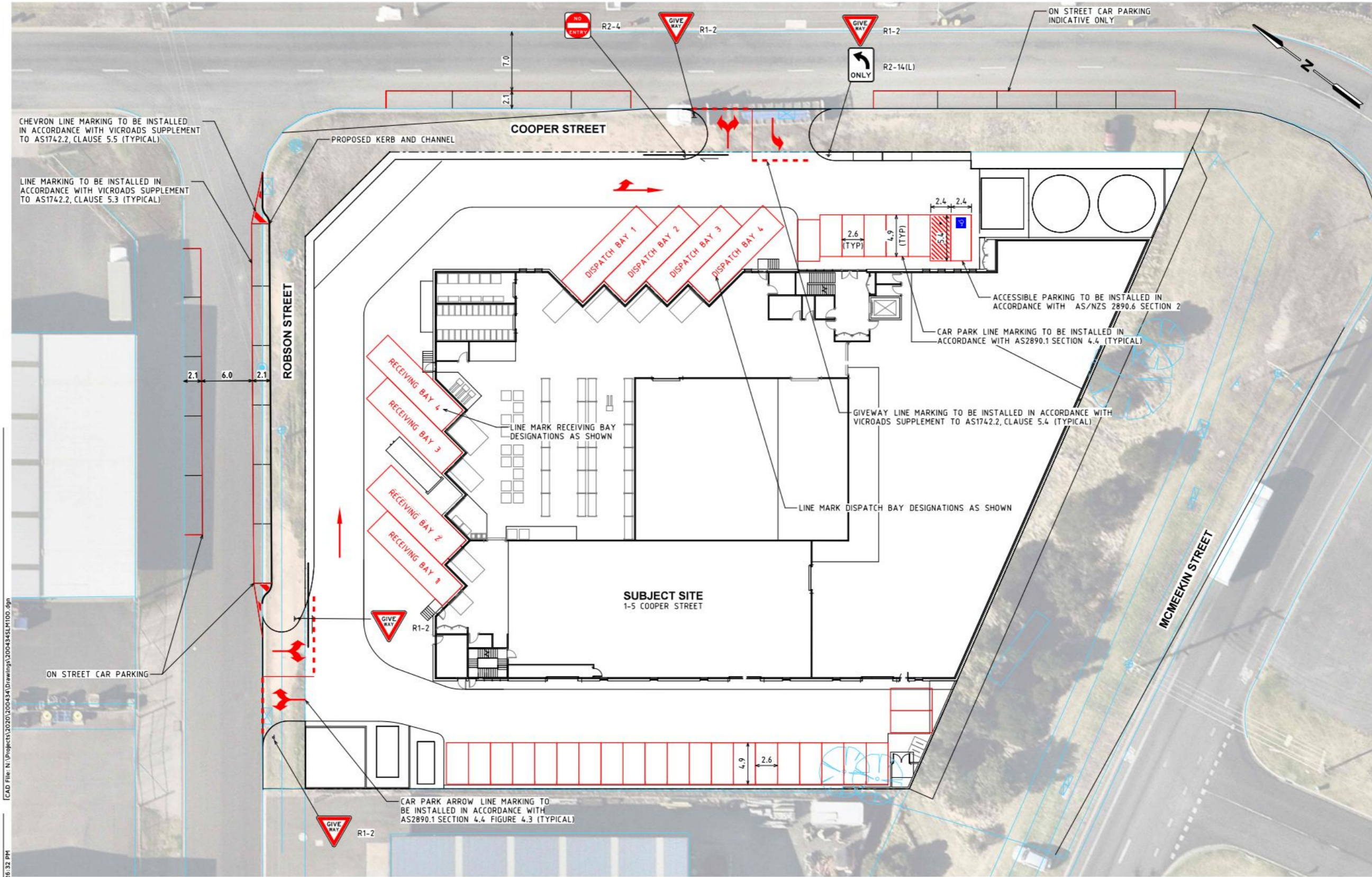
Designed MOB	Approved JS	Melway Ref X926 D8
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Project Number 200434	Drawing Number SPA201	Revision A
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Appendix B Signage and Line Marking Plan





CAD File: N:\Projects\2020\200434\Drawings\200434SLM100.dgn
 Date Plotted: 06-12-2021 2:26:32 PM

- GENERAL NOTES**
1. LOCAL ROAD - ROBSON STREET (SPEED ZONE 60KM/H).
 2. LOCAL ROAD - COOPER STREET (SPEED ZONE 60KM/H).
 3. LOCAL ROAD - MCMEEKIN STREET (SPEED ZONE 60KM/H).
 4. SIGNS AND LINE MARKING TO BE INSTALLED IN ACCORDANCE WITH VICROADS SUPPLEMENT TO AS1742.2.
 5. CAR PARK LINE MARKING TO BE INSTALLED IN ACCORDANCE WITH AUSTRALIAN STANDARD AS 2890.1.
 6. ADOPT VICROADS SUPPLEMENT TO AUSTRALIAN STANDARDS AS REQUIRED.
 7. REMOVE ALL REDUNDANT SIGNS AND LINE MARKING.

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Scale: 1:400 @ A3

Drawing Title 1-5 COOPER STREET, WARRNAMBOOL PROPOSED SITE LAYOUT SIGN AND LINEMARKING		
Designed MOB	Approved JS	Metway Ref X926 D8
Project Number 200434	Drawing Number SLM100	Revision G

7.6. REZONING OF KINGS COLLEGE AND ROYAL COURT - PLANNING SCHEME AMENDMENT C210WARR

DIRECTORATE : City Growth

PURPOSE:

This report recommends that Council adopt Amendment C210warr, and submit the adopted amendment to the Minister for Planning for approval.

EXECUTIVE SUMMARY

- Amendment C210warr (the **Amendment**) to the Warrnambool Planning Scheme proposes to:
 - rezone land at 44-52 Balmoral Road, Warrnambool (Kings College) and Nos. 1-22 Royal Court, Warrnambool from the Public Use Zone 2 (Education) to the General Residential Zone 1, (including the Royal Court road reserve).
 - Rezone part of Crown Allotment 2102 (Crown Land), RES1 on Plan of Subdivision 719889N and Part of RES1 on Plan of Subdivision 728613 from Public Use Zone 2 (Education) to Public Park and Recreation Zone.
- The Amendment was formally exhibited between 21 April 2022 and 23 May 2022, with one submission being received (refer to **Attachment 1**).
- Council officers met with the submitter, and the submitter has subsequently withdrawn the submission (refer to **Attachment 2**).
- Further, an email was received from the EPA which reminded Council of the need to review, and if necessary, satisfy the requirements of Ministerial Direction 1 – Potentially Contaminated Land (refer to **Attachment 3**).
- Council officers have reviewed Ministerial Direction 1 and made updates as necessary to the Explanatory Report. No further action is required.
- It is recommended that Council adopt the Amendment, and submit the Amendment to the Minister for Planning for approval.

MOVED: CR BEN BLAIN

SECONDED: CR RICHARD ZIEGELER

That Council:

- 1. Adopts Amendment C210warr to the Warrnambool Planning Scheme in accordance with Section 29(1) of the *Planning and Environment Act 1987*.**
- 2. Submits Amendment C210warr to the Minister for Planning for approval in accordance with Section 31(1) of the *Planning and Environment Act 1987*.**

CARRIED - 7:0

BACKGROUND

Amendment C210warr to the Warrnambool Planning Scheme was prepared by Council at the request of Myers Planning Group (**proponent**) on behalf of Kings College, and seeks to correct the zoning of the land at 44-52 Balmoral Road, Warrnambool (Kings College campus); Nos. 1-22 Royal Court (including the Royal Court road reserve) from the Public Use Zone to reflect the private ownership of the land. The amendment also proposes to rezone crown land and public reserve areas within the site to the Public Park & Recreation Zone.

The location of the Land is shown in **Figure 1** below.



Figure 1: Source: Myers Planning Group

Specifically, the Amendment proposes to:

- Rezone 44-52 Balmoral Road, Warrnambool (Kings College school campus) from Public Use Zone – 2 (Education) to General Residential Zone – Schedule 1.
- Rezone 1-22 Royal Court, Warrnambool and the Royal Court road reserve (R1 on Plan of Subdivision 719889N) from Public Use Zone – 2 (Education) to General Residential Zone – Schedule 1 (GRZ1).
- Rezone part of Crown Allotment 2102 Parish of Wangoom from Public Use Zone – 2 (Education) to Public Park and Recreation Zone.
- Rezone RES1 on Plan of Subdivision 719889N and part of RES1 on Plan of Subdivision 728613 from Public Use Zone – 2 (Education) to Public Park and Recreation Zone (PPRZ).

The proposed zoning map is shown below at Figure 2.

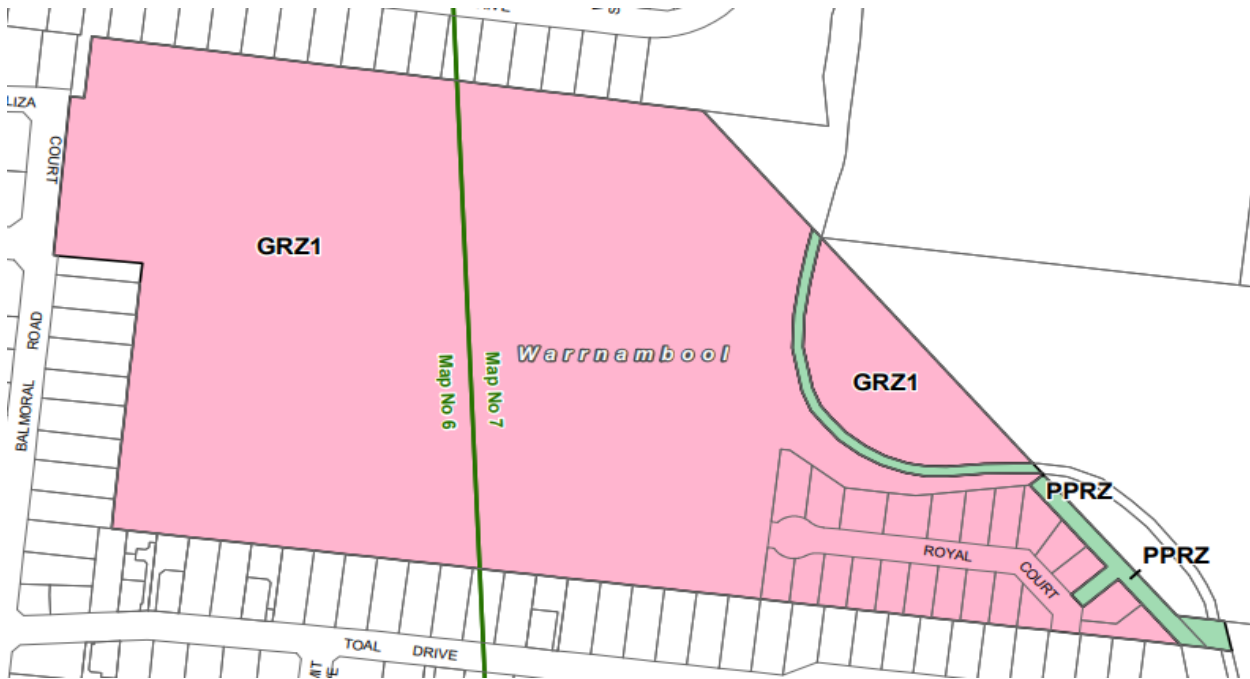


Figure 2: Zoning map (Source: Planning Mapping Services, DELWP)

On 6 September 2021, Council resolved to request authorisation from the Minister for Planning to prepare the planning scheme amendment. The Minister for Planning authorised Council to prepare the amendment on 25 February 2022.

The Amendment was placed on public exhibition between 21 April 2022 and 23 May 2022, with one submission being received (refer to **Attachment 1**).

Where submissions have been received to an amendment, Council must either resolve the submission, change the amendment as requested, refer the submission to a Planning Panel, or abandon the amendment.

ISSUES

The submission received raised concerns regarding safety of Royal Court and future subdivision of Kings College land. These concerns are related to any future subdivision application that Kings College may or may not make, and are not affected by the rezoning of the land. Kings College do not need to have their land rezoned to be able to lodge a subdivision application. An application to subdivide can be made under the current zoning provisions, as evidenced by the subdivision application that created Royal Court (under the Public Use Zone 2 – Education). Any future subdivision application would be publically notified, and the submitter would be able to lodge an objection at that time.

Council officers met with the submitter to discuss their concerns, and to explain the difference between the rezoning process currently being considered, and that any future subdivision application would be a separate process. Subsequently, the submitter has now withdrawn their submission (**Attachment 2**).

An email was also received from the EPA (**Attachment 3**). The EPA acknowledge that the proposed amendment presents a low risk of harm to the environment, amenity and human health as a result of pollution and waste. The EPA's email simply reminds Council of the need to review, and if necessary, satisfy the requirements of Ministerial Direction 1 – Potentially Contaminated Land. An appropriate statement acknowledging the low risk and zone correction nature of the amendment, will be included in the updated Explanatory Report which will be submitted to the Minister for approval.

FINANCIAL IMPACT

Costs associated with the preparation and exhibition of Amendment C210warr can be met within the 2021/22 City Strategy and Development Budget and all statutory fees will be paid by the proponent.

LEGISLATION / POLICY / COUNCIL PLAN CONTEXT

4 A connected, inclusive place

4.1 Effective planning: Council will ensure its planning acknowledges the unique character and attributes of local places and that that supports social connection, equitable access, appropriate housing and sustainable population growth.

5 An effective Council

5.1 Leadership and governance: Council will be a high-functioning team committed to respectful relationships, collaboration and ongoing engagement. It will provide strong, effective leadership, sound governance and informed decision-making

5.5 Organisational and financial sustainability: Council will ensure organisational and financial sustainability through the effective and efficient use of Council's resources and assets.

TIMING

Once Council adopts the Amendment, Council must submit the Amendment to the Minister for Planning within 10 business days of the date the amendment was adopted. A flow chart showing the current steps in the process is attached (**Attachment 4**).

COMMUNITY IMPACT / CONSULTATION

Public exhibition of the amendment was undertaken in accordance with the requirements of the *Planning and Environment Act 1987*. This included written notification to all affected and adjoining landowners, relevant government agencies and Prescribed Ministers. Notice was also placed in the Warrnambool Standard and in the Government Gazette. Amendment documentation was also available on Council's website.

LEGAL RISK / IMPACT

Risk is managed through implementing the provisions of the *Planning and Environment Act 1987*.

OFFICERS' DECLARATION OF INTEREST

Strategic Planner, Andrew Nield, has declared a conflict of interest in this matter. Management of the planning scheme amendment request is being led by the Coordinator City Strategy, with oversight by the Manager City Strategy & Development.

CONCLUSION

The proposed rezoning of the Kings College land and lots at 1-22 Royal Court, Warrnambool is considered appropriate, in the context of the private ownership of the land. The adoption of the amendment will ensure the appropriate zoning provisions are in place to support existing use and development of the land.

ATTACHMENTS

1. Attachment 1 Redacted [7.6.1 - 1 page]
2. Attachment 2 Redacted [7.6.2 - 4 pages]
3. Attachment 3 Redacted [7.6.3 - 2 pages]
4. Planning Scheme Amendment Flowchart for Council reports (1) [7.6.4 - 1 page]

Ms Julie McLean
Coordinator City Council
25 Liebig Street
Warrnambool VIC 3280
16th May 2022

Warrnambool City Council	
17 MAY 2022	
Ref No	
Officer	
Scanned Yes / No	Ch:

Dear Ms McLean,

I wish to put in a submission objecting to the rezoning of Nos 1-22 Royal Court Warrnambool, for two reasons:

1. The safety of the street, Royal Court.
2. The future of Kings Collage.

1. When we bought our home to retire in 2019, we choose Royal Court because it was a court, not being a through road it was and is, less busy and safer for us, as older members of the community, to walk for exercise.

If Royal Court becomes a through road will be more dangerous because of the extra flow of traffic.

2. With the expansion of housing in North, North-East Warrnambool, it is reasonable to expect the need for Kings Collage to become a larger campus in the near future.

Rezoning the area to General Residential Zone 1, will make it harder to cater for the future educational needs of the area.

My suggestion is to leave Nos 1-22 Royal Court, Warrnambool and the Royal Court Road reserve R-1 on Plan of Subdivision 719899N as Public Use Zone, for the reasons stated above.

Regards

[Redacted signature]

[Redacted line]

[Redacted line]

[Redacted line]

[Redacted line]

[REDACTED]

From: [REDACTED]
Sent: Tuesday, 31 May 2022 4:30 PM
To: Julie McLean
Cc: [REDACTED]
Subject: [REDACTED]

CAUTION: This email originated from outside of Warrnambool City Council. Do not follow guidance, click links, or open attachments unless you recognise the sender and know the content is safe.

Good afternoon Julie,

Thank you and Luke for coming to meet with Mum and myself last week to discuss the rezoning of the Kings College and Royal Court area.

I am writing to advise that at this time Mum is happy to withdraw her objection to the rezoning plans.

Thanks and regards

[REDACTED]

[REDACTED]



On 24 May 2022, at 10:29 am, Julie McLean <jmclean@warrnambool.vic.gov.au> wrote:

Hi [REDACTED]

Thanks for confirming, and yes we can come to your mother's home at [REDACTED] on Thursday. My manager will also be attending with me.

Kind regards

Julie

From: [REDACTED]
Sent: Tuesday, 24 May 2022 9:09 AM
To: Julie McLean <jmclean@warrnambool.vic.gov.au>
Subject: Re: [REDACTED]

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Hi Julie

Yes that will be good - [REDACTED]

Just confirming that you can come to [REDACTED]

Thanks

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

<image002.jpg> <image003.jpg>

On 23 May 2022, at 12:45 pm, Julie McLean
<jmclean@warrnambool.vic.gov.au> wrote:

Hi Melissa

Thursday morning would suit. How about 11.15am?

Kind regards

Julie

From: [REDACTED]
Sent: Friday, 20 May 2022 8:52 PM
To: Julie McLean <jmclean@warrnambool.vic.gov.au>
Subject: Re: [REDACTED]

CAUTION: This email originated from outside of Warrnambool City Council. Do not follow guidance, click links, or open attachments unless you recognise the sender and know the content is safe.

Hi Julie

What about Thursday morning?



Sent from my iPhone

On 20 May 2022, at 4:16 pm, Julie McLean
<jmclean@warrnambool.vic.gov.au> wrote:

Hi 

Thank you for getting back to me.

Unfortunately I am unavailable next Wednesday; is there any other day that would suit? I am happy to come to your mother's home if that is easier.

Kind regards
Julie

Julie McLean | Coordinator | City Strategy
Warrnambool City Council | 25 Liebig
Street Warrnambool 3280 | P.O Box 198 Warrnambool 3280
T: +61 355594836 | M: +61 408208342 | F: +61
355594900 | E: jmclean@warrnambool.vic.gov.au
We value accountability, collaboration, respectfulness,
progressiveness and wellbeing.
Council acknowledges the Traditional Owners and Custodians
of the lands on which we live and work and pays respects to
Elders past, present and emerging.

www.warrnambool.vic.gov.au |

<image001.jpg>

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From: 

Sent: Friday, 20 May 2022 3:21 PM
To: Julie McLean <jmclean@warrnambool.vic.gov.au>
Subject: [REDACTED]

CAUTION: This email originated from outside of Warrnambool City Council. Do not follow guidance, click links, or open attachments unless you recognise the sender and know the content is safe.
Hi Julie

I help Mum with her appointments. With regards to your letter requesting a meeting with [REDACTED], next Wednesday at 11am or 11.30am would be good - if you are able to come to [REDACTED]

Please let me know if this would suit.

Thanks

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

<image003.jpg> <image004.jpg>

[Redacted]

From: [Redacted]
Sent: Wednesday, 20 April 2022 1:33 PM
To: Julie McLean
Subject: Notice of Amendment C210warr - Warrnambool Planning Scheme

CAUTION: This email originated from outside of Warrnambool City Council. Do not follow guidance, click links, or open attachments unless you recognise the sender and know the content is safe.

To Whom it May Concern

We write to you regarding Amendment C210 which we understand is now on public exhibition.

It appears that Council did not previously refer this Amendment to us in accordance with Ministerial Direction 19, which indicates to us that the proposed Amendment presents a low risk of harm to the environment, amenity and human health as a result of pollution and waste.

It is noted that the Amendment appears to be drafted so as to ensure that the zoning of the land correctly reflects the actual use and ownership of the land.

We take this opportunity to remind Council of the need to review, and if necessary, satisfy the requirements of *Ministerial Direction 1 - Potentially Contaminated Land*.

We have no further comments to make and do not wish to be a party to this Amendment moving forward.

Kind regards

[Redacted]

[Redacted]
Team Leader, Strategic Planning Advisory
Development Advisory
200 Victoria St, Carlton
[Redacted] | www.epa.vic.gov.au

Please note I work Monday to Thursday



**Victoria has new laws
to prevent harm from
pollution and waste.**

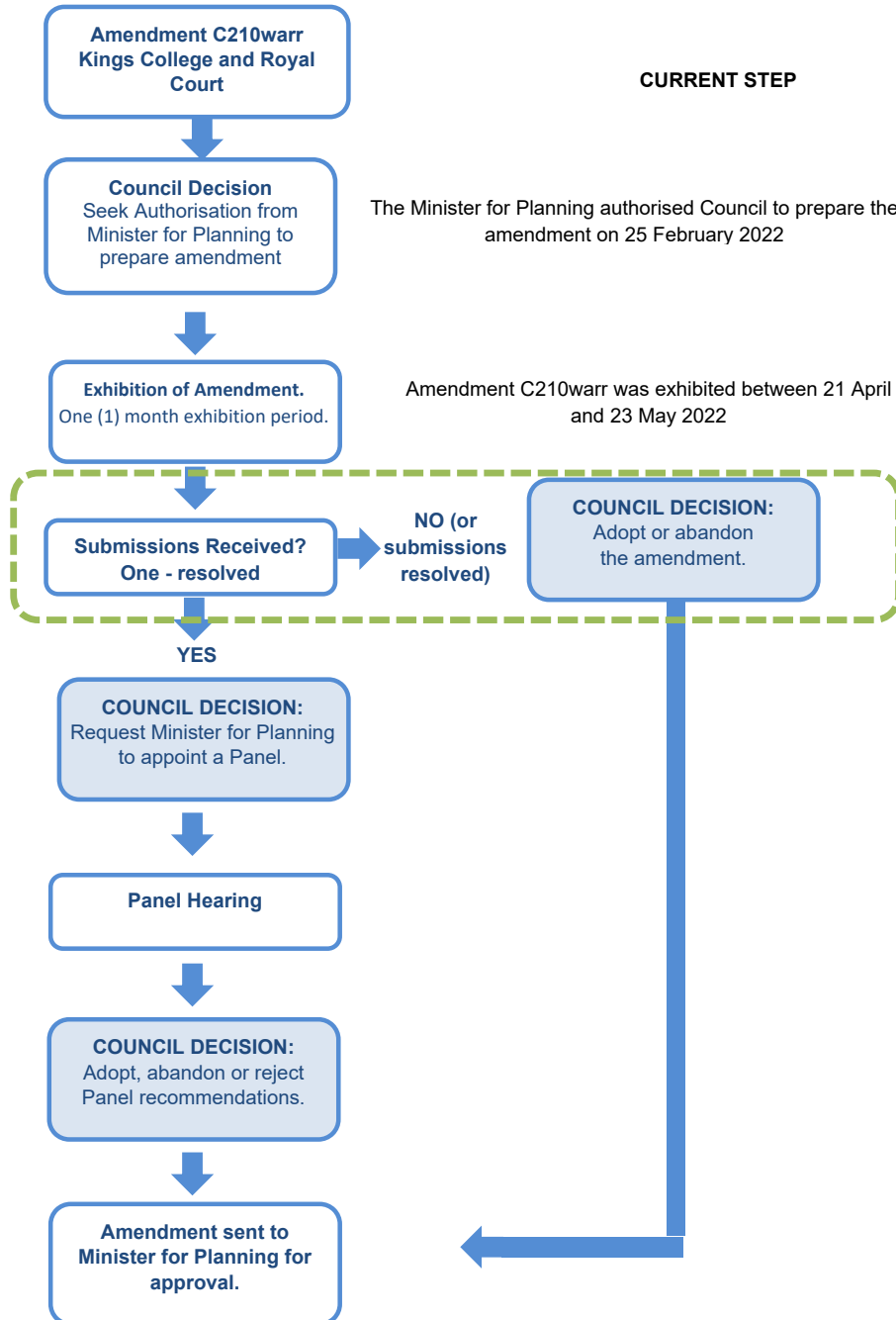
LEARN MORE

EPA acknowledges Aboriginal people as the first peoples and Traditional custodians of the land and water on which we live, work and depend. We pay respect to Aboriginal Elders past and present and recognise the continuing connection to, and aspirations for Country.



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PLANNING SCHEME AMENDMENT FLOWCHART (AMENDMENT C210warr)



7.7. WARRNAMBOOL BEACH ACCESS STRATEGY

DIRECTORATE : City Growth

PURPOSE:

This report considers submissions to the draft Warrnambool Beach Access Strategy and recommends that the plan be adopted by Council.

EXECUTIVE SUMMARY

- The Warrnambool Beach Access Strategy provides guidance for Warrnambool's 33 beach access points between Shelly Beach and Logans Beach, over a 15-year timeframe.
- The strategy helps inform council's capital works and renewal programs and will be used to support future grant and funding applications associated with improving beach access.
- A public survey was undertaken in March 2022 and responses informed the development of the draft plan which was released for community consultation in May 2022.
- Community consultation and collaboration with key stakeholders has informed the plan and feedback has been provided by written submissions and survey responses.
- The feedback has informed some minor changes to the Warrnambool Beach Access Strategy.

MOVED: CR MAX TAYLOR

SECONDED: CR DEBBIE ARNOTT

That Council resolve to:

- 1. Receive and consider the submissions in response to the draft Warrnambool Beach Access Strategy.**
- 2. Adopt the Warrnambool Beach Access Strategy.**

CARRIED - 7:0

BACKGROUND

Council maintains 35 beach access points. The beach access points range from fully constructed access ramps to informal paths. Two of these access points, one at Levys Beach and another at Spookys Beach, were included in the recently completed Wild Coast Landscape Master Plan. The remaining 33 beach access points span across approximately eight (8) kilometres of Warrnambool's coastline. These 33 beach access points provide access to Shelly Beach, Pickering Point, the Merri River Estuary, Stingray Bay, Worm Bay, Lady Bay, Point Ritchie / Moyjil, Hopkins River Estuary and Logans Beach. Warrnambool City Council is the Committee of Management (CoM), established under the *Crown Land (Reserves) Act 1978*, who are responsible for managing much of the Warrnambool coastline, including the 33 beach access points included within this study.

In 2019, Council completed an audit of the beach access points it maintains. The audit identified that some beach access structures are not fit for purpose and some have a limited useful remaining lifespan. In the future, significant changes are likely to place additional pressure on Warrnambool's coastline. The population of Warrnambool was approximately 35,500 in 2020 and is forecast to reach close to 40,000 by 2036. (RDV, 2022). Warrnambool is also a popular and expanding tourism destination (WWC, 2021) and this will result in a growing demand for beach access in the coming years. The impacts of climate change are expected to bring a warmer year-round climate, more frequent storm surges with increased wave height as well as sea level rises. These forecast changes may cause significant impact on the coastline, including its fragile dune system and built infrastructure. Council initiated this Beach Access Strategy to:

- a) Gain a better understanding of the needs of stakeholders, community and visitors in accessing Warrnambool's beaches,
- b) Find out more about the challenges and opportunities for each beach access point; and
- c) Develop recommendations for what can be done to better manage Warrnambool's beach access.

The Beach Access Strategy is informed by consultation with community and key stakeholders. It is also informed by the various strategies, plans and policies that are relevant to coastal planning and specifically beach access, including the Warrnambool Coastal Management Plan 2013, Disability Access and Inclusion Policy 2020, Active Warrnambool Strategy 2019-30, Warrnambool 2040, Community Plan 2019 and the Warrnambool Coastal Vegetation Management Plan 2012.

The development of the Warrnambool Beach Access Strategy aligns with the following strategies:

Warrnambool 2040

- Warrnambool will be Australia's most sustainable city

Green Warrnambool

- Adaptable Warrnambool: We will adapt to the impacts of climate change
- Naturally Warrnambool: We enjoy, love, respect and care for the natural environment
- Blue Warrnambool: Water is for life, we will care for and regenerate our waterways, our coast and marine environment
- Green Warrnambool: We will become a city in nature

Warrnambool Coastal Management Plan

- Sets the vision of 'an environment where the natural and cultural values of Warrnambool's unique coastline are protected and enhanced and the opportunities to access and enjoy the coastline are achieved in a sustainable way'.

In May 2022 Council resolved to release the draft Warrnambool Beach Access Strategy for community consultation.

ISSUES

The Warrnambool Beach Access Strategy has been developed in consultation with key stakeholders and the community.

The strategy is in five parts: Introduction & Planning Framework, Consultation Findings, Analysis, Planning Principles and Recommendations and Implementation 2022-2037. **Refer to Attachment 1 Warrnambool Beach Access Strategy**

The Implementation 2022-2037 plan includes recommendations for improvements to Warrnambool's beach access points, over a period of 15 years. The timing for delivery of these recommendations will be dependent on Council priorities and budget allocations and availability of funding programs and grant opportunities.

The key recommendations include:

- Replacement of the existing accessible ramp near the Warrnambool Surf Lifesaving Club, three new accessible ramps in Lady Bay and Hopkins River (to replace existing structures) and consolidation of two access structures into one new accessible ramp at 'The Flume'
- Replacement of 13 staircases, including accessibility and safety improvements
- Retention of five (5) recently constructed/upgraded access structures, with no changes proposed
- Retention and improvements to seven (7) existing structures
- Closure of two existing access points; and
- One new access point at the Harbour

Community consultation has been undertaken and included an online survey via Council's YourSay website and community 'drop in' sessions.

Council received three (3) written submissions. **Refer to Attachment 2, 3 and 4.**

Seventy-five (75) online submissions were received in response to the online survey. **Refer to Attachment 5 YourSay Survey Responses.**

Majority of respondents support the overall intent of the Beach Access Strategy including the guiding principles and objectives. Many of the comments made in the surveys and submissions reflect or support recommendations of the Beach Access Strategy.

The suggestions arising from the consultation that have been incorporated into this final version of the Strategy include:

- Further discuss weed species including Marram Grass (*Ammophila arenaria*) and Beach Daisy (*Arctotheca populifolia*) and the need for these weeds to be monitored and controlled to prevent detrimental impacts to Hooded Plover (*Thinornis cucullatus*) habitat and breeding.
- Improve signage and fencing to help protect Hooded Plover beach-nesting sites and consult with Birdlife Australia when planning new access points, to discuss vegetation and habitat for bird species, including the Hooded Plover.
- Consider appropriateness of installing solar lighting, showers and drinking taps, near new/upgraded beach access points are designed.
- Change the reference to 'Water Treatment Facility' to correct terminology of 'Sewage Treatment Plant'.
- As part of the recommended safety audit of the walking trail between Viaduct Road and Shelly Beach, investigate the best alignment for a single, more defined beach access point at WCC101 to avoid unnecessary damage to shorebird habitat.
- Investigate and support purchasing of portable beach matting. Liaise with Warrnambool Surf Lifesaving Club to determine options for making portable beach matting readily available during the patrolled beach season. Investigate means of promoting use of beach matting and developing a user-friendly booking method, if required.
- Conduct a signage audit of directional, informational and regulatory signs, including information regarding dog access to beaches (prohibited or on-leash). Investigate opportunities to incorporate information about culturally and environmentally significant sites/features.
- Conduct a review of dog access on beaches near known Hooded Plover beach-nesting areas at Blue Hole and Logans Beach, including timing of seasonal access. Engage with BirdLife Australia to discuss dog off-leash impacts on beach-nesting bird breeding.
- Provide additional information to dog owners regarding seasonal access, restriction times and prohibited areas for all beaches in Warrnambool, including maps.

FINANCIAL IMPACT

The preparation of the Warrnambool Beach Access Strategy has been funded by Council. Implementation of the strategy will be accommodated within Council's capital works and renewal programs budget and will be used to support future grant and funding applications associated with improving beach access such as the Department of Environment, Land, Water and Planning (DELWP) funding stream for coastal public risk and access.

LEGISLATION / POLICY / COUNCIL PLAN CONTEXT

1 A healthy community

1.4 An accessible city: Council will improve physical and social accessibility to community services, facilities, places and precincts.

1.5 Recreation, arts, culture and heritage: Council will support opportunities to participate in a wide range of recreational, arts and cultural programs that promote activity, wellbeing, diversity heritage and which increase community connectedness.

2 A Sustainable environment

2.1 Natural environment: Council will enhance open spaces and infrastructure that support a healthy community, wildlife, flora, fauna and biodiversity.

2.2 Water and coastal management: Council will protect and enhance the health of Warrnambool's coastline and inland waterways to protect and improve biodiversity

2.3 Environmental impact and a changing climate: Council will encourage innovation and initiatives that minimise Warrnambool's environmental impact.

4 A connected, inclusive place

4.1 Effective planning: Council will ensure its planning acknowledges the unique character and attributes of local places and that that supports social connection, equitable access, appropriate housing and sustainable population growth.

4.2 A connected community: Council will enhance Warrnambool's connectivity through the delivery of, or advocacy for, improvement to roads, public transport, footpaths, trails and digital infrastructure.

4.4 Sustainable practices: Council will promote and encourage the implementation of sustainable design across the municipality including the attractiveness, safety, accessibility and functionality of our built environment.

5 An effective Council

5.1 Leadership and governance: Council will be a high-functioning team committed to respectful relationships, collaboration and ongoing engagement. It will provide strong, effective leadership, sound governance and informed decision-making

5.2 Engaged and informed community: Council will ensure ongoing community engagement to identify changing needs and priorities when developing and delivering services and programs.

TIMING

The draft Warrnambool Beach Access Strategy has been exhibited, submissions and feedback considered and changes to the plan have been made accordingly. Once adopted the plan will provide strategic direction to the maintenance and management of Warrnambool's Beach Access.

COMMUNITY IMPACT / CONSULTATION

Community consultation for the development of the Warrnambool Beach Access Strategy has been undertaken through a two staged approach.

The first stage comprised an online survey to establish how the community use and value the beach accesses along with concerns for beach accesses and what should be addressed within the plan. The feedback received has influenced the vision of the draft plan. Council staff also provided early input into the plan.

The release of the draft Warrnambool Beach Access Strategy for community consultation was the second stage in the consultation process and included survey on Councils Your Say website and notification in the newspaper and social media. Key stakeholders were notified of the release of the draft plan and community 'drop in' sessions were held.

LEGAL RISK / IMPACT

In 2019, Council completed an audit of the beach access points it maintains. The audit identified that some beach access structures are not fit for purpose and some have a limited useful remaining lifespan. Consideration of each beach accesses physical condition, safety issues, environmental issues, cultural issues and historical issues produced a safety score and list of capital works needed for each access. The Warrnambool Beach Access Strategy has been developed to assist in improving the safety score and prioritising capital works.

OFFICERS' DECLARATION OF INTEREST

None.

CONCLUSION

The Warrnambool Beach Access Strategy provides recommendations that are intended to provide guidance for Warrnambool's 33 beach access points between Shelly Beach and Logans Beach, over a 15-year timeframe. The strategy will help inform Council's capital works and renewal programs and will be used to support future grant and funding applications associated with improving beach access.

ATTACHMENTS

1. Warrnambool Beach Access Strategy June 2022 [7.7.1 - 81 pages]
2. Bird Life Submission Draft Warrnambool Beach Access Strategy [7.7.2 - 2 pages]
3. Wannon Water Submission Draft Warrnambool Beach Access Strategy [7.7.3 - 2 pages]
4. Submission - Draft Beach Access Strategy [7.7.4 - 1 page]
5. Your Say Survey Responses - details redacted [7.7.5 - 5 pages]



Warrnambool Beach Access Strategy



JUNE 2022

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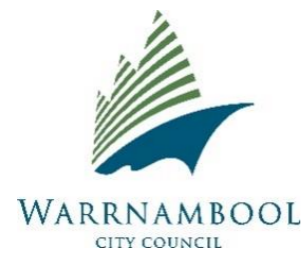
Document Name	Warrnambool Beach Access Strategy
Department	City Growth
Version	1.3
Version Date	20 June 2022

ACKNOWLEDGEMENTS

Council acknowledges the Eastern Maar Nation as the original custodians of the lands of this general area. Council also acknowledges the descendants of the ancestors of Aboriginal nations within the lands forming the Great South Coast and particularly the elders of the Indigenous communities within both Warrnambool and this region.

Warrnambool City Council is honoured to have an important custodian role in partnership with Eastern Maar Citizens in looking after Country. Warrnambool City Council is proud of our Maar heritage and story. We acknowledge the Maar people and celebrate their rich, diverse and ongoing contribution to us all.

PREPARED BY:



DISCLAIMER

This publication may be of assistance to you, but Warrnambool City Council and its employees do not guarantee that the publication is without flaw of any kind or is wholly appropriate for your particular purposes and therefore disclaims all liability for any error, loss or other consequence which may arise from you relying on any information in this publication.

ACRONYMS

BMO	Bushfire Management Overlay
CoM	Committee of Management
CHMP	Cultural Heritage Management Plan
DDA	Disability and Discrimination Act
DDO	Design and Development Overlay
DELWP	Department of Environment Land Water and Planning
EMAC	Eastern Maar Aboriginal Corporation
ESO	Environmental Significance Overlay
EVC	Ecological Vegetation Class
ESTA	Emergency Services Telecommunications Authority (ESTA)
FRP	Fibre Reinforced Polymers
HO	Heritage Overlay
PCRZ	Public Conservation and Resource Zone
RAP	Registered Aboriginal Party
SES	State Emergency Service
SLO	Significant Landscape Overlay
VCMP	Victorian Coastal Monitoring Program
WCC	Warrnambool City Council
WSLSC	Warrnambool Surf Lifesaving Club

EXECUTIVE SUMMARY

Warrnambool's beaches are amazing natural assets attracting residents, visitors and tourists. These beaches play an important role for the community, providing spaces for a range of activities, recreation, tourism and events, as well as opportunities for people to connect with the natural environment and cultural coastal landscapes.

Beach access is highly valued and will be subject to increasing demand as Warrnambool's population continues to grow. Warrnambool's coastal environment is dynamic, often with diverse climatic conditions which can contribute to shifting sands and unstable dune systems. It is important that beach access points along the coast are carefully planned, designed and built to ensure they can withstand the demands of increasing use and climate change. These access points must also provide safe and functional access, whilst protecting the natural and cultural landscapes that make Warrnambool's coastline special.

The preparation of a Beach Access Strategy allows Council to gain a better understanding of the needs of stakeholders, the community and visitors in accessing Warrnambool's beaches. Through consultation with stakeholders and the community and the development of the Strategy, Council gains a clearer picture of the strengths, challenges and opportunities for beach access along Warrnambool's coastline and a strategy for what can be done to improve it.

This Strategy helps inform Council's capital works and renewal programs and will be used to support future grant and funding applications associated with improving beach access.

The recommendations of the Strategy are intended to provide guidance for Warrnambool's 33 beach access points between Shelly Beach and Logans Beach, over a 15-year timeframe.

The Strategy includes 26 recommendations as described on pages 5-7 and Section 5 (page 59-61).

In summary the following changes are recommended:

- Replacement of the existing accessible ramp near the Warrnambool Surf Lifesaving Club.
- Replacement of existing staircase/ramp structures with construction of four (4) accessible ramps, including one near Merri River Estuary (Viaduct Road), one at McGennans Beach, consolidation of two access structures into one new accessible ramp at 'The Flume' and one at the Hopkins River Estuary (Blue Hole Road).
- Replacement of 11 staircases, including accessibility and safety improvements.
- Retention of five recently constructed/upgraded access structures, with no changes proposed.
- Retention and improvements to seven existing structures.
- Closure of two existing access points.
- Review of pedestrian safety and beach access points at Merri River estuary off Viaduct Road; and
- One new access point, incorporating an accessible ramp, near the Harbour.



SHELLY BEACH, PICKERING POINT LOOKOUT, MERRI RIVER ESTUARY, STINGRAY BAY AND WORM BAY

1. Conduct a safety audit of the walking trail between the Viaduct Road and Shelly Beach, including beach access points WCC101 and WCC107. There are cliffs in relatively close proximity to the access path leading to Shelly Beach and Point Pickering. A safety audit of the cliff face and fencing should be undertaken to provide sufficient evidence that the tracks and beach access points can safely remain open to the public.
2. Investigate opportunities to make safety improvements to Shelly Beach WCC101. Changes may include fencing and surface improvements.
3. Carry out fencing repairs and additional fencing between the Merri Bridge and Shelly Beach to ensure walkers stay on the main track and avoid threats to significant cultural heritage places and deter people from going near cliff edges.
4. Install signage to direct visitors along the main tracks to Shelly Beach.
5. Replace existing staircase at beach access WCC107 near Pickering Point. The suitability of this location as a beach access point should be investigated as part of the safety audit.
6. Develop Viaduct Road Pedestrian Access Plan. Incorporate review of car parking, pedestrian access paths and crossings, pedestrian safety and beach access at WCC111, WCC112 and WCC113. The Plan should provide recommendations to address beach accessibility for people with wheelchairs and special access requirements and ensure emergency vehicle access is provided to the beach at this location. The Plan should include an assessment of the suitability and safety of retaining the three access points in their current locations.
7. Design and construct a new accessible ramp proposed near boat launching facilities. Design and construction of the proposed concrete terraced seating is to have integrated accessible ramp. This access point was adopted as part of the Harbour Master Plan.
8. Investigate opportunities to make safety improvements to the Worm Bay pedestrian and horse beach access ramp at WCC117.
9. Retain access points at the Yacht Club WCCYC and Worm Bay WCC118 as they are. These are relatively new structures with long remaining useful lifespans.

LADY BAY WEST (INCLUDING THE FLUME) AND LADY BAY EAST

10. There are a number of existing timber structures which have short remaining useful life. These should be replaced with staircases incorporating handrails, landings, tactile ground surface indicators and contrasting strips on stairs to make them more accessible. Access points proposed for replacement with staircases include WCC119, WCC120, WCC121, WCC123, WCC129 and WCC130. The replacement of WCC123 and WCC129 are current projects in the planned capital works program.
11. The existing accessible ramp near the Warrnambool Surf Lifesaving Club WCC126 is subject to regular access maintenance issues due to its design, construction materials and proneness to sand build up. It is recommended that this access ramp be replaced with a new accessible ramp. The design and siting of the accessible ramp near the Warrnambool Surf Lifesaving Club WCC126 should be undertaken at the same time as the plans for the proposed surf lifesaving club upgrade/extension to ensure good planning and access to and from main building entrance/s and car parking areas. It is also recommended that a second accessible ramp be provided in Lady Bay West near the eastern end of the holiday park due to it being a high usage area with good path access from the McGennans car park. WCC122 may be an appropriate location for an accessible ramp subject to further investigation of the dune morphology and detailed design.

12. Retain access points at the Lady Bay WCC124 and Lady Bay WCC131 as they are. These are relatively new structures with long remaining useful lifespans.
13. Upgrade matting material of the vehicle access ramp at the Warrnambool Lifesaving Club WCC127. This may be a short-term solution depending on the future long-term plans for the Warrnambool Surf Lifesaving Club and associated vehicle access to the beach. It is not known whether the vehicle access point is proposed to remain in its current location.
14. It is recommended that Lady Bay WCC128 and WCC132 be decommissioned and removed and these areas fenced and revegetated. There are multiple access points provided along this section in front of the holiday park which will ensure convenient beach access is retained. These two access points present regular maintenance issues due to their siting and position in the dynamic sand dune and regular sand coverage. Access to WCC128 has been closed to the holiday park due to maintenance and safety concerns.
15. The access points WCC133 and WCC134 are in very close proximity to each other, approximately 65 metres apart. WCC133 is reaching the end of its remaining useful lifespan and WCC134 has an estimated remaining useful lifespan of 7 years. It is recommended to consolidate WCC133 and WCC134 into one upgraded beach access structure with an accessible ramp to accommodate wheelchairs and people with special access requirements. It is important that the access paths from the holiday park and The Flume car park be maintained in the redesign. The siting and location of the structure in the sand dune will require careful design and consideration in this dynamic sand dune to help avoid sand build up. The design of the new consolidated access point should include emergency vehicle access to the beach in this location (minimum 3m wide for all-terrain vehicle) as well as maintenance vehicles to clear sand away.
16. Retain and improve WCC135, WCC136 and WCC138. These are relatively low usage access points. Investigate ways in which minor improvements can be carried out to enhance safety and extend their remaining useful lifespan.

POINT RITCHIE / MOYJIL, HOPKINS RIVER ESTUARY AND LOGANS BEACH

17. Retain access points at Point Ritchie / Moyjil WCC140. This is a relatively new structure with a long remaining useful lifespan.
18. Replace staircases at Point Ritchie/Moyjil WCC141 and Hopkins River WCC142 and WCC145.
19. Construct accessible ramp at Hopkins River WCC144 to accommodate wheelchairs and people with special access requirements. Provide all-terrain vehicle access to beach in this location for improved emergency access (although vehicle access is dependent on tidal levels)
20. Investigate opportunities to make safety improvements to Logans Beach access WCCBH. Changes may include fencing and surface improvements. New ESTA marker required at this location.
21. Replace staircase at Logans Beach WCC146. Replace timber stairs between the existing viewing platform/deck and beach. This is a current project in the planned capital works program.

GENERAL

- 22.** Conduct a Vegetation Management Plan review to investigate the management of weeds and species with invasive tendencies, including Coast Tea-tree. Use findings of review to guide the maintenance program and amend planning overlays, where required.
- 23.** Conduct a review of ESTA markers, including review of numbers, siting and information provided on each sign.
- 24.** Investigate and support purchasing of portable beach matting. Liaise with Warrnambool Surf Lifesaving Club to determine options for making portable beach matting readily available during the patrolled beach season. Investigate means of promoting use of beach matting and developing a user-friendly booking method, if required.
- 25.** Conduct a signage audit of directional, informational and regulatory signs, including information regarding dog access to beaches (prohibited or on-leash). Investigate opportunities to incorporate information about culturally and environmentally significant sites/features.
- 26.** Conduct a review of dog access on beaches near known Hooded Plover beach-nesting areas at Blue Hole and Logans Beach, including timing of seasonal access. Engage with BirdLife Australia to discuss dog off-leash impacts on beach-nesting bird breeding.



RECOMMENDATIONS PLAN

WARRNAMBOOL BEACH ACCESS - RECOMMENDATIONS PLAN (WEST)



WARRNAMBOOL BEACH ACCESS - RECOMMENDATIONS PLAN (EAST)



LEGEND

- Beach Access Point (33 in total within study area)
- **Retain**
Recently constructed staircase structure:
Worm Bay WCC118
McGennons WCC124
Lady Bay WCC131
Moyil/Point Ritchie WCC140
Recently upgraded boat ramp:
Worm Bay WCCYC
- **Retain and improve**
- **Replace with accessible ramp**
Incorporate handrails, landings, tactile ground surface indicators
- **Replace with staircase**
Incorporate handrails, landings, tactile ground surface indicators and contrasting strips on stairs
- **New accessible ramp**
Incorporate handrails, landings, tactile ground surface indicators
Currently no constructed beach access at this location
- **Consolidate with accessible ramp**
Consolidate WCC133 and WCC134 providing a single location for beach access. Replace with ramp (incorporating handrails, landings, tactile ground surface indicators). Provide all-terrain vehicle (ATV) access in consultation with emergency services.
- ⊗ **Decommission and Remove**
WCC128 and WCC132
Fence off and revegetate area
- ▲ **Provide emergency vehicle access to beach**
- Existing Path/Traill
- ⊗ Existing Public Amenities/Toilets
- **Develop Viaduct Road Pedestrian Access Plan**
Incorporate review of car parking, pedestrian access paths and crossings, pedestrian safety and siting and design of WCC111, WCC112 and WCC113. Ensure access ramp for pedestrians and access ramp for emergency vehicles are provided.
- **Prepare a risk audit of the track and beach access points between Viaduct Road and Shelly Beach.** The audit should assess the risk to visitors taking into consideration the stability of the cliffs and proximity of the trail/path/boardwalks to the cliff.

REFER TO LOCATION PLAN (EAST) (BELOW)

REFER TO LOCATION PLAN (WEST) (ABOVE)

Beach Access Strategy
Part 1: Introduction & Background

1. INTRODUCTION

1.1 STUDY AREA

Council maintains 35 beach access points. The beach access points range from fully constructed access ramps to informal paths. Two of these access points, one at Levys Beach and another at Spookys Beach, were included in the recently completed Wild Coast Landscape Master Plan.

The remaining 33 beach access points span across approximately eight (8) kilometres of Warrnambool's coastline. These 33 beach access points provide access to Shelly Beach, Pickering Point, the Merri River Estuary, Stingray Bay, Worm Bay, Lady Bay, Point Ritchie / Moyjil, Hopkins River Estuary and Logans Beach.

Warrnambool City Council is the Committee of Management (CoM), established under the *Crown Land (Reserves) Act 1978*, who are responsible for managing much of the Warrnambool coastline, including the 33 beach access points included within this study.

These 33 beach access points are included in this Beach Access Strategy for Warrnambool. The study area and 33 existing beach access points are shown at Figures 1 and 2.

Figure 1: Study Area Boundary



Figure 2: Beach Access Point Location Plan (with reference ID)

WARRNAMBOOL BEACH ACCESS - LOCATION PLAN (WEST)



REFER TO LOCATION PLAN (EAST) (BELOW)

WARRNAMBOOL BEACH ACCESS - LOCATION PLAN (EAST)



REFER TO LOCATION PLAN (WEST) (ABOVE)

1.2 WHY IS A STRATEGY NEEDED?

In 2019, Council completed an audit of the beach access points it maintains. The audit identified that some beach access structures are not fit for purpose and some have a limited useful remaining lifespan.

In future, significant changes are likely to place additional pressure on Warrnambool's coastline. The population of Warrnambool was approximately 35,500 in 2020 and is forecast to reach close to 40,000 by 2036. (RDV, 2022). Warrnambool is also a popular and expanding tourism destination (WWC, 2021) and this will result in growing demand for beach access in the coming years.

The impacts of climate change are expected to bring a warmer year-round climate, more frequent storm surges with increased wave height as well as sea level rises. These forecast changes may cause significant impact on the coastline, including its fragile dune system and built infrastructure.

Council initiated this Beach Access Strategy to:

- a) Gain a better understanding of the needs of stakeholders, community and visitors in accessing Warrnambool's beaches,
- b) Find out more about the challenges and opportunities for each beach access point; and
- c) Develop recommendations for what can be done to better manage Warrnambool's beach access

The recommendations of the Strategy are intended to provide guidance for Warrnambool's 33 beach access points over a 15-year timeframe. The Strategy will help inform Council's capital works and renewal programs and will also be used to support any future grant and funding applications.

1.3 PROJECT APPROACH

The Beach Access Strategy is informed by consultation with community and key stakeholders. It is also informed by the various strategies, plans and policies that are relevant to coastal planning and specifically beach access, including the *Warrnambool Coastal Management Plan 2013*, *Disability Access and Inclusion Policy 2020*, *Active Warrnambool Strategy 2019-30*, *Warrnambool 2040*, *Community Plan 2019* and the *Warrnambool Coastal Vegetation Management Plan 2012*.

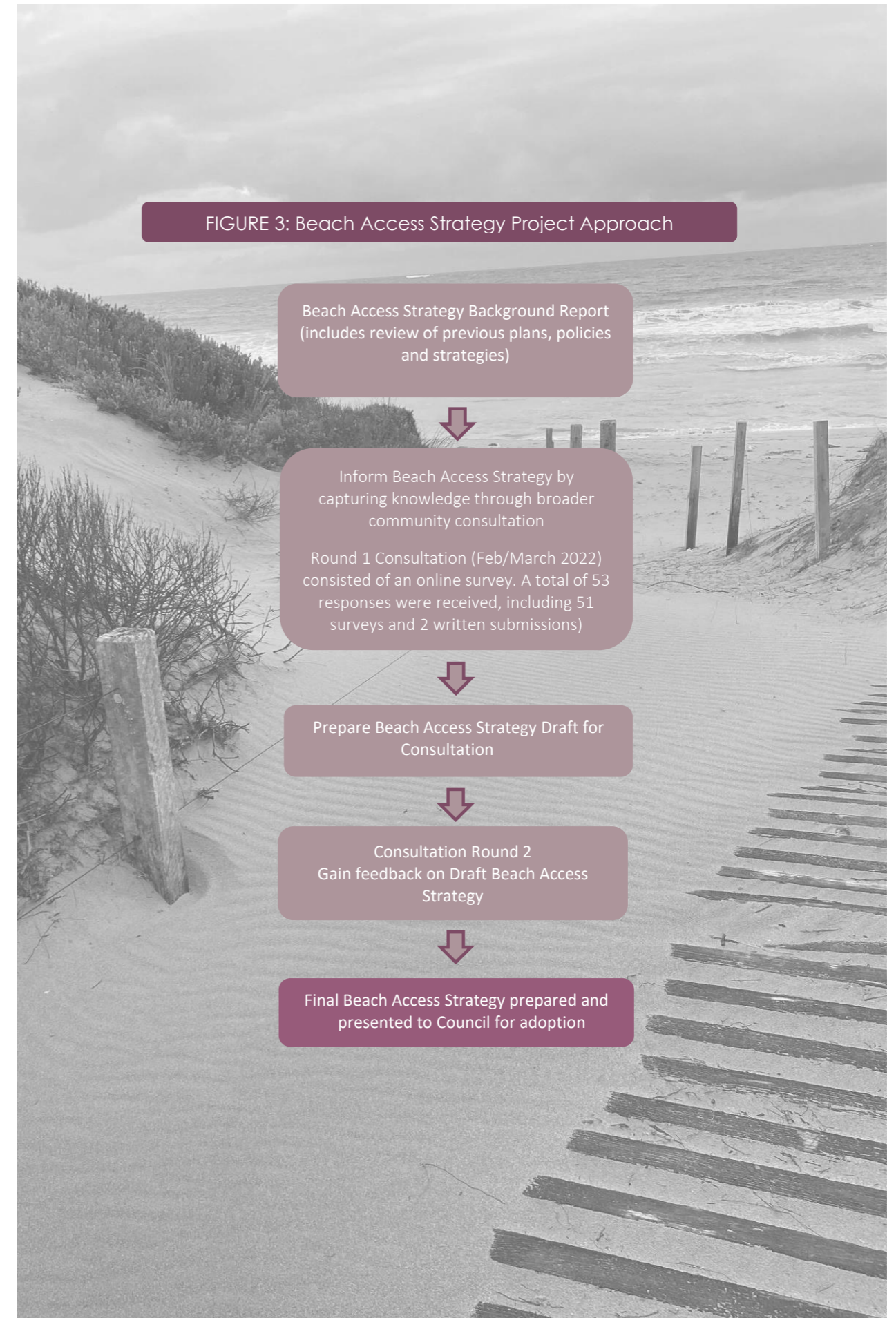
A summary of these documents and key findings are provided in the Warrnambool Beach Access Strategy Background Report, 2022. This Background Report details how the relevant plans and policies relate to future planning for beach access. Section 2 also provides a summary of the planning framework which informs this Strategy.

Council sought community input into this Beach Access Strategy during consultation in February/March 2022. The survey asked the community how they currently utilise beach access points between Shelly Beach and Logans Beach, what issues they face when using these access points, what concerns they have and how they would like to see beach access improved. A summary of the feedback from Round 1 consultation is provided at Section 2.

The project team conducted site visits in March 2022. An overview of the site analysis from these visits, and findings from previous audits, is provided at Section 4.

Council sought community and stakeholder feedback on the draft Strategy during consultation in May/June 2022. The survey asked the community if the Strategy addresses their concerns relating to beach access and whether the Strategy responds to the communities needs for beach access. Majority of feedback was supportive of the Strategy. A summary of the feedback is provided at Section 2.

Figure 3 shows the stages in the development of the Warrnambool Beach Access Strategy.



1.4 PLANNING FRAMEWORK

The Warrnambool coastline is recognised as having significant landscape, cultural heritage and environmental values. These values are acknowledged by Aboriginal Victoria, the State Government of Victoria and Warrnambool City Council.

The section of coastline between Shelly Beach and Logans Beach also has a significant role in providing for public recreation and tourism, providing public beach access in multiple locations, including the patrolled swimming beach and connecting with the broader linear trail network.

The need to protect the significant landscape, cultural heritage and environmental values whilst maintaining access for tourism and recreation are reinforced through regulations and planning policy.

The Beach Access Strategy is informed by the existing planning framework and the various approved policies, strategies and plans relevant to coastal planning, including:

STATE PLANNING FRAMEWORK

- *Warrnambool Planning Scheme*
- *Marine and Coastal Policy, Victorian State Government 2020*
- *Victorian Coastal Strategy 2014*
- *Victoria's Coast and Marine Environments Under Projected Climate Change: Impacts, research and priorities (Victoria State Government 2018)*
- *Siting and Design Guidelines for Structures on the Victorian Coast, 2020*
- *Protecting Victoria's Environment-Biodiversity 2037*

LOCAL PLANNING FRAMEWORK

There are numerous local strategies, plans and policies that provide recommendations and directions for the Warrnambool Coast and beach access. They include:

- *Warrnambool City Council Plan 2021-2025*
- *Wild Coast Landscape Master Plan 2021*
- *Disability Access and Inclusion Policy 2020*
- *Active Warrnambool Strategy 2019-30*
- *Warrnambool 2040, Community Plan 2019*
- *Lake Pertobe Master Plan 2018*
- *Green Warrnambool 2018*
- *Warrnambool Harbour Master Plan 2018*
- *Warrnambool Coastal Management Plan 2013*
- *Moyjil Conservation Management Plan 2013*
- *Warrnambool Open Space Strategy 2013*
- *Warrnambool Coastal Vegetation Management Plan 2012*
- *Warrnambool Public Amenities Strategy 2013*

A summary of the listed State and local planning documents is provided in the Warrnambool Beach Access Background Report 2022, which helps inform this Strategy.

One of the most pertinent planning documents relevant to Beach Access is the Siting and Design Guidelines for Structures on the Victorian Coast (DELWP, 2020). In the planning phase of replacing or proposing new structures on the Coast, the Guidelines list a number of questions that should be considered by the proponent, which in most instances will be Warrnambool City Council. When considering the replacement, upgrade or relocation of Warrnambool's beach access structures, the Siting and Design Guidelines for Structures on the Victorian Coast (DELWP, 2020) must be carefully considered and addressed.

There are 15 fundamental considerations detailed in the Guidelines, including:

1. *Aboriginal cultural heritage*
2. *Coastal processes*
3. *Geology*
4. *Morphology*
5. *Hydrology*
6. *Vegetation and ecology*
7. *Climatic conditions*
8. *Views*
9. *Public Open Space*
10. *Local character and sense of place*
11. *Heritage*
12. *Public access*
13. *Increased function and adaptability*
14. *Sustainability*
15. *Materials and finished*

The *Siting and Design Guidelines for Structures on the Victorian Coast 2020* are referred to regularly throughout this document.

PLANNING ZONES

Warrnambool's 33 beach access points are located on land zoned Public Conservation and Resource Zone (PCRZ) and Public Park and Recreation Zone (PPRZ). The PCRZ applies to coastline to the less urbanized areas of the coast, including Shelly Beach, Pickering Point, Lady Bay (East) and Logans Beach, whilst the PPRZ applies to the coastline adjoining the urban area and foreshore precinct, including Worm Bay and Lady Bay (West).

Figure 5 shows zoning of land within the study area. The following zones apply:

36.02 PUBLIC PARK AND RECREATION ZONE

This zone seeks to:

- recognise areas for public recreation and open space.
- protect and conserve areas of significance where appropriate.
- provide for commercial uses where appropriate

36.03 PUBLIC CONSERVATION AND RESOURCE ZONE

This zone seeks to:

- protect and conserve the natural environment and natural processes for their historic, scientific, landscape, habitat or cultural values.
- provide facilities which assist in public education and interpretation of the natural environment with minimal degradation of the natural environment or natural processes.
- provide appropriate resource-based uses.

Figure 4: Zoning



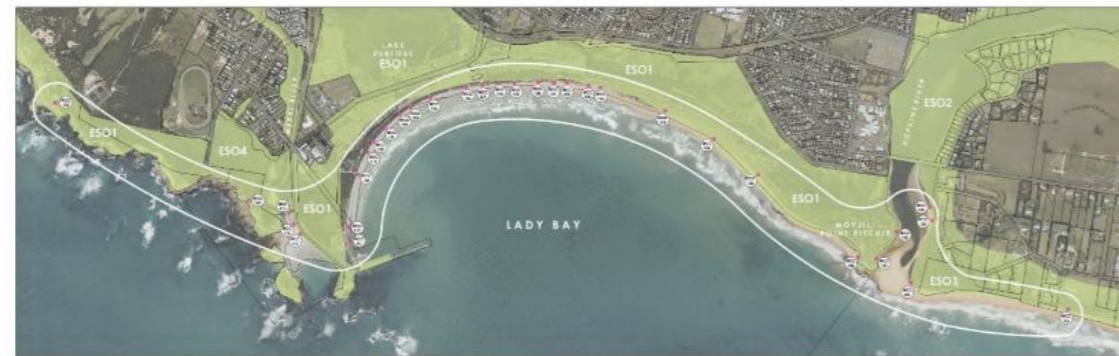
PLANNING OVERLAYS

There are five overlays applying to the study area between Shelly Beach and Logans Beach. Figures 6 to 10 show overlays applying to land within the study area. These overlays include the following:

42.01 ENVIRONMENTAL SIGNIFICANCE OVERLAY SCHEDULE 1 – COASTAL ENVIRONS

This overlay applies to coastal environs in Warrnambool with environmental significance. It contains a number of environmental objectives to be achieved for these areas, including protection of natural and cultural values, preventing and minimising coastal erosion, maintaining remnant vegetation, minimising the spread of weeds and encouraging planting of locally indigenous species.

Figure 5: Environmental Significance Overlay – Schedule 1 Coastal Environs



42.03 SIGNIFICANT LANDSCAPE OVERLAY – SCHEDULE 1 – COASTAL HINTERLAND LANDSCAPE AREA

This overlay applies to coastal hinterland areas recognised for their significant landscapes. It contains a number of landscape objectives to be achieved, including protecting the scenic qualities of the coast hinterland, recognizing important views and maintaining and enhancing these views.

Figure 6: Significant Landscape Overlay – Schedule 1 Coastal Hinterland Landscape Area



43.01 HERITAGE OVERLAY – HO19 WARRNAMBOOL BREAKWATER, VIADUCT AND HARBOUR AND HO51 HOPKINS RIVER MOUTH

This overlay seeks to conserve and enhance heritage places of natural or cultural significance, conserve and enhance those elements which contribute to the significance of heritage places, ensure that development does not adversely affect the significance of heritage places and conserve specified heritage places by allowing a use that would otherwise be prohibited if this will demonstrably assist with the conservation of the significance of the heritage place.

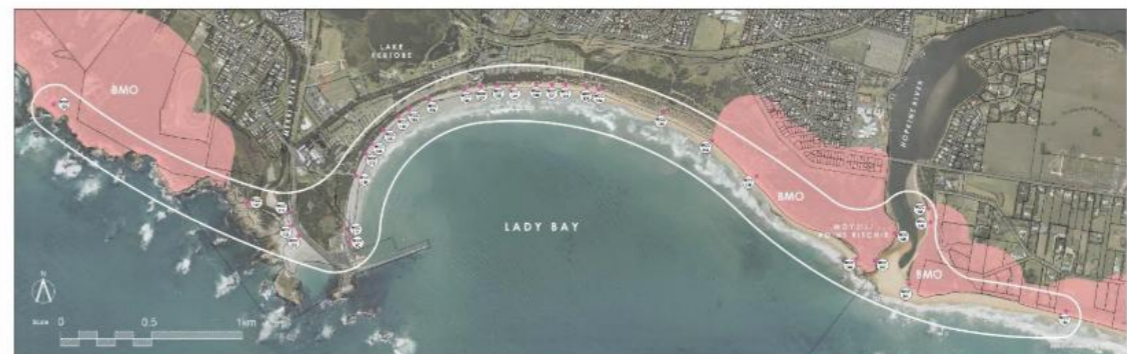
Figure 7: Heritage Overlay HO19 Warrnambool Breakwater, Viaduct and Harbour, HO51 Hopkins River Mouth



44.06 BUSHFIRE MANAGEMENT OVERLAY

The purpose of this overlay to ensure that the development of land prioritises the protection of human life and strengthens community resilience to bushfire. Other purposes of this overlay relate to development and in particular buildings that people inhabit.

Figure 8: Bushfire Management Overlay



43.02 DESIGN AND DEVELOPMENT OVERLAY – SCHEDULE 2 – LOGANS BEACH

This overlay applies to set the design, subdivision and development parameters, including:

- To ensure the proper protection and management of the whale viewing area and its environs.
- To protect the local environment and significant views.
- To provide generous separation between dwellings to enable revegetation of the landscape.
- To limit intrusion on the skyline and ridgeline.
- To encourage the designation of Appropriate Building and Access Areas at the time of subdivision.
- To provide for a thorough permit application assessment process for buildings, particularly on the southern side of Hopkins Point Road in relation to landscape and environmental issues, by using as appropriate the Logans Beach Urban Design Guidelines (including the associated computer model).

Figure 9: Design and Development Overlay – Schedule 2 Logans Beach

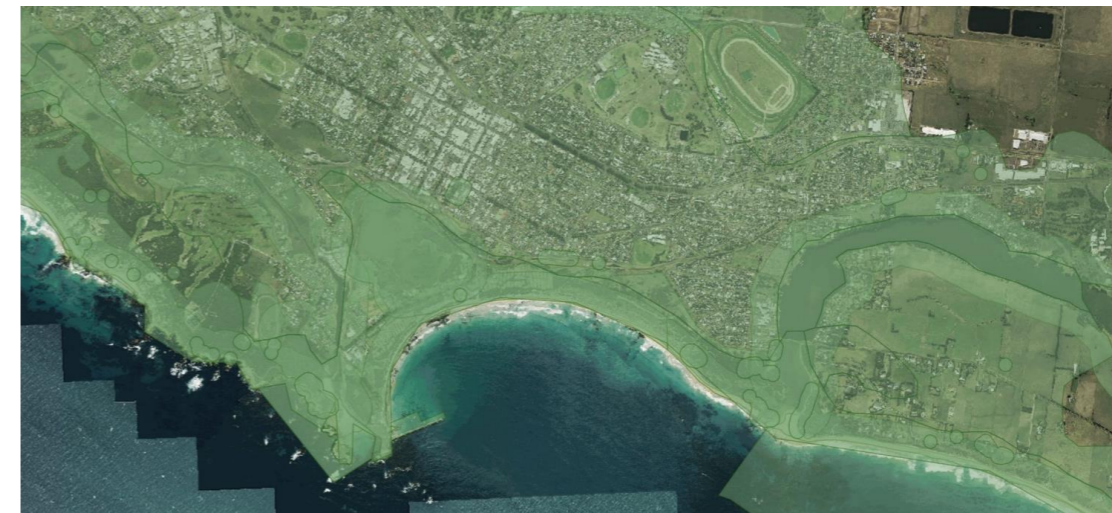


CULTURAL HERITAGE SENSITIVITY

Areas of cultural heritage sensitivity are defined in the *Aboriginal Heritage Regulations 2018* and relate to landforms and soil types where Aboriginal places are more likely to be located. The cultural sensitivity areas are identified on maps available from the Aboriginal Victoria's Aboriginal Cultural Heritage Register and Information System (ACHRIS). Figure 11 shows the entire study area as an area of cultural heritage sensitivity. There are also particular sites of cultural heritage which have been mapped and recorded within the study area. (AV, 2020)

In a planning context, any land use and development activities likely to cause harm to Aboriginal cultural heritage must have a cultural management plan prepared and approved before the development or activity can be carried out (AV, 2020) and the recommendations of the management plan must be complied with.

Figure 10: Cultural Heritage Sensitivity Areas (covers 33 beach access points in the study area) (DELWP 2022)



Heritage
Aboriginal Cultural Heritage Sensitivity

Beach Access Strategy
Part 2: Consultation Findings

2. CONSULTATION FINDINGS

2.1 CONSULTATION FINDINGS (ROUND 1)

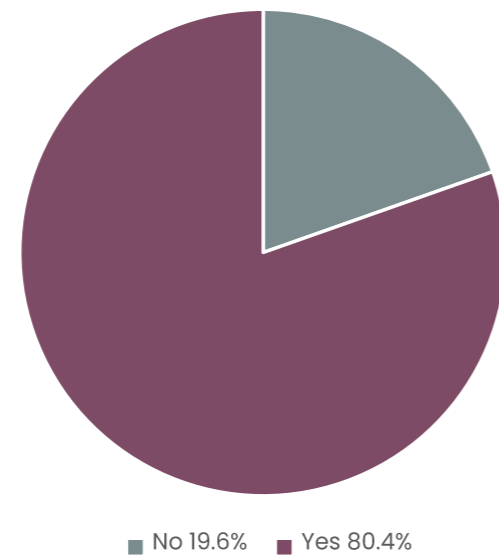
Round 1 consultation was undertaken in February/March 2022 to gain a better understanding of which access points residents and visitors currently use, what issues/challenges exist for beach access and how beach access can be improved. An online survey was carried out to reach the broader community. 51 people completed the online survey and there were two written letter submissions, one from the Warrnambool Surf Lifesaving Club and one from a resident. Comments from the two written submissions relating to concerns around beach access and suggestions for improvements have been incorporated into the responses for Questions 8 and 10.

A number of stakeholders, primarily organisations and groups were directly contacted inviting them to participate and provide comment on beach access in Warrnambool. Feedback was received from Leadership Great South Coast, Eastern Maar Aboriginal Corporation, the State Emergency Service and Warrnambool Surf Lifesaving Club.

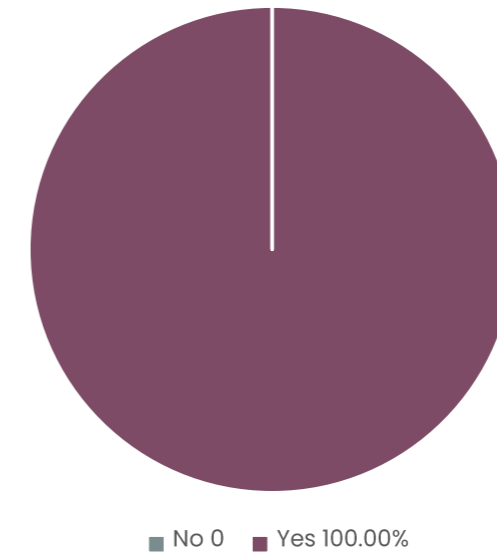
With regards to the survey timing, the usage of beach access points vary depending on the time of year and presence of holidaymakers, particularly in the adjacent caravan parks. The figures below provide a snapshot of usage during late February and early March, which is not peak holiday season. Management of neighbouring holiday parks were consulted with to get a better understanding of which beach access points are used by tourists at the holiday parks during peak holiday season.

The following provides a summary of the findings from the online survey:

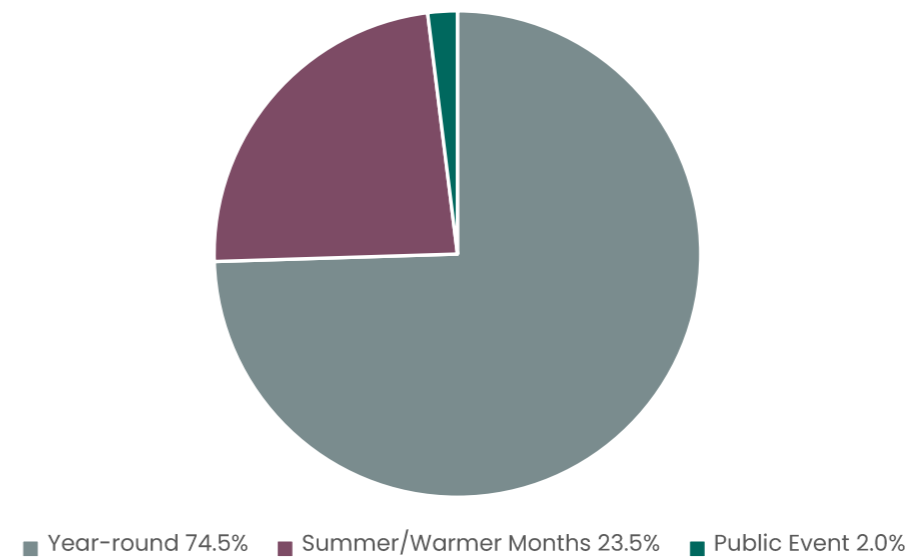
QUESTION 1: Do you live in Warrnambool?



QUESTION 2: Do you use any of the beach access points identified on the attached plan?



QUESTION 3: At what time of year to you utilise the beach access point/s?



QUESTION 4: Which access points do you visit and how often?*

*Note - A full breakdown of responses relating to usage of each of the 33 access points are provided at Appendix 1. The following is a summary of results:

The beach access used by the highest number of survey respondents:

- 1 - Lady Bay West WWC 118 (access point closest to Worm Bay car park)
- 2 - Lady Bay West WCC119 (access point 80 metres (aprx.) north of Worm Bay car park)
- 3 - Lady Bay West WCC127 (ramp at Warrnambool Surf Lifesaving Club, next to observation tower)
- 4 - Lady Bay West WCC120 (in front of Shipwreck Bay Holiday Park 150m (aprx.) north of Worm Bay car park)
- 5 - Hopkins River WCC144 (access point adjacent car park and opposite public toilets at Bluehole Road)

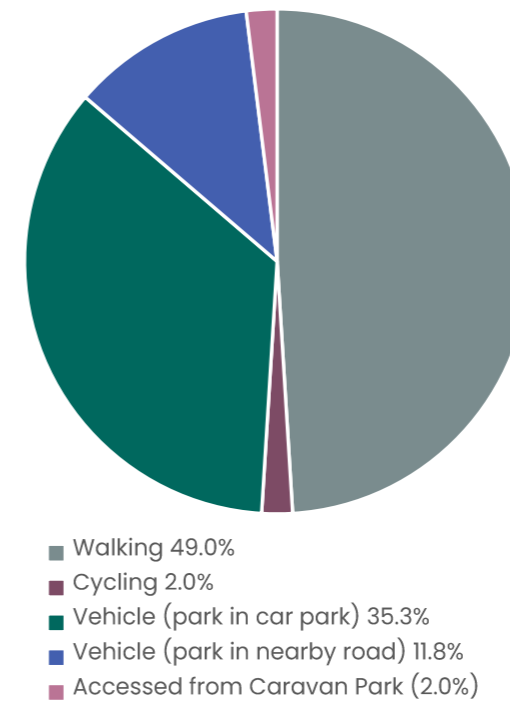
The beach access points used by the least number of survey respondents:

- 1 - Lady Bay West WCC131 (towards eastern end of Surfside Holiday Park)
- 2 - Lady Bay West WCC133 (eastern end of Surfside Holiday Park)
- 3 - Lady Bay East WCC135 (access point to the east of The Flume)
- 4 - Hopkins River WCC145 (40m (aprx.) south of Bluehole Road car park)

The most frequently used access points (visited on a daily/weekly basis):

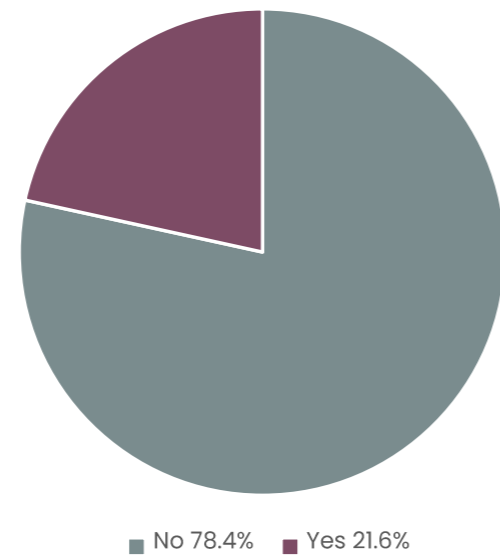
- 1 - Lady Bay West WCC119 (access point 80 metres (aprx.) north of Worm Bay car park)
- 2 - Lady Bay West WCC118 (access point closest to Worm Bay car park)
- 3 - Lady Bay West WCC126 (access ramp west side of Warrnambool Surf Lifesaving Club)
- 4 - Lady Bay West WCC127 (ramp at Warrnambool Surf Lifesaving Club, next to observation tower)

QUESTION 5: When getting to the beach what is your mode of transport?



Of the respondents, 9.8% answered that in addition to their main mode of transport, they use other modes on some occasions, including walking, vehicles and running.

QUESTION 6: Do you have special access requirements?



Of the 11 (21.6%) respondents who have special access requirements, these special access requirements include wheelchair access (3), vision impairment (1), children in a pram (6), arthritis, using a wheeled walker due to impaired balance and special accessibility requirements associated with injuries, ageing and multiple sclerosis.

QUESTION 7: Does existing access to the beach meet your special access requirements?

Of the 11 (21.6%) respondents who have special access requirements 4 answered 'yes' the existing access to the beach meets their requirements and 7 answered 'no'.

There were additional comments from people who do not have special access requirements, but in some cases have family members or friends who do have special access requirements.

In cases where respondents answered 'no', the reasons described as to why the current beach access is inadequate include:

- Large piles of sand make it slippery and difficult to navigate (3 responses) including prams
- No handrails/inadequate handrails (3 responses) on inclines
- Unstable (2 responses)
- Steepness (2 responses)
- Large drop off (50cms) onto beach (3 responses)
- Steel stairs
- Ramp much better access than stairs for families and older people especially when carrying beach gear and children
- Lack of resting platforms on stairs
- Unsafe
- Not enough space

- It's often hard to get up the stairs with gear. Aged residents have difficulty getting up the stairs
- Need firm ground down to beach
- Difficult access at Bluehole. Throughout winter the track has lots of mud puddles. The access has been washed away leaving wood sitting in difficult positions to cross
- Not maintained, broken slats
- Difficult to walk down/up big drop unstable entry
- Weeds built up on path

QUESTION 8: Do you have any concerns about the access points shown on the map?

- The Surf Lifesaving Club access point next to the observation tower (WCC127) needs to be regularly graded to clear sand. Not maintained enough. (3 responses)
- Access behind beach kiosk (WCC125) needs reopening as it is a main access point (2 responses) and looks terrible
- Overgrown vegetation around the paths allows sand to build up around the paths. If there was less vegetation the sand would blow back into the ocean and not accumulate on paths behind vegetation
- Lack of accessibility to main beach
- Ramps are safest way to access the beach for families and the elderly
- Some of the access points are covered over in sand, could be maintained by clearing once per week by one person working in the beach area
- Can't see the beach/tide until you are already at the access, then if tide is too high a different access point has to be used
- Erosion of the dunes washes away the stairs
- Some are dangerous, beach eroded and not navigable by some people
- No concerns
- Logan's Beach Access staircase needs replacing
- So steep and not well maintained
- Steep slope on WCC134 ('The Flume')
- All entries from surfside (WCC129 to WCC133), with fall risks as these locations
- Safety of walking the track and accessing the beach
- Not enough access points between McGennans car park and surf club
- Some require more attention due to breakages and wear over the years. Especially Logans and Hopkins east side of the river, overgrown and washed away by ocean surge
- Long term viability, with increasing dune movement and rising sea level
- Damage to shell middens and environment caused by people walking/cycling off the authorised tracks.
- Disregard for signage. Disruption to fauna caused by people letting their dogs off in areas that they are not permitted, or should be on a lead
- Animal excrement being left behind
- Litter left on beaches by visitors
- Outdated signage and lack of information.

QUESTION 9: Are there any issues you would like to see addressed through the beach access strategy?

Of the survey respondents, 41 (80.4%) said they would like the strategy to address a specific issue. A summary of these suggestions include:

- Vegetation maintenance/less vegetation (3 responses). Too much vegetation around the paths is not allowing sand to blow back into the ocean. Maintain lower height on bushes/trees along promenade. Worm Bay access, WCC118 requires vegetation cutting back along the breakwater side of the track. Risk of collision between bicycle riders and pedestrians
- Additional access ramps (2 responses). Ramps, at least on west end of McGennans carpark beside the caravan park. This would allow access from both carpark and caravan park. Port Fairy example cited
- Wider paths (2 responses) to allow for the amount of people using the paths and the traffic with bikes etc. More public toilets. rubbish bins on the pathways. more sweeping of sand and water from paths
- Sand accumulation (2) on the paths and making it unsafe on bikes and difficult with prams. A specialist needs to look at why the sand is trapped
- Make Lady Bay beautiful again, it is in very poor condition
- Maintain and update the access path from end of Younger Street into the beach being used by walkers, hikers, surfers and photographers and should be used as a permanent path for the public to use
- Better steps
- More facilities
- More seating
- More taps
- WCC125 should be re-opened. It is regularly used despite council boarding it up
- Improved stairs to the beach
- Some of the tracks leading to or past the access points do not have adequate fencing adjacent to nearby cliff edges. These pose a threat especially to small children. ie. Pickering Point to WCC107 to WCC111
- Maintenance of existing access points, removal of sand build up is sporadic
- Accessible access for older people, prams and wheelchairs.
- Maintain as many access points as possible
- Seaweed accumulation
- Disabled Access Ramp could be better maintained & safer if it was wider and more direct route, to utilise council's maintenance fleet
- People walking on the dune system- accessing it from the beach side
- Better access for those with disabilities
- Better lighting on pathways
- Dune health and wildlife habitat

- Ease of access not so steep
- Bring back the access to the beach from Surf Side WCC127 and WCC128
- Steep sand dune paths are hard to access as well as narrow steep staircases
- Safe beach access from surfside. That's why people camp there
- Improved access at Bluehole (WCCBH)
- The access ramp from the surf lifesaving club to the beach is heavily used by young families often juggling young children and beach paraphernalia and many campers wishing to access the beach safely
- Horses shouldn't be allowed on the beach.
- Please change laws so dogs are allowed on beach all year before 8 or 9am
- Maintained safe access.
- At entrance WCC129. I would like wood handrails to go all the way and for the sudden drop to be fixed as it is difficult for someone with poor balance
- Access steps to small bay between boat ramp and breakwater
- It should be easier for older people with stiff joints to access, sometimes too steep
- Access via the new stairways is difficult for older adults and young children
- Higher levels of maintenance and replacement programs, the new housing areas at Logans Beach coastal village and Hopkins Heights once finished will have over 1000 households increasing previous use of beach access east of the Hopkins River. A higher level of maintenance, signage and replacement will need to be developed. Developers of Logans beach coastal village need to be pressured to complete works on the dune walking track to Logans whale platform before damage is done to the natural dune area. The damage will only increase as residential areas are completed
- Disability access to popular locations
- Find a way for disabled people and those with mobility issues to enjoy a swim
- Coastal infrastructure being adaptive to climate change and sea level rises
- Sand washing out from the base of any new staircases installed

QUESTION 10: How could beach access be improved?

- Additional access ramps (3 responses) and rails. A suggestion for a ramp every few sets of steps
- Vegetation maintenance (less vegetation (2 responses) and tidy up overgrown items from the pathway. Remove all the dead tea tree so there is a better line of site along the foreshore
- Sand could be removed (2 responses), including from the ramp near the lifesavers
- Younger Street beach access improved and updated
- More staircases with holes in them so the sand can blow through and not accumulate on the paths.
- More facilities including seating
- Improved maintenance of steps and railings
- Maintenance on timber checked more regularly
- Remove much of the plantings along promenade

QUESTION 10 (continued): How could beach access be improved?

- The seaweed piled up against the dunes has created seaweed cliffs rather than sand dunes
- WCC125 should be re-opened. It is regularly used despite council boarding it up
- Better paths near Shelly beach.
- If you have an access point, then please make it usable. Some in front of the Holiday Park (from WCC127 -WCC133) are washed away and difficult/dangerous to use
- Places to wipe sand off, brushes or mats
- The access point we use could have a couple of boards replaced.
- More handrails or rope on steep inclines. more stairs and access points like the new worm bay stairs. Better pedestrian access at the breakwater separate to horse or boat access.
- Warning signs to alert for cyclists & remove some of the undergrowth for safer viewing on crossing point!
- Seaweed cleared more regularly in Lady Bay
- The stairs at Worm Bay are fantastic and seem to be more resilient to the forces of nature
- Better maintained ramps and a toilet block with shower facilities at the lady bay access points or the breakwater area
- More visible markings to prevent rogue walkers
- Open the access to the beach from the caravan park between WCC127 and WCC128
- Be safe. Sides steady no sheer drops or broken steps
- Fix the current infrastructure
- Replicate the improvements that have been completed on other beach accesses along Lady Bay that have recently been updated
- Maintained and easy access for all despite age or disability
- A wheelchair path
- Bins at every access for people to dispose of their rubbish
- Less access points but existing ones improved similar to Worm Bay WCC118
- Not as steep and twice as wide.
- Ramps could improve access for older adults and young children. people who have difficulties with balance find the metal stairs difficult
- New construction, repair, replacement, maintenance and signage
- Having better car access closer to beach
- Get mats for surf club and the other access ramp
- Materials they are made out of need to be longer lasting materials. Better materials used for structures, reducing impacts of erosion and storm events
- Ensuring that the sand doesn't fill the walkways or be washed out from the base of any new staircases installed
- More information signage on why dogs are prohibited in some places.
- Improve signage, particularly at Merri River Marine Sanctuary
- Better enforcement by Council to stop illegal activities and stop owners taking dogs on beaches where dogs are prohibited or letting dogs off lead in locations where they should be on-lead.

QUESTION 11: Do you have any general comments that would help inform the beach access strategy?

- Targeted consultation with the disability community - where should we be providing better access? (Two responses) Suggestion to consult an occupational therapist
- Talk to the main user groups including the Surf Lifesaving Club (2 responses) and listen to their concerns
- When walking along the beach paths there is next to no view of the ocean from Granny's Grave to the river mouth. The scrub has grown so high I feel unsafe walking through certain parts of the track. It's nice to access the beach and it would be nice to see the beach from most parts of the walking path. It's overgrown and very unkept from Granny's Grave to the river mouth especially near the timber decking area
- Check what other beachside towns do which are better than Warrnambool
- Beach access is not a problem, the problem is access to toilet facilities when at the beach
- The seaweed needs to be removed from the beach. It becomes a health and safety issue particularly in summer. People have to endure the smell and being attacked by bugs. Doesn't encourage tourists to sit on the beach
- Wider paths to allow for the amount of people using the paths and the traffic with bikes etc.
- More public toilets. rubbish bins on the pathways. more sweeping of sand and water from paths
- Just keep most of the area clean this would be easy if done once per week with a sweeper and hand blower, it would improve the look of the area. Want to see the beach, not tea tree and other bushes
- Access points are identified using emergency markers. Closing access points that are emergency markers is dangerous and should not be done. WCC125 is one such access (at the top of the carnival site). WCC125 should be re-opened. It is regularly used despite council boarding it up
- The beach access point (No WCC119) serves a large number of sites from within Shipwreck Bay and is a direct link to the caravan park on the opposite side of Pertobe Road
It provides crucial access to the beach for a large volume of young children, families and older people. Many carry items such as chairs, shade tents, food, toys etc so they are able to spend the day there. I have been using it for over 50 years and from experience would say it is one of the busiest and most essential points of access
- Metal is very uninviting. Timber is a much better material with better appearance
- Do more to make access easy for our community
- Walker safety and access over bike paths is also a risk for ambulant and young/aged users
- The new stairways put in at Lady Bay West are fantastic protection for the environment and storms
- It is just as important to provide safe easy beach access to tourists as well as residents. Warrnambool relies on tourism and has a beautiful beach which is a major attraction and needs to be maintained for everyone's safety and enjoyment
- Format of online survey not good and cross-references to map, with no link to survey mean people won't respond
- There is not one rubbish bin between the surf club and Granny's Grave, I always pick up my dog but there is nowhere to bin it, probably why a lot of pet owners don't
- Clear away the tea tree from the primary dunes. It is not natural and causes problems. Remember the dunes are artificial from a few decades ago
- New stairways and McGennan's and Worm Bay are great but they are very high. Older adults can find it difficult, especially when carrying chairs/bags/boards etc.
- New construction, repair, replacement, maintenance and signage
- It would be good to be able to have better lookouts

2.2 STRENGTHS, CHALLENGES AND OPPORTUNITIES

As revealed in the preparation of the Background Report, there are a number of strengths, challenges and opportunities relating to Warrnambool's Beach Access. These strengths, challenges and opportunities have been updated to reflect the feedback received from the community and stakeholders during Round 1 Consultation.

STRENGTHS

- Significant as a cultural landscape, with important connections to Country for the Traditional Owners and sites of significance, including Moyjil Aboriginal Place
- Highly scenic and significant coastal landscape
- Appealing beaches and swimming areas
- Home to the Warrnambool Surf Life Saving club
- Logans Beach Southern Right Whale Nursery
- Home to a wide variety of flora with a wide variety of ecological vegetation classes, including the locally endangered Coastal Dune Grassland
- Mouth of the Hopkins River and Merri River Estuaries
- Adjacent the Merri Marine Sanctuary and Middle Island
- Home to a wide variety of fauna, including rare and threatened species, including nesting Hooded Plover (*Thinornis cucullatus*).
- Popular for a variety of recreational activities, including walking and running, cycling, horse riding, fishing, photography, birdwatching, surfing, swimming and other water sports, yachting
- Close to the city centre and tourist attractions with convenient access to tourist resorts/parks
- Close to holiday parks, restaurant/s and café/s
- Post settlement sites of significance, such as Granny's Grave and Victorian Registered sites such as the breakwater
- Foreshore and foreshore promenade are high use areas next to the popular Lake Pertobe
- Highly valued by the community for the variety of recreational opportunities available
- Facilities and amenities, including car parking, toilets, seats, showers and waste disposal bins in close proximity to a number of access points.
- ESTA markers on most access points

CHALLENGES

- Increase in visitor numbers may create additional pressure on the coastline, its landscape and cultural values and existing infrastructure, including access structures
- Ageing infrastructure reaching the end of its useful life
- Natural and marine processes, such as storms and storm surges, can impact on the integrity of heritage sites and also contribute to dune erosion and damage to infrastructure.
- Climate change impacts such as rising sea levels and increased frequency and severity of storms are a threat.
- Limited knowledge of the effects climate change will have on the coast.
- Conservation management of native flora and fauna
- Threats to environmental values from urban areas
- Pest plant and animal management
- Unauthorised pedestrian and bicycle access
- Dune instability and impacts of sand shifting onto access structures and paths. Sand build-up creates accessibility barriers and maintenance concerns.
- Non-compliance with the off-leash areas
- Areas of soil and cliff instability
- Impacts to places of cultural significance due to their fragile and accessible nature
- Access and inclusion to beach access for those with a disability and/or special access requirements
- Provision of new infrastructure, including amenities
- Silting of Lady Bay
- Disposal of dredging spoil
- Seaweed accumulation on the foreshore
- Public safety and risks to users of beach access structures
- Fire management
- Coastal Acid Sulfate Soil hazard
- Dumping of rubbish and littering
- Financial costs associated with providing new infrastructure and maintaining existing infrastructure
- Emergency access to the beach can be difficult in some locations.
- Steep inclines and steep staircases
- Lack of infrastructure for people with special access requirements
- Steep drop offs
- Vegetation overgrowth and management (mainly Coast Tea-tree)

OPPORTUNITIES

- Improving access and inclusion to those with a disability and/or special access requirements through upgrades to beach access infrastructure
- Reducing safety risks to visitors through improved beach access infrastructure
- Enhancing Warrnambool's tourism and event offerings through improved beach access
- Protecting cultural heritage landscapes and sites along the coastline through changes and/or improvements to beach access infrastructure. The means by which this can be achieved will be discussed with the Traditional Owners
- Improving coastal dune stability through revegetation and installation of physical barriers, preventing pedestrian and cyclist access away from designated beach access paths
- Adopting a consistent approach to design and construction materials used for beach access points. This may result in long-term cost savings for renewal and capital works budgets
- Implementing climate change mitigation measures to help protect the coastline's values and ensure beach access structures are design and constructed to tolerate climate changes and extreme weather events
- Developing a hierarchy of most to least used beach access points to help better determine access requirements for each point and appropriately direct funding
- Developing a works priority list for renewal and capital works for the beach access points
- Applying adaptive management to inform approaches and changes to management of the coastline over time
- Maintenance regime changes to target specific challenges and issues detailed by the community and maintenance staff, including sand build up and vegetation overgrowth
- Improve emergency access and provide ESTA markers at all access points
- Beach access changes to be considered, include:
 - replacement (like for like or minor modifications)
 - replacement with upgrade (to improve accessibility with new design, siting and materials)
 - retention (of new structures or those with a long useful lifespan remaining)
 - consolidation (2 structures decommissioned and rebuilt with 1 upgraded structure)
 - decommissioning and removal



2.3 CONSULTATION FINDINGS (ROUND 2)

Round 2 consultation was undertaken in May 2022. This round of consultation sought feedback on the draft Beach Access Strategy. A number of community groups, stakeholders and adjacent landowners were directly contacted inviting them to participate and provide feedback.

An online survey was carried out to reach the broader community. A total of 75 online submissions were received in response to the online survey. There were written submissions from two local organisations and two individuals. On Council's 'Your Say Warrnambool' page and social media platforms, community members were invited to attend a drop-in session to look at the draft Strategy and provide their feedback. Three drop-in information sessions were held on the 25th of May 2022. A total of 6 people attended.

The following provides a summary of the findings from the online survey:

Of the 75 online submissions, 63 of the respondents were from Warrnambool City Council and 12 were from outside the municipality.

Eight (8) respondents stated that they have special access requirements, including wheelchair (2), mobility aid (1), children in pram (3). One respondent carries scuba equipment, and another carries a canoe.

Of the eight (8) respondents with special access requirements, five (5) said the current access structures to the beach do not address their access needs. Of these five respondents with concerns about current beach access, 3 said the strategy addresses their concerns, one said the strategy does not address their concerns (but did not state why) and one did not respond to the question.

Majority of respondents support the Strategy. Of the 35 respondents who answered the question 'Does the draft Beach Access Strategy address the needs of the community and result in improved beach access in Warrnambool?', 60% (21) are of the view that the Strategy addresses the needs of the community and will result in improved beach access. 40% (14) are of the view that the strategy does not address the needs of the community and will not result in improved beach access. Comments in support, included:

- It looks great.
- Improved access at WCC122 with access ramp is welcomed.

Reasons given for lack of support, included:

- Shouldn't retain dunes. Need to promote more commercial development and enterprises to occur in Lady Bay. Examples for development included, lawns, parks like Apollo Bay, leading to the beach. More employment, more local use, more interest, and attraction, for locals and tourists
- Should be creating more access not less, with additional development of the foreshore to provide year-round attractions, not just holiday season usage.

Other comments included:

- Seaweed is a problem. The seaweed odour is an issue and it is difficult to getting boat trailers over the piles of seaweed. The frontend loader clearing of seaweed is great but needs continuous effort for safety and aesthetics.
- Would like to see rugged path to Shelly Beach retained in future.
- Toilet facilities and showers to be considered.
- Overgrown vegetation creates unsafe environment, particularly near Worm Bay, where sightlines are blocked and pedestrians can't see riders approaching.
- Why isn't beach access from the new Logan's beach estate included?

Four respondents listed the recommendations they see as most urgent/important. They included:

- Access ramp at WCC122
- Vegetation clearing - some areas are overgrown and I do not feel comfortable there alone
- Lighting along beach path
- Restoration of the access points with limited future lifespan

Eight individuals provided feedback written feedback and attendance at drop-in sessions. Comments included:

- The Strategy is on the right track.
- Extra steps needed to make the beach a more safe and healthy environment.
- Support the new ramp at WWC122 beach access, as it provides beachgoers with safe access to and from McGennans car park.
- The seaweed banked up against the dunes is a health and safety issue and increases risk of dunes collapsing as well as bugs and insects and deters people from the beach.
- Not clear enough to dog owners that dogs are prohibited at the Merri River Mouth (south of Stanley Street Bridge including Middle Island).
- Better signage required to provide information about areas where dogs are prohibited and where dog on-leash areas are located. Better regulation required for dog access on beaches. Suggestion for a dog-stop grid/infrastructure to prevent people walking dogs into the Merri Marine Sanctuary.
- Important flora and fauna, such as penguins, echidna, reptiles and local and migrating birds being impacted by dog owners allowing their dogs off lead in areas where they shouldn't be.
- Look to example set by Moyne Shire Council for responsible dog ownership information.
- Vehicle access ramp at surf club and other paths often covered in sand.
- Lighting required at paths accessing Worm Bay access points WCC117 and WCC118
- Existing showers are ordinary and drains are filled with sand causing drainage issues. Look at design of showers and drainage more closely to avoid these problems in the future.
- McGennans drinking water tap has discoloured/dirty water coming out.
- The area between Point Ritchie and The Flume requires an overall plan with access through the reserve and to the beach considered. Area to be opened up with more facilities and recreational activities within this area.
- Views of the sea should be visible from various vantage points, including from the train line. Future planting in the area near the train line should be low-growing only.

Stakeholder feedback from organisations included:

- General support for the Strategy.
- Need for additional comments in the Strategy around the importance of safety in the Shelly Beach access area, particularly where treated sewage outflows near WCC 101.
- Improvements to signage, including multi-lingual, and fencing to discourage swimming and fishing in waters where the sewage outfall is located. The area where treated effluent is discharged is not suitable for swimming or fishing.
- Consideration of the relationship between the various trails in the area, including mountain biking trails.
- Informal access tracks compromise coastal habitat integrity, in particular the EPBC-listed Hooded Plover's breeding habitat.

Stakeholder feedback from organisations (continued):

- Support for better defined tracks, fencing and improved signage to better direct traffic, particularly between the Merri Bridge and Shelly Beach.
- Support the creation and direction of a single beach access point at Shelly Beach WCC101.
- Suggestion that works on Logans Beach staircase replacement (WCC146) occurs outside of the Hooded Plover breeding season, which occurs from late August to March).
- Request for WCCBH to be closed and revegetated, due to informal tracks and impacts on nesting habitats and impacts of off-leash dogs.
- Support for a vegetation management plan review.
- Threat of the invasive weeds including Marram Grass (*Ammophila arenaria*) and Beach Daisy (*Arctotheca populifolia*) which present threats to ecological values. Future management of these weeds are important for the dunes and beach-nesting bird breeding.

During the Round 2 consultation period, the Accessible Beaches Great South Coast Advocacy Report (Leadership Great South Coast Inc, 2022) was released and a copy provided to the project team. This Report discusses accessible infrastructure and the need to improve equitable beach access for all members of the community. This Report discusses the resources that are currently available to the Warrnambool community to make beach access more accessible, including:

- Accessible parking
- Ramp access
- Accessible toilet
- Accessible changeroom
- Beach wheelchair; and
- Hoist

Warrnambool does not currently have beach walkers, floating wheelchair or portable beach matting.

The Report includes discussion and findings from project trial days held in various locations, where different resources were available to the public to test. One of the resources available on the market is portable beach matting product/s, which provide access across the sand between existing built access ramps and the water's edge. Warrnambool does not currently have portable beach matting or beach walkers. 100% of the 30 participants in the trial days said they would use the beach matting product frequently if it was available.

The Report recommends improvements to beach access, including making a variety of resources and equipment available for people to use, promoting the equipment and ensuring the equipment booking method is user-friendly.

2.4 RESPONSES/CHANGES AS A RESULT OF CONSULTATION

Through Round 2 consultation, there were some new suggestions, which were not raised during Round 1. The suggestions arising from Round 2 consultation that have been incorporated into this final version of the Strategy include:

- Further discuss weed species including Marram Grass (*Ammophila arenaria*) and Beach Daisy (*Arctotheca populifolia*) and the need for these weeds to be monitored and controlled to prevent detrimental impacts to Hooded Plover (*Thinornis cucullatus*) habitat and breeding.
- Improve signage and fencing to help protect Hooded Plover beach-nesting sites and consult with Birdlife Australia when planning new access points, to discuss vegetation and habitat for bird species, including the Hooded Plover.
- Consider appropriateness of installing solar lighting, showers and drinking taps, near new/upgraded beach access points are designed.
- Change the reference to 'Water Treatment Facility' to correct terminology of 'Sewage Treatment Plant'.
- As part of the recommended safety audit of the walking trail between Viaduct Road and Shelly Beach, investigate the best alignment for a single, more defined beach access point at WCC101 to avoid unnecessary damage to shorebird habitat.
- Investigate and support purchasing of portable beach matting. Liaise with Warrnambool Surf Lifesaving Club to determine options for making portable beach matting readily available during the patrolled beach season. Investigate means of promoting use of beach matting and developing a user-friendly booking method, if required.
- Conduct a signage audit of directional, informational and regulatory signs, including information regarding dog access to beaches (prohibited or on-leash). Investigate opportunities to incorporate information about culturally and environmentally significant sites/features.
- Conduct a review of dog access on beaches near known Hooded Plover beach-nesting areas at Blue Hole and Logans Beach, including timing of seasonal access. Engage with BirdLife Australia to discuss dog off-leash impacts on beach-nesting bird breeding.
- Provide additional information to dog owners regarding seasonal access, restriction times and prohibited areas for all beaches in Warrnambool, including maps.

This Strategy focuses on how to better manage Warrnambool's beach access. Some of the suggestions during consultation related to matters that are outside the scope of works for this Strategy. For example, there were comments from 2 survey respondents and a workshop attendee that the foreshore should be opened up for more commercial development. This strategy provides direction for means of improving physical access to the beach and is not a review of the existing planning zones or overlays relating to land uses occurring in the foreshore precinct.

Warrnambool Beach Access Strategy
Part 3: Analysis, Planning Principles &
Recommendations

3. ANALYSIS AND PLANNING PRINCIPLES

This section provides an analysis of Warrnambool's Beach Access and key planning principles that should be applied in future planning of beach access.

The beach access planning principles are derived from the findings from site visits and site analysis, the Warrnambool Planning Scheme, previously adopted studies and plans and insights and suggestions from the community and stakeholders. These principles inform the recommendations of the strategy.

3.1 SERVICE PROVISION AND ACCESSIBILITY

Warrnambool's beaches are amazing natural assets attracting residents, visitors and tourists. The 33 beach access points, spanning across eight (8) kilometres from Shelly Beach to Logans Beach, are in walking distance from the Warrnambool City centre, holiday parks and popular tourist destinations including Lake Pertobe. The beach access points also provide access to the patrolled swimming beach in front of the Warrnambool Lifesaving Club.

AMENITIES AND CAR PARKING FACILITIES

Many of the beach accesses are connected to the Warrnambool beach foreshore loop, Port Fairy to Warrnambool Rail Trail and foreshore promenade and Lake Pertobe Road.

In addition to the paths and trails, there are eleven (11) car parks which allow people to park their vehicle and walk to the beach access points. These car parks include:

1. Thunder Point lookout (Thunder Point Road)
2. Pickering Point lookout (Pickering Point Road)
3. Merri River Estuary (Viaduct Road)
4. Harbour Precinct car parks (end of Viaduct Road)
5. Worm Bay (Worm Bay Road)
6. McGennans Beach (entrance off Pertobe Road)
7. Warrnambool Surf Lifesaving Club (entrance off Pertobe Road)
8. The Flume (entrance off Merri Street)
9. Point Ritchie/Moyjil (Point Ritchie Road)
10. Hopkins River (Blue Hole Road)
11. Logans Beach (Logans Beach Road)

There are currently public amenities including toilet facilities located at:

1. Merri River (Viaduct Road)
2. Harbour Precinct car parks (end of Viaduct Road)
3. McGennans Beach (entrance off Pertobe Road) (proposed for replacement)
4. Warrnambool Surf Lifesaving Club (entrance off Pertobe Road)
5. Point Ritchie/Moyjil (Point Ritchie Road); and
6. Hopkins River (Blue Hole Road)

The Public Amenities Strategy 2013 identified toilet upgrades at Hopkins River (Blue Hole Road), Merri River (Viaduct Road) and Point Ritchie / Moyjil as well as a toilet replacement near McGennans Beach car park. The Public Amenities Strategy did not recommend and new toilet facilities at beach access locations.

USAGE, SERVICE PROVISION AND ACCESSIBILITY

There are a variety of different service levels, which generally align with the usage level. Refer to the Usage Plan at Figure 11. Usage and service levels have been divided into three categories:

Category A

- Located near key tourist attraction or Life Saving Club. High use during peak periods.
- Located with good connection to shared trail.
- Public amenities and car parking facilities located within 300m walking distance in all locations, except Logans Beach Whale Nursery which does not have public toilets.

Category B

- Public amenities, car parking facilities and/or tourist park located within 300m walking distance.
- Located with good connection to shared trail.
- Medium to high use during peak periods.

Category C

- Public amenities and car parking facilities located greater than 300m walking distance.
- Low to Medium use during peak periods.

There are a number of different construction types and materials used for the 33 beach access points. They range from

1. Sand access track
2. Sand access track with boards and chains
3. Stairs constructed of timber or concrete, many excluding appropriate landings and ground surface indicators.
4. Steel and fibre reinforced polymer mesh with handrails, landings and ground surface indicators.
5. Timber ramp with handrails and landings.

The existing level of service of some structures do not meet the current user's needs and unlikely to meet future anticipated demand. This was evidenced through the 2019 Council audit and recent site visits and was reinforced through the Round 1 community consultation feedback, where a number of comments related to the beach access points not meeting the needs of users with special access requirements and concerns raised about various beach access points. Concerns around access and service provision related to:

- Sand buildup
- Absent/inadequate handrails
- Trip hazards, particularly on timber structures
- Staircase incline being too steep

- Inappropriate materials
- Lack of landings/resting platforms on staircases
- Unstable structures
- Lack of space on structures
- Uneven ground/surfaces
- Path erosion and water pooling
- Broken slats
- Large drop-offs to beach at end of structures
- Weeds/vegetation overgrowth

There is only one access structure designed to accommodate wheelchairs, prams and walking frames. This ramp (WCC126) is accessed via a path from the McGennans Car Park or via a path from the Surf Lifesaving Club car parking areas, including a disabled parking bay on the west side of the club building. The ramp presents numerous issues in terms of accessibility and maintenance due to regular sand build up. The design and construction material of the ramp also make it difficult for service crews to remove the sand on the ramp.

Creation of New Tracks

One of the requests listed in the survey responses was for a new track to be created from the end of Younger Street to the beach. The creation of this track is not recommended in this Strategy due to a number of reasons, as follows:

- The creation of new tracks is expensive. They require survey, cultural heritage management plans, vegetation removal and offset, fencing, signage and maintenance. There is a cost benefit to the community by utilising funding to upgrade and improve the existing authorised tracks and beach access points rather than creating a new one in this location. A new access track is likely to benefit a small number of residents in the nearby residential estate, of which Younger Street forms part of, rather than the broader Warrnambool community.
- There would be a significant loss of native vegetation required to create a new track. This would also add to fragmentation of the Coastal Dune Scrub in this area.
- The area of land has poor passive surveillance, which doesn't promote good pedestrian safety.

SERVICE PROVISION AND ACCESSIBILITY PLANNING PRINCIPLES

- Address accessibility concerns and provide safe and equitable public access to the beach and river estuaries.
- Ensure renewal and replacement of beach access structures facilitates greater accessibility and inclusiveness for those living with a disability and those with special access requirements.
- Actively engage and involve disability support groups and users with special access requirements early in the planning phase for new and upgraded beach access infrastructure.
- Enhance connections between beach access points and surrounding paths and trails and public transport stops to improve accessibility and provide opportunities for beach access and active beach recreation for all residents and visitors.
- Provide adequate waste and public amenities infrastructure to ensure beaches remain clean.



Figure 11: Beach Access Peak Usage Plan

WARRNAMBOOL BEACH ACCESS - PEAK USAGE PLAN (WEST)



- LEGEND
- Beach Access Point (33 in total within study area)
 - Category A
Located near key tourist attraction or Life Saving Club.
High use during peak periods
Located with good connection to shared trail
Public amenities and car parking facilities located within 300m walking distance in all locations except Logans Beach Whale Nursery
 - Category B
Public amenities, car parking facilities and/or tourist park located within 300m walking distance
Located with good connection to shared trail
Medium to High use during peak periods
 - Category C
Public amenities and car parking facilities located greater than 300m walking distance
Low to Medium use during peak periods
 - Existing Trail
 - * Public Amenities/Toilets

REFER TO LOCATION PLAN (EAST) (BELOW)

WARRNAMBOOL BEACH ACCESS - PEAK USAGE PLAN (EAST)



REFER TO LOCATION PLAN (WEST) (ABOVE)

3.2 SAFETY & EMERGENCY ACCESS

SAFETY

Warrnambool's coastal environment is dynamic, often with diverse climatic conditions which can contribute to shifting sands and unstable dune systems. It is important that beach access points along the coast are planned, designed and built carefully to ensure they can withstand the demands of increasing use and climate change. These access points must also provide safe and functional access.

Beach access safety concerns raised by the community or noted through the site visits and discussions with stakeholders, included:

- Grades/steepness of some staircases and timber boards and chains.
- Sand coverage and build up over structures (Figure 12)
- Erosion of sand and steep drop-offs at base of some stairs/access structures
- Surveillance and sightlines. Particularly along the beach foreshore trail where taller vegetation exists blocking views and creating safety concerns for users, particularly at intersections between the shared trail and path access points. (Figure 13)
- Horses
- Isolated nature of places, such as Shelly Beach (WCC101) and Pickering Point (WCC107)
- Cliffs, steep embankments, steep dune embankments.
- Inadequacy of fencing in some locations
- Materials and maintenance (splinters, warped stair treads)
- Anti-social behaviour, including lighting of fires

Perceptions of safety have a strong influence on people's walking preferences and vegetation overgrowth was cited by a number of survey respondents in relation to safety. If people feel as though they are putting themselves at risk in certain locations they are more likely to avoid those environments.

Figures 12: Sand build up on ramp (WCC126)



Figure 13: Vegetation close to trail



EMERGENCY ACCESS

Discussions and feedback from the State Emergency Service (SES) and Warrnambool Surf Lifesaving Club (WSLSC) revealed existing emergency access issues.

The State Emergency Service are called to emergencies for the retrieval of casualties if the ambulance cannot gain access. The SES use an all-terrain vehicle to gain access to the beach it requires a three (3) metre minimum access width.

The Warrnambool Surf Lifesaving Club have a patrol tower located adjacent to access point WCC127. The usual flagged area for the patrolled swimming area is located between access points WCC126 and WCC127. However, it can deviate up to 200m either side of these access points. The WSLSC also respond to beach emergencies extending up to 4kms along Lady Bay between the Yacht Club (WCCYC) and Point Ritchie/Moyjil (WCC141).

The concerns raised by the SES and WSLSC included access for emergency vehicles onto and along the beach and the need for additional emergency vehicle access points, particularly to provide better emergency access to the eastern end of Lady Bay, such as The Flume. The WSLSC also provided a number of suggestions for improvements to specific beach access points being WCC111, WCC113, WCC126, WCC127 and WCC133. These suggestions are incorporated into the recommendations at Section 5.

Concerns raised by the SES and/or WSLSC included:

- Missing Emergency Services Telecommunications Authority (ESTA) markers. (The state emergency marker codes commence with the WCC followed by a number. These markers provide critical information in the event of emergency calls requiring assistance from the police, fire, ambulance or state emergency services. Special notes can be added to the ESTA system providing advice to emergency services on best access locations and form of access to each location.
- The importance of having up to date information linked to the ESTA markers, in relation to available access points and access point closures.
- Limited emergency vehicle access to beach in some locations, including all-terrain-vehicles (ATVs), particularly at the eastern end of Lady Bay.
- The provision of sturdy, safe access points, particularly for those with a disability and/or special access requirements.

SAFETY AND EMERGENCY ACCESS PLANNING PRINCIPLES

- Address safety concerns through upgrades, renewal and replacement of structures and review maintenance regime to include additional safety checks where required.
- Investigate opportunities to provide additional beach access points for emergency vehicle access and/or all-terrain vehicles to the beach at the eastern end of Lady Bay and east of the Hopkins River.
- Ensure signage at each beach access point (land side and beach side) contains up to date information and emergency contacts, in accordance with the ESTA. Ensure all access points have an ESTA marker and ESTA markers are regularly inspected and replaced, where required.
- Actively engage and involve emergency service groups, including Warrnambool Lifesaving Club, SES, Fire Rescue Victoria, Victoria Police and Ambulance Victoria, early in the planning phase for new and upgraded beach access infrastructure.
- Determine a pruning/removal regime for the tea-tree to ensure sightlines are maintained, particularly at path junctions with beach access points.
- Apply Crime Prevention Through Environmental Design (CPTED) principles when planning upgrades/renewal or new/replacement structures.



3.3 CULTURAL HERITAGE

Warrnambool's coastline has been home to the Traditional Owners for thousands of years and their connection to Country remains unbroken. One particular place of great cultural significance is the Point Ritchie/Moyjil area near the Hopkins River estuary, which is rich in both cultural and natural history. This site records unique evidence of early human occupation by the Traditional Owners, for tens of thousands of years, possibly dating beyond 60,000 years. (WCC, 2013)

Significant risks to cultural heritage exist along Warrnambool's coast. Natural weather events and processes, including fires, are a threat to cultural heritage and can result in erosion of cultural heritage sites. Of particular concern is the creation and use of unauthorised tracks, such as near Shelly Beach, which may disturb or destroy cultural heritage.

This Moyjil Aboriginal Place – Point Ritchie Conservation Management Plan 2013 includes four management areas, being Point Ritchie / Moyjil (Management Area 1), Western Dunes (Management Area 2), Hopkins River - West Bank (Management Area 3) and Hopkins River - East Bank (Management Area 4). The Point Ritchie / Moyjil Management Area, which includes the Point Ritchie / Moyjil car park, the mainland headland and the West and East rock stacks, was given the highest priority.

In accordance with the Conservation Management Plan, protection and control of access within the management area, including the Point Ritchie/Moyjil area, needs to be carefully considered.

The design, construction and use of beach access points must be carefully planned for, monitored and managed to avoid harm to the highly significant deposits and cultural significance of the area.

Figure 14: Moyjil / Point Ritchie



CULTURAL HERITAGE PLANNING PRINCIPLES:

- Acknowledge and respect cultural heritage and connection to Country for the Eastern Maar Peoples. Conserve and protect these values through careful siting and design of beach access structures.
- Support the continued public amenity use of the Moyjil area in a way which does not compromise the identified cultural significance of the place.
- Protect the places of cultural significance along Warrnambool's coast, including Moyjil from inappropriate development*.
- Decisions relating to beach access will need to be consistent with the recommendations of the Moyjil Conservation Management Plan 2013 and the Coastal Management Plan 2013.
- Obtain Cultural Heritage Management Plans (CHMP) approved under the Aboriginal Heritage Act 2006 and ensure that permit approvals for beach access structures align with the recommendations of the relevant Cultural Heritage Management Plan.
- Ensure land management practices and siting and design of beach access structures occurs in consultation with the Traditional Owners to ensure cultural heritage is retained and protected.
- Actively engage and involve Eastern Maar Aboriginal Corporation (EMAC) early in the planning phase for new and upgraded beach access infrastructure.
- Implement measures to discourage visitors from deviating from authorised pathways and impacting significant sites (e.g. the headland and West Stack Deposits).

**Note - 'Development' in this instance means any activity which will involve the disturbance or removal of physical fabric, or that will impinge on the setting of the precinct. Examples could include the construction of buildings or roads, which will require disturbance through preliminary groundworks, or coastal engineering works which require the disturbance or removal of material. Limited development should occur within the precinct. As visitor numbers increase, renewal and upgrade of existing facilities and public amenities may be required. (WCC, 2013)*

3.4 POST-EUROPEAN SETTLEMENT HERITAGE

There are a number of sites of post-European heritage along the coast. Many of these are located near the harbour, including the Warrnambool Breakwater and the former Warrnambool Lifeboat Jetty.

One of the 33 beach access points (WCC138) is located near 'Granny's Grave'. The trail leading from near the intersection of Hickford Parade and Patricia Street runs past the grave of Agnes Ruttleton, who was buried in 1848. Her grave is referred to as 'Granny's Grave'.

There are also references to maritime history along the coast, such as the plaque describing the Edinburgh Castle vessel, which ran aground in Lady Bay in 1888. This plaque is also located near beach access WCC138.

Figure 15: Granny's Grave, Photograph by John T Collins, c. 1970 (Source: State Library Victoria)



Figure 16: Granny's Grave, 2022



Figure 17: Edinburgh Castle Plaque



POST-EUROPEAN SETTLEMENT HERITAGE PLANNING PRINCIPLES

- Protect the heritage values, the aesthetic quality of locations, cultural links with maritime activities, sea country and sense of place.
- Ensure an appropriate setting and context for heritage places is maintained or enhanced.
- Encourage the conservation and restoration of contributory elements of a heritage place.

3.5 BIODIVERSITY AND VEGETATION MANAGEMENT

NATIVE FAUNA

Warrnambool's beaches provide important habitat for a wide range of local flora and fauna. The Warrnambool coastline between Shelly Beach and Logans Beach provides habitat for a diverse range of birds including the vulnerable Hooded Plover (*Thinornis cucullatus*) and endangered Ruddy Turnstone (*Arenaria interpres*). Other fauna inhabiting this section of coastline include reptiles such as the endangered Swamp Skink (*Lissolepis coventryi*) and mammals such as the vulnerable Long-nosed Fur Seal (*Arctophoca australis forsteri*) and endangered Australian Sea-lion (*Neophoca cinerea*). (DELWP⁴, 2022)

NATIVE FLORA, LANDSCAPE VALUES AND VEGETATION MANAGEMENT

A range of flora exists through the sand dunes and cliffs. Biosis Research prepared a Warrnambool Coast Vegetation Management Plan in 2012. Biosis recorded fifteen (15) ecological vegetation classes during site visits in 2012. In the foreshore area between Shelly Beach and Logans Beach, the following ecological vegetation classes (EVCs) were found:

Shelly Beach to the Merri River Estuary

- Spray-zone Coastal Shrubland,
- Coastal Tussock Grassland, and
- Coastal Dune Scrub/Coastal Headland Scrub Mosaic

Merri River Estuary, Worm Bay and Lady Bay East and West

- Coastal Dune Scrub Modified
- Coastal Dune Scrub
- Coastal Dune Scrub/Coastal Headland Scrub
- Coastal Dune Grassland (small patch between Point Ritchie / Moyjil and Granny's Grave)
- Spray-zone Coastal Shrubland (small patch at Point Ritchie / Moyjil)

East of Hopkins River and Logans Beach

- Coastal Dune Scrub
- Coastal Dune Grassland
- Berm Grassy Shrubland (small patches adjacent the Hopkins River)

(Biosis, 2012)

Amongst species present in the area, there are endangered species including, Coast Twin-leaf (*Zygophyllum billardierei*), Coast Bitter-bush (*Adriana quadripartita*) occurring in the Granny's Grave area and Coast Fescue (*Poa billardierei*). (Biosis, 2012, p. 5)

Coast Wattle (*Acacia longifolia* ssp. *sophorae*) is an indigenous species found in Coastal Dune Scrub EVC 160, but it demonstrates invasive properties and has a tendency to take over and reduce available habitat for a range of other indigenous vegetation species, threatening biodiversity values. Therefore, in areas where revegetation occurs, it is not recommended for new plantings. Coast Wattle is of particular threat to the regeneration of Common Correa, Thyme Rice-flower and Coast Beard-heath. (Biosis, 2012, p. 16)

Coast Tea-tree (*Leptospermum laevigatum*) is indigenous to Victoria but is an introduced species to this part of south-western Victoria. (Biosis, 2012, p. 6) 'It was recommended by Ferdinand von Mueller as part of dune revegetation in the 1880s. It has since been used in amenity planting and is extensively naturalised' (Biosis, 2012, p. 6). Although Coast Tea-tree is not indigenous to this area, it is indigenous to Victoria and therefore requires a planning permit for its removal.

Marram Grass (*Ammophila arenaria*), was introduced from Europe and planted extensively to help prevent sand drifts created by stock grazing. (Biosis 2012, p. 6). The presence of exotic weed species, including Marram Grass (*Ammophila arenaria*), Sea Spurge (*Euphorbia paralias*) and Cape Beach Daisy (*Arctotheca populifolia*), which are found along the Warrnambool coastline, reduce indigenous plant diversity and in some locations have detrimental impacts on dune morphology and beach nesting birds. For example, Hooded Plovers have been found to avoid Marram Grass vegetated dunes. Maguire et al. (2014, pp. 59-60).

It is important that weed monitoring is carried out on a regular basis with quick response to prevent establishment of new weeds. The native Hairy Spinifex (*Spinifex sericeus*), which is not locally indigenous to the Warrnambool Plain Bioregion but is native to Victoria, may be used as a replacement species in revegetation areas where exotic species, such as Marram Grass are removed.

Many of the management recommendations of the Warrnambool Coast Management Plan 2012 are relevant and applicable today. However, there has been substantial changes to the dune morphology and vegetation coverage in the past nine (9) years since the Management Plan was prepared. Changes have included further spread of Coast Tea-tree, which is causing safety concerns for users and ongoing maintenance concerns for Warrnambool's maintenance staff. The aerial photos shown at Figures 18 and 19 are from 2015 and 2020. These aerial images show that the Tea-tree coverage has become denser along the foreshore. Figure 20 shows the close proximity of the Coast Tea-tree to the shared trail, where it requires regular trimming.

The Coast Management Plan 2012 recommended that management of the Coast Tea-tree should involve 'careful lopping and trimming of up to one third of the height or volume of native trees ensuring the health of the tree is not compromised' (Biosis, 2012, p. 16) The Management Plan did not recommend removal of Coast Tea-tree. However, this recommendation from 2012 requires a review, as it may be appropriate for some areas of Coast Tea-tree to be removed and replaced with indigenous species that are lower growing and do not significantly inhibit sightlines, particularly near path intersections and key beach access points.

Whilst the Coast Tea-tree provides erosion control by stabilisation of the sand by the root systems, it was noted on site visits that underneath the Coast Tea-tree the sand movement tends to occur in channels and this may be due to the lack of tufted graminoids and groundcovers present. In areas where the Coast Tea-tree has died and the area has been revegetated, the maintenance staff have found that leaving the root system of the dead tree in place helps erosion control while the newly planted vegetation establishes.

A strategic approach is required to ensure that in places where Coast Tea-tree and any weed species are removed that revegetation is densely planted with sufficient erosion control measures in place to avoid creating any new erosion problems. Appropriate native vegetation offsets must also be provided for the vegetation removed.

Figures 18 and 19 – Show vegetation and dune changes to the west of the Surf Lifesaving Club between 2015 (top) and 2020 (below). Erosion has increased along the dune face which has changed the dune morphology and there is an increase in density and coverage of Coast Tea-tree (Aerial image sources, Geovic, 2015 and WCC, 2020)

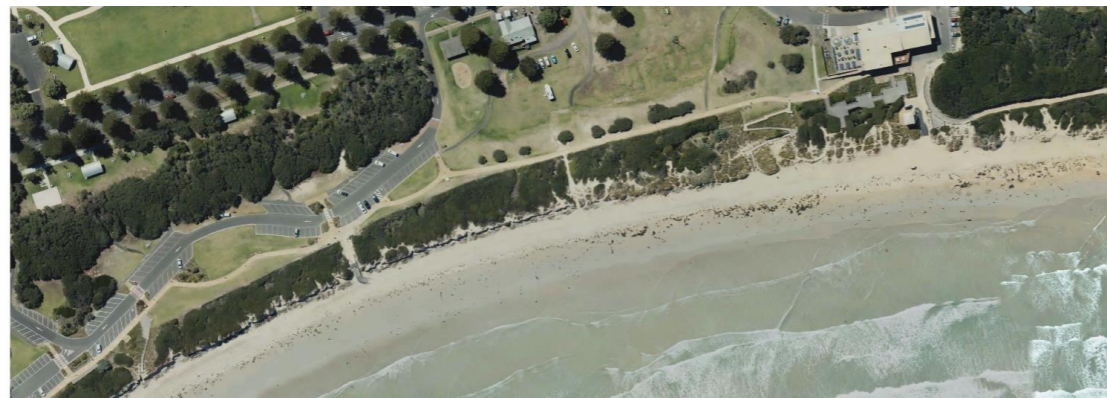


Figure 20: Thick Tea-tree adjacent existing paths and access points (Aerial Image source, WCC, 2020)



BIODIVERSITY AND VEGETATION MANAGEMENT PLANNING PRINCIPLES

- Protect and enhance the ecological values of the ecosystems in Warrnambool's marine and coastal environment, including coastal reserves, dune systems, Merri River estuary and Hopkins River estuary and coastal reserves.
- Protect and enhance the overall extent and condition of native habitats and species diversity distributions across public and private land.
- Minimise direct, cumulative and synergistic effects on ecosystems and habitats.
- *Minimise the impacts of pest plants and animals and decrease damaging land uses and practices.*
- Promote revegetation retention, planting and rehabilitation in dune areas prone to erosion.
- Investigate removal of sections of Coast Tea-tree and invasive species.
- Protect and enhance natural features, landscapes, seascapes and public visual corridors.
- Minimise the visual impact of development including accessways, on the scenic landscapes along the coast, river valleys and inland ridgelines.
- Balance the requirements of vegetation retention with the need to protect vantage points, view and sight lines to and from the public realm, to ensure adequate passive surveillance and promote good perceptions of safety in accordance with Crime Prevention Through Environmental Design (CPTED) principles.
- Ensure development is of an appropriate scale, use and intensity relative to its location and minimises impacts on the surrounding natural, visual, environmental and coastal character.

3.6 RECREATION AND TOURISM

Warrnambool's beaches play an important role for the community, providing spaces for a range of activities, recreation, tourism and events, as well as opportunities for people to connect with the natural environment and cultural coastal landscapes. As described in Section 3.2, the 33 beach access points span across eight (8) kilometres, are in walking distance from the Warrnambool City centre, holiday parks and popular tourist destinations including Lake Pertobe and provide access to the patrolled swimming beach in front of the Warrnambool Lifesaving Club.

In terms of recreation and tourism, there are numerous locations of note, which the beach access points provide entry to, including:

- Places of Aboriginal cultural significance, including Moyjil Aboriginal Place
- Logans Beach Southern Right Whale Nursery
- Popular recreational fishing at the mouth of the Hopkins River Estuary
- Patrolled beach swimming area
- Home to the Warrnambool Surf Life Saving club and surf lifesaving activities; and
- Popular for a variety of recreational activities, including walking and running, cycling, horse riding, fishing, photography, bird-watching, surfing, swimming and other water sports, yachting.

In the Warrnambool Open Space Strategy, the subject site falls into three precincts being Warrnambool (South/Merrivale), Warrnambool Central and Warrnambool (South East/Hopkins). In the Open Space Strategy, the 33 access points are located on land classified as 'existing open space' that is accessible to the public. The Active Warrnambool Strategy 2019-2030 seeks to increase regular participation in sport, active recreation and physical activity by the community, with benefits being physical fitness, reduced risk of chronic illnesses and improved mental wellbeing. Together, these strategies seek to provide:

- *A diversity of parks that everyone can access close to home*
- *A well-connected network of open spaces across the Municipality*
- *A network that protects a range of natural and cultural environments and contributes positively to biodiversity and water quality*
- *A more environmentally sustainable open space network*
- *A management system that makes efficient use of available resources whilst maintaining quality of provision*
- *An open space network that meets the needs of current and future residents and visitors*
- *Increased participation and use of open space*
- *Increased participation opportunities for everyone*
- *Maximised and best use of facilities, places and spaces*
- *Improved connectivity between facilities, places and spaces*
- *Renewed and redeveloped existing facilities, places and spaces to maximise physical activity opportunities*

Providing accessible, well-maintained beach access helps to achieve these goals and promotes recreation and visitation to tourist attractions.

RECREATION AND TOURISM PLANNING PRINCIPLES

- Encourage active recreation through promotion of trails, beach access points, significant cultural heritage, significant environmental features and assets.
- Improve signage to help promote greater usage of paths, trails and beach access.
- Provide for the sustainable management of regionally significant tourism attractions, including cultural heritage sites.
- Support tourism and community access to the coast, without compromising the natural environment.
- Encourage use and development of coastal and river areas that optimise their tourism potential while respecting the sensitive nature of these areas.
- Provide accessible and inclusive beach access points to encourage beach visitation and involvement in recreation and physical activity.

3.7 COASTAL LANDSCAPE CHANGES AND CLIMATE CHANGE

The physical impacts of climate change, including sea-level rise, wave and wind changes, more frequent and extreme storms, are likely to have an impact Warrnambool's shoreline and beach access structures.

VICTORIAN COASTAL MONITORING PROGRAM

There are gaps in current knowledge about climate change and the potential impacts it is likely to have on coastal environments. (DELWP, 2018) The Victorian Government, through the Department of Land, Water & Planning (DELWP), has partnered with Deakin University, The University of Melbourne, and Monash University to better understand patterns of beach erosion along the Victorian coast through the Victorian Coastal Monitoring Program (VCMP). The Program, which commenced in 2018, uses scientific tools to understand patterns of beach erosion along the Victorian coast' (Deakin University, 2022).

'Our coast is already very high energy and dynamic with climate change expected to modify the weather systems impacting the shore and therefore have major impacts to beaches and dunes. Understanding the impacts of sea level rise, changes in wave direction, and storminess can help Victoria prepare for the future. The aim of this program is to fully understand the dynamics of the coast from the dunes to offshore where waves are able to mobilise sand during storms' (Deakin University, 2022).

The Program, has involved regular monitoring, including drone surveys approximately every six weeks, to monitor the changes 'occurring in the position of the toe of the dunes and in the beach level within the survey area' (Deakin, 2022). The survey area in Warrnambool includes Worm Bay and Lady Bay West. This monitoring is providing scientists in the VCMP with survey quality data to look at the dynamics of the shoreline and understand the impact of disturbance events, such as large swells and storm surges. This data and research coming from the Program provides land managers with information to help 'determine where action is required to protect the coast from these events, which are predicted to increase with climate change' (Deakin University, 2022).

VISUALISING BEACH CHANGE

One component of the Program is visualizing beach change. *'During storms, significant erosion occurs along Warrnambool beach, putting coastal assets at risk. (Deakin University, 2022)*

The image 'on the right shows how the beach changed after a storm with side-by-side flights over the drone imagery. The frame on the left is from March 6, 2014 and the frame on the right is from July 2, 2014' (Deakin 2022).

Figures 21 and 22: Pre- (top) and Post- (below) 2014 storm event drone imagery (Deakin, 2022)



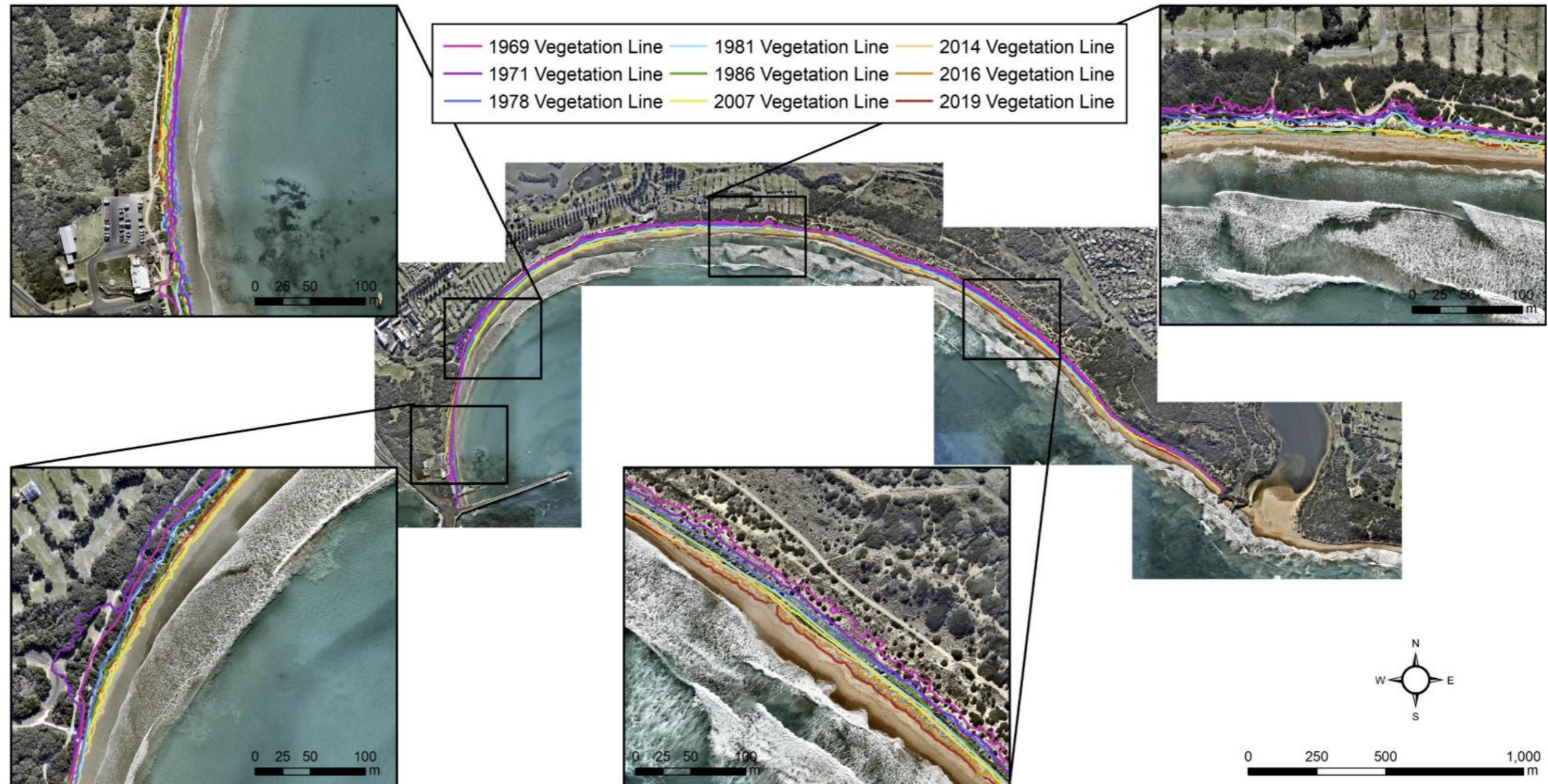
Images Sourced from the Victorian Coastal Monitoring Program (Deakin, 2022)

HISTORICAL SHORELINES

One component of the Program is the study of historical shorelines, which has involved analysis of historical and recent aerial photographs to look at changes to the shoreline. The vegetation line on the seaward side has been analysed and mapped to show the changes over 50 years, dating back to 1969. (Deakin, 2022)

'Victoria has more than 2500 km of coastline that provides critical social, cultural, and economic benefits to communities, in addition to its important and varied intrinsic natural values. Coastal erosion already affects these values in many parts of Victoria with climate change likely to increase the rate of change of coastlines. Understanding trends and changes in erosion rates over the past 60 years is critically important as it allows managers and researchers to separate short term storm erosion from long term retreat. Erosion during a storm on a beach that is generally stable or building out is less important than erosion on a beach which is rapidly retreating. Attempting to stop erosion on a stable or accreting beach may in fact force this beach out of balance with nature and lead it to become erosional. Using aerial photos, both historical and contemporary, the VCMP collaborated with the National Environmental Science Programs, Earth Systems and Climate Change Hub to investigate changes in the frequency and intensity of erosion. The team has mapped 15 locations along the state's coastline, including Warrnambool' (Deakin, 2022). Figure 17 shows historical change in the shoreline for each timestep.

Figure 23: Historical shorelines 1969 to 2019 (vegetation line mapping) (Deakin, 2022)

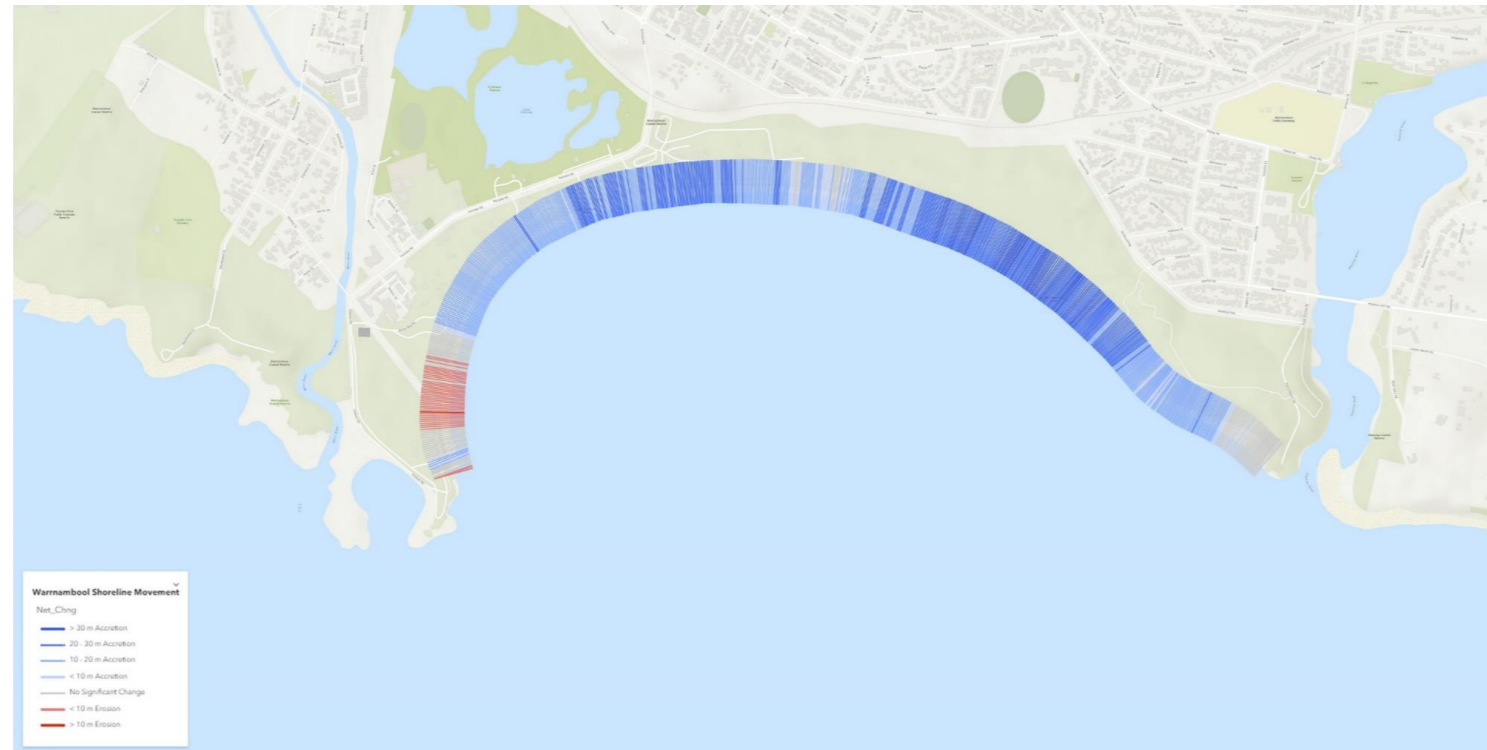


NET SHORELINE MOVEMENT

The majority of the Warrnambool beach (83.3%) has experienced some amount of accretion over the past 50 years from 1969 to 2019, while erosion accounts for 6.0% of the change in shoreline position. No significant change was found at the remaining 10.7% of transect locations. Most of the erosion is occurring in the western end of the beach area next to the breakwater. Accretion is occurring across the rest of the beach with a few areas of no significant change interspersed. You can explore specific areas of interest by navigating around the map' (Deakin, 2022)*

*Note – Accretion is the gradual accumulation of sand.

Figure 24: Net Shoreline Movement 1969 to 2019 (vegetation line mapping) (Deakin, 2022)



COASTAL LANDSCAPE AND CLIMATE CHANGE PLANNING PRINCIPLES:

- Consider the risks associated with climate change in planning and management decision making processes and site and design development to minimise risk to life, property, the natural environment and community infrastructure from natural hazards.
- Plan for sea level rise of at least 0.8 metres by 2100 and allow for the combined effects of tides, storm surges, coastal processes and local conditions such as topography and geology when assessing risks and coastal impacts associated with climate change.
- Reduce the urban heat island effect by greening urban areas, buildings, transport corridors and open spaces with vegetation.
- Promote and support low energy forms of transport such as walking and cycling.

3.8 MAINTENANCE, RENEWAL AND CAPITAL WORKS PROGRAM

The cost of maintaining, upgrading and replacing beach access structures is significant. It is important to provide sufficient access points to provide convenient beach access for residents and visitors. However, it is also important to consider the appropriateness of existing access points and whether they should be retained, upgraded, replaced or removed. Particularly given the substantial costs associated with replacement of existing structures and provision of new structures. Recent costings for access points and cost estimations for future access points range between \$215,000 for a relatively small staircase to \$937,000 for the planned concrete terraced seating with integrated accessible ramp near the boat launch facility (WCC, 2018).

When Council undertook an audit of the beach access structures in 2019, only 4 were identified as having a useful lifespan extending past the year 2037. This means that over the next 15 years, it is anticipated that 29 of the existing beach access structures would require renewal or replacement. In most cases, the materials that these existing structures have been constructed of will need to be upgraded or replaced.

MAINTENANCE AND CONSTRUCTION MATERIALS

A key issue facing Council in managing beach access structures is their life span. The design of upgrades or rebuilds to beach access structures must ensure *'that the structure can adapt to the anticipated increase in coastal hazards including sea level rise over the structures intended life span'* (DELWP, 2020, p.12). The question is what are the best design materials and construction techniques to ensure beach access structures have a long life, are adaptable to changing climates and avoid long-term maintenance issues for Council?

Many of the existing 33 structures are constructed of timber. However, a number of these timber structures are presenting a significant maintenance burden to Council in carrying out repairs. Whilst timber is a natural material that when sourced locally has relatively low-embodied energy compared with some other materials and it weathers to provide a soft, sympathetic appearance on the coast, it is also prone to deterioration when exposed to saltwater and UV exposure. Saltwater and UV exposure can accelerate the deterioration of timber and when it cracks, moisture can seep in causing rot. Many of the timber boardwalks and access structures to the beach present safety issues such as handrail splinters, lifting and bowing of boards and rot causing uneven tread. Another issue that has been noted with the use of timber is that the decking boards prevent sand from seeping through underneath resulting in increased sand building up on top of the stair treads, landings and ramps.

This has resulted in the most recently replaced beach access structures being constructed of materials, such as a combination of concrete, steel and fibre reinforced polymer mesh, not timber. One of the benefits of using a meshed material for stair landings and treads is that the sand falls through the structure and doesn't result in as much sand build up leading to accessibility issues for users. The materials and design of the new structures is helping reduce costly maintenance and ensure beach access structures have a longer useful lifespan, estimated to be at least 20 years longer, than the traditional timber construction.

The Siting and Design Guidelines for Structures on the Victorian Coast provide the following guidance for materials selection:

- Use materials sympathetic the coastal environment.
- Use the local colours and textures for any new structure.
- Use durable materials, fittings and finishes developed specifically for a coastal environment.
- Use low-embodied energy, recycled and locally-sourced materials where possible

Figure 25 shows the standard materials palette contained in the Siting and Design Guidelines.

Council's preferred materials for new/replacement beach access structures include:

Foundations

- Use of hot dipped galvanised screw piles for climate change adaptability within a dynamic and extreme coastal environment. Joints between the piles to be welded to prevent internal corrosion.
- Use of stainless steel reinforcement within concrete head stock/ beam.

Structures

- Use of Fibre Reinforced Polymers (FRP) or proven equivalent in response to dynamic range of sand dunes and interaction with sea water.
- Posts, bearers, stringers and joists to be in FRP for extended asset life.

Decking (New)

- Minimum 2500mm width landings and viewing platforms at DDA approved grades.*
- Stairs must be DDA approved design and ramps with compliant kerbs, where used at minimum 1800mm.
- Within the swash zone use of Fibre Reinforced Polymers (FRP) non-slip grating treads for durability and optional extension onto platforms and landings.** Concrete may be appropriate in some locations.

Decking (Upgrade)

- Use of only Class 1 Durability Hardwood (non-dressed) and minimum 50mm thickness for decking timbers.
- Decking timbers are to be dressed on three (3) sides, rough sawn and pencil round on the other, which becomes the top face when laid. All timber is to be treated to H5 Alkaline Copper Quaternary (ACQ) treated (arsenic free) except for Cypress Pine

Handrails and Balustrades

- Handrail to be DDA approved in 316 electroplated stainless steel.
- Post to be either Class 1 Durability Hardwood (upgrade), FRP or 316 electroplated stainless steel.
- Balustrade to be provided for falls >2m onto sand in expandable grade 316 stainless steel mesh.

Fencing

- Timber Class 1 Durability Hardwood posts and PVC coated wire

Paths

- Crushed limestone (locally sourced) or sand.
- Concrete***
- Avoid the use of pinned down fabrics/materials between paths/trails and beach access structures as machinery tends to get caught on edges/corners causing damage.

Notes:

*Consider 3000mm wide paths, ramps and sufficient landing size where sand coverage is an issue, to provide adequate access for maintenance vehicles to clear sand.

**The 'swash zone' is the upper part of the beach where intense erosion occurs during storms.

***Concrete has been used at the top of new staircase structures and is working well in terms of maintenance and sand clearance. Small maintenance machinery is able to push sand from the adjacent path and concrete access through the structure to the beach below, where it can be cleared.

RENEWAL AND CAPITAL WORKS - PLANNED BEACH ACCESS PROJECTS

There are a number of planned upgrades/replacements to beach access structures identified in the planned short-term capital works program. They include:

1. **Merri River Estuary (WCC112)**
Design and replacement of existing structure accessed from Viaduct Road. Rebuild with compliant staircase and handrails.
2. **Worm Bay (WCC117)**
Design and replacement of access ramp that provides access for horse training. Proposed rebuild to address safety concerns for horses exiting beach into the car park. Likely that ramp design will be different to ensure horses exit beach more slowly.
3. **Lady Bay (WCC129)**
Design and replacement of existing structure accessed from shared trail and holiday park. To be rebuilt with compliant staircase and handrails.
4. **Lady Bay / McGennans (WCC123)**
Design and replacement of access staircase with access from McGennans car park. This access point was closed due to safety issues and is currently closed.
5. **Logans Beach WCC146**
Design and construction of replacement staircase to replace timber stairs between the existing viewing platform/deck and beach.
6. **Warrnambool Harbour (New)**
New accessible ramp proposed near boat launching facilities. Design and construction of the proposed concrete terraced seating is to have integrated accessible ramp. Identified as short-term action in the Harbour Master Plan, but not included in 22/23 budget.

The recommendations and implementation plan at Sections 5 and 6 include these planned projects.

MAINTENANCE, RENEWAL AND CAPITAL WORKS PLANNING PRINCIPLES

- Use durable construction materials that can adapt to the anticipated increase in coastal hazards including sea level rise.
- Ensure that the design and siting of publicly accessible infrastructure, including car parking areas and beach access structures are of a high standard and respond appropriately to the *Design and Siting Guidelines for Structures on the Victorian Coast 2021*.
- Use local materials where possible, for example local crushed limestone is an appropriate material for paths.
- Consider adjacent infrastructure, such as showers, drinking fountains and lighting when upgrading/replacing beach access structures.
- Consider maintenance access in the design of beach access points, including the practicality of providing access for machines to clear sand.
- Actively engage and involve maintenance staff early in the planning phase for new and upgraded beach access infrastructure to ensure materials and design will be suited to maintenance regimes and machinery.
- Monitor and adapt maintenance approaches on a regular basis to address maintenance shortfalls and safety concerns and provide adequate level of service to users.

Figure 25: -Siting and Design Guidelines for the Victorian Coast - Standard Materials Palette (DELWP, 2020 p.79)

STANDARD MATERIALS PALETTE



Hardwood timber - plantation - grown and recycled timber treated for protection from insects and decay - Red Gum, Jarrah and Tallowood are most durable and suitable for structure in the water.
Photo: John Gollings

Reinforced polymer mesh - lightweight - chosen for its excellent anti-corrosive and low maintenance properties.
Photo: Roger Ellingsen



Steel - structural grade and hot dip galvanised as per AS/NZ 4680 for superior performance and powder coated for corrosive protection.
Photo: Jarle Waehler

Concrete - durable providing there is adequate cover to all reinforcement to prevent corrosion. Photo: Jarle Waehler



Glass - needs special consideration to avoid glare and reflection. Photo: Peter Aaron

Natural stonework - very durable and requires no special treatment. Photo: EMF Architects

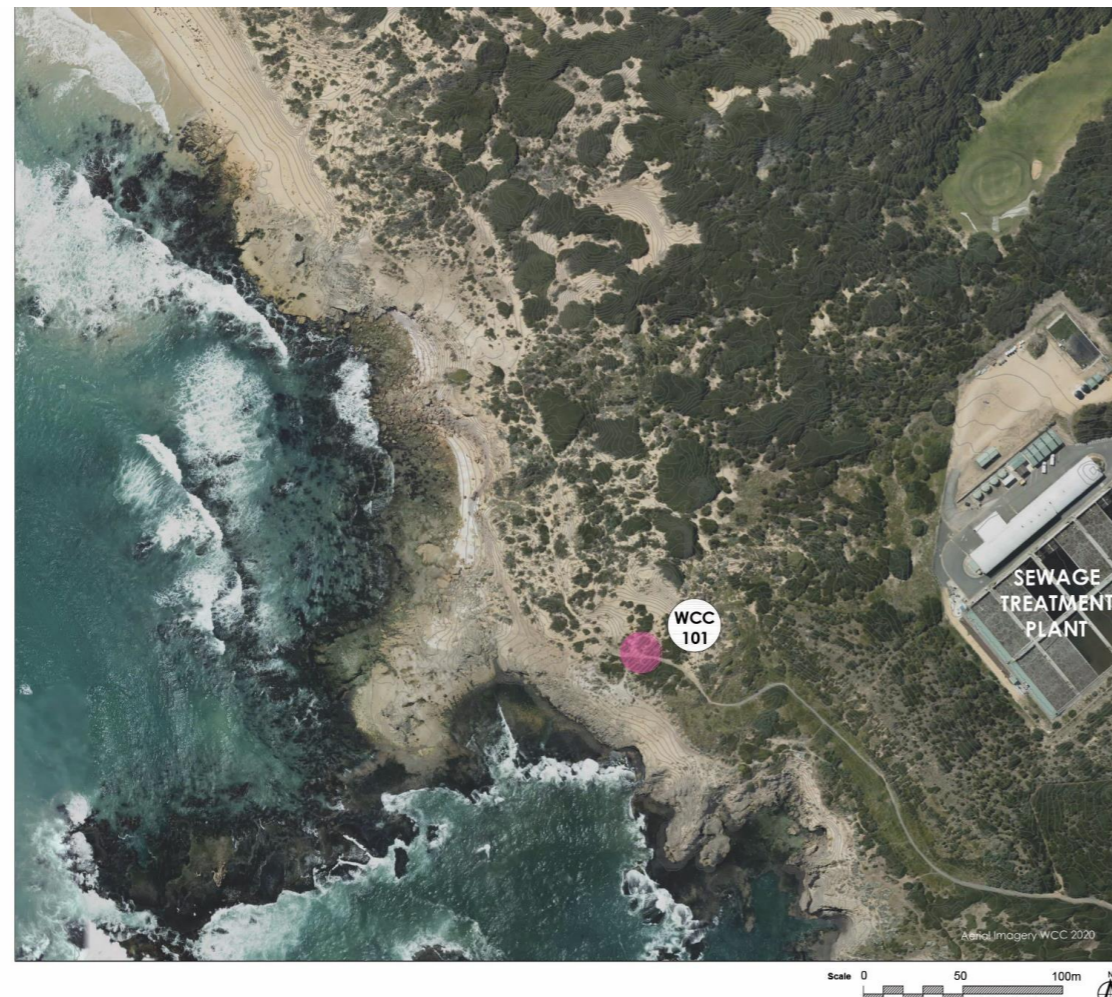
4. SITE-SPECIFIC ANALYSIS

4.1 SHELLY BEACH

There is a single beach access point to Shelly Beach referred to as WCC 101. This beach access point can be reached by walking from the Thunder Point car park or from Shelly Beach to the west. On low tide beachgoers can walk between Shelly Beach and Levys Beach.

The track to Shelly Beach from the Thunder Point Lookout car park is approximately 900m long and constructed mostly of gravel. This path passes south of the Warrnambool sewage treatment plant. The treated effluent is discharged near access WCC 101. In accordance with the EPA licence the area inside the mixing zone is not suitable for swimming or fishing.

Figure 26: Beach Access Point Location Map



STRENGTHS

- Remote and quiet
- Spectacular scenery
- Ideal location for bird watching/fauna spotting
- Culturally significant area for Traditional Owners

CHALLENGES

- Erosion-prone area with access track along cliff-top
- Rocky access to beach
- Access to Shelly Beach and further linkage to Levys Beach dependent on tide
- Unauthorised tracks in this area have potential to cause loss of native vegetation, increased erosion, threat to cultural heritage and present a safety concern to those using these tracks, particularly in steep and unmanaged areas.
- Lack of directional and information signage.
- Access in the event of an emergency is limited
- Section of beach unsuitable for swimming or fishing due to sewage outfall.

OPPORTUNITIES

- Improve safety, including fencing
- Protect cultural heritage
- Improve directional signage
- Improve signage, including multi-lingual text to discourage people from fishing and swimming in this area

Figure 27 – WCC101 track to Shelly Beach



Figure 28 – WCC101 track to beach



Figure 29 – Post and wire fence



Figure 30 – End of informal beach access path



4.2 PICKERING POINT LOOKOUT, MERRI RIVER ESTUARY, STINGRAY BAY AND WORM BAY

The Pickering Point lookout (WCC107) beach access is utilised by tourists visiting Pickering Point and walking along the coastal trail and is also used by scuba divers and there are shipwreck dives in the area, including the La Bella shipwreck.

The three access points next to Viaduct Road (WCC111, WCC112 and WCC113) are accessed by many tourists stopping to take in the sites of Stingray Bay and Middle Island. There is convenient car parking and toilet amenities as well as the bridge across the Merri River providing access to the Pickering Point lookout.

In Worm Bay, the Warrnambool Yacht Club have access to the launching ramp which does not have a WCC number. This is referred to as WCCYC for the purposes of this Strategy. The horse racing industry utilizes WCC117, which is an access ramp constructed for horse training access to the beach. Whilst these two access points have not been constructed for the purposes of pedestrian access, pedestrians still utilise them to gain beach access. The next nearest pedestrian access point is located at WCC118, which is also close to the Worm Bay car park. This access structure has recently been upgraded with a new staircase constructed to replace the previous timber one.

Figure 31 – Beach Access Point Location Map



STRENGTHS

- Spectacular scenery
- Interesting and varied landscape
- Extensive path and boardwalk near Pickering Point lookout
- Tourism attractions
- Café/restaurant nearby
- Car parking in close proximity
- Close to public amenities including toilets.

CHALLENGES

- Erosion-prone area with access track to Pickering Point near cliff-top
- Rocky access to beach
- Maintenance of extensive length of timber structures
- Unauthorised tracks in this area have potential to cause loss of native vegetation, increased erosion and threat to cultural heritage.
- There are no patrolled swimming beaches in this area and waters can be treacherous in high seas, particularly between Lady Bay to Stingray Bay and navigating around the La Bella shipwreck
- Access in the event of an emergency is limited in some locations, particularly to Pickering Point.
- Access point at WCC111 needs to be regularly maintained to allow for vehicular access
- Sand drift and build-up is a maintenance concern for WCC111, WCC112 and WCC113
- Pedestrian safety near access points and Viaduct Road, particularly in peak summer holiday season when vehicle traffic to the harbour is heavy
- The only constructed ramps providing beach access in this area are WCC117 and WCCYC, and whilst they are used by some residents and visitors they are not designed for pedestrians or wheelchair accessibility

OPPORTUNITIES

- Improve safety
- Protect cultural heritage
- Improve beach accessibility for people with disabilities and those with special access requirements

Figure 32 – Track from leading along coast to WCC107



Figure 33 – WCC107 Top landing



Figure 34 – WCC107 staircase to beach



Figure 35 – WCC111



Figure 36 – WCC111



Figure 37 – WCC112



Figure 38 – WCC112



Figure 39 – WCC113



Figure 40 – WCC113



Figure 41 – WCCYC (Boat launching ramp)



Figure 42 - WCC117 (Horse training access)

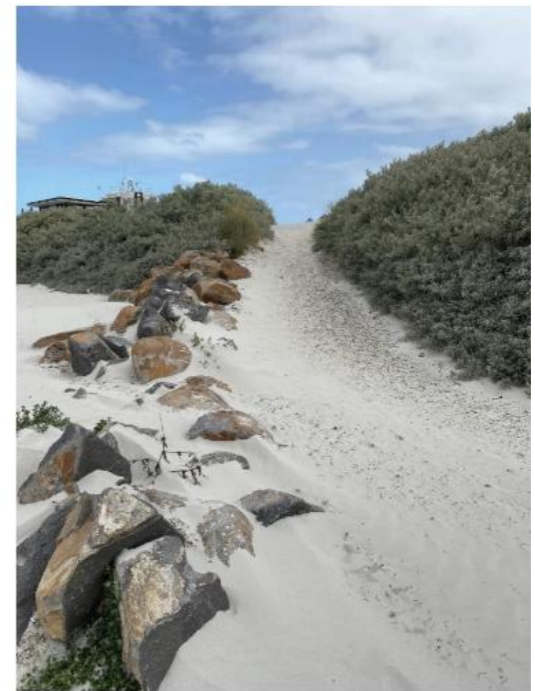


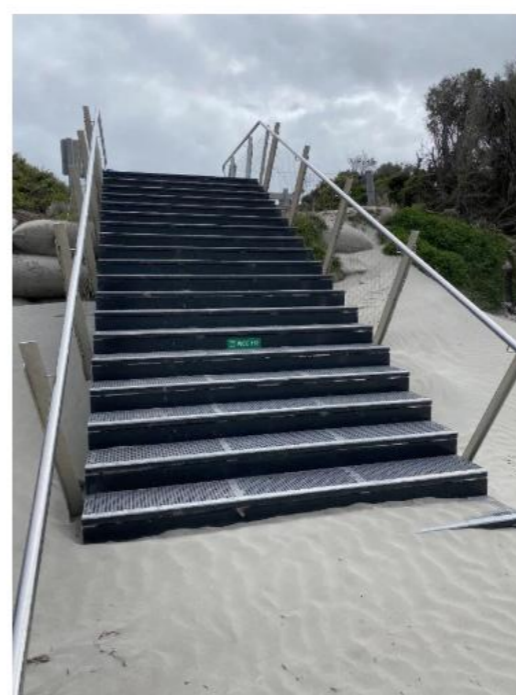
Figure 43 – WCC118 (recently replaced)



Figure 44 – WCC118



Figure 45 – WCC118



4.3 LADY BAY WEST (INCLUDES THE FLUME)

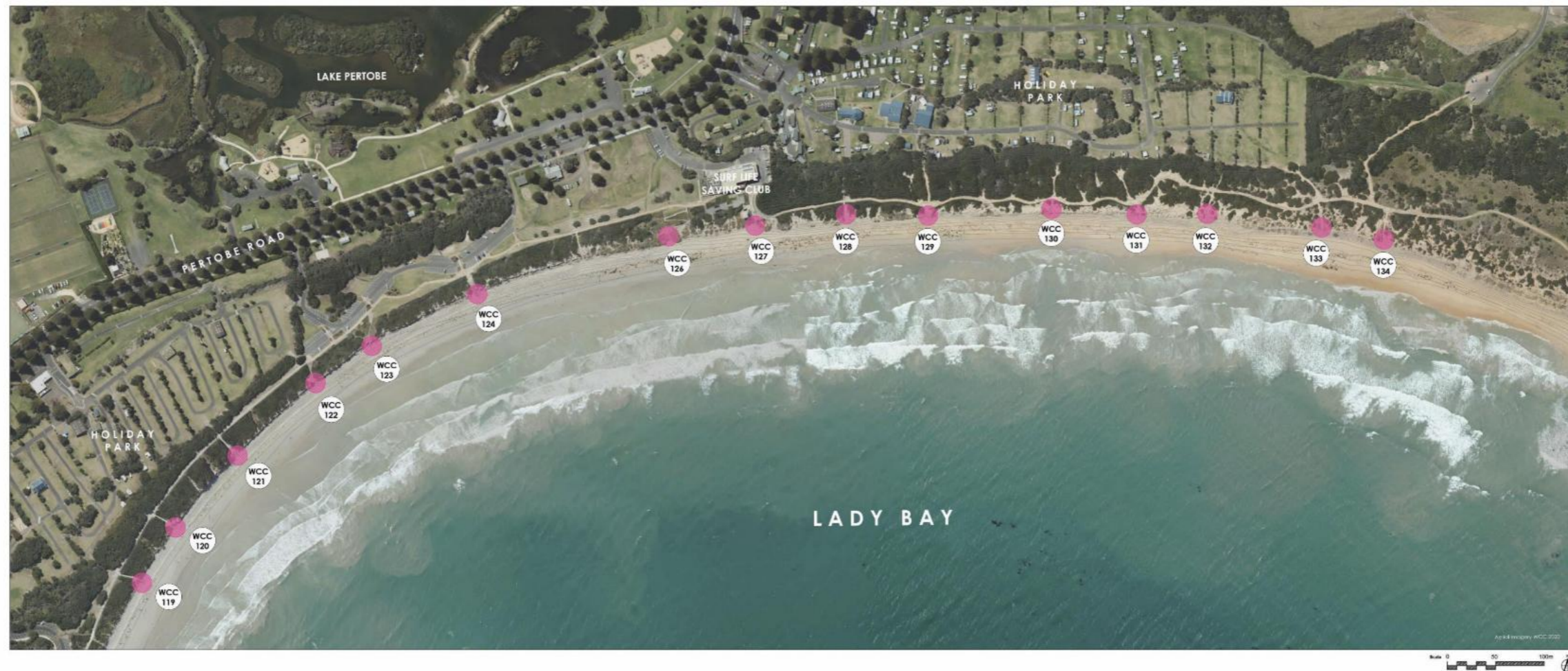
There are fifteen (15) beach access points spanning across this section of Lady Bay, which stretches approximately 1.5 kilometres.

This area of Lady Bay is a popular place for locals to gain beach access and walks along the coastal trail and path network. This area is also heavily trafficked by tourists during the peak summer holiday season, with nine (9) of these access points connected directly to the two holiday parks.

This section of coast includes the Warrnambool Surf Lifesaving Club (WSLSC), patrolled swimming area in front of the WSLSC, is close to café/restaurants, McGennans Beach, holiday parks, Lake Pertobe and The Flume (WCC134) which is a popular beach for surfers.

There is convenient car parking located at McGennans and toilet amenities provided near McGennans car park and the surf lifesaving club. There is also a car park located near The Flume.

Figure 46 - Beach Access Point Location Map



STRENGTHS

- A variety of recreational activities on offer
- Tourism attractions
- Patrolled swimming beach
- Spectacular scenery
- Great connections to the existing coast trails and path network
- Café/restaurant/s nearby
- Car parking in close proximity to beach
- Close to public amenities including toilet facilities at McGennans and Warrnambool Surf Lifesaving Club
- Good access to and from holiday parks

CHALLENGES

- Maintenance of extensive number of structures, including many older timber structures requiring regular upkeep
- Erosion-prone dunes
- Limited accessibility, with only one accessible ramp (WCC126), which often has restricted access due to sand build up and requires very regular maintenance to clear sand
- Overgrowth of vegetation next to beach access points and at intersections with adjacent paths, creating safety risks for path and beach access users
- Maintaining viewlines
- Changing dune morphology
- Dune erosion and erosion at base of beach access structures
- Seaweed build up on beach and at base of structures
- Sand drift and cover over beach access structures and adjacent paths
- Unauthorised tracks from the holiday parks and to the east of The Flume have potential to cause loss of native vegetation, increased erosion and threat to cultural heritage
- People choosing to swim at unpatrolled sections of the beach.
- Access in the event of an emergency is limited in some locations, particularly vehicular access to the eastern end near The Flume

OPPORTUNITIES

- Improve safety
- Protect cultural heritage
- Improve maintenance regime
- Improve beach accessibility for people with disabilities and those with special access requirements
- Provide improved emergency vehicle access

Figure 47 – WCC 119



Figure 48 – WCC 119



Figure 49 - WCC120



Figure 50 - WCC122



Figure 51 - WCC123 (currently closed)



Figure 52 - WCC124



Figure 53 – WCC124



Figure 54 – WCC126



Figure 55 – WCC127



Figure 56 – WCC127



Figure 57 – WCC128



Figure 58 – WCC 129



Figure 59 – WCC 130

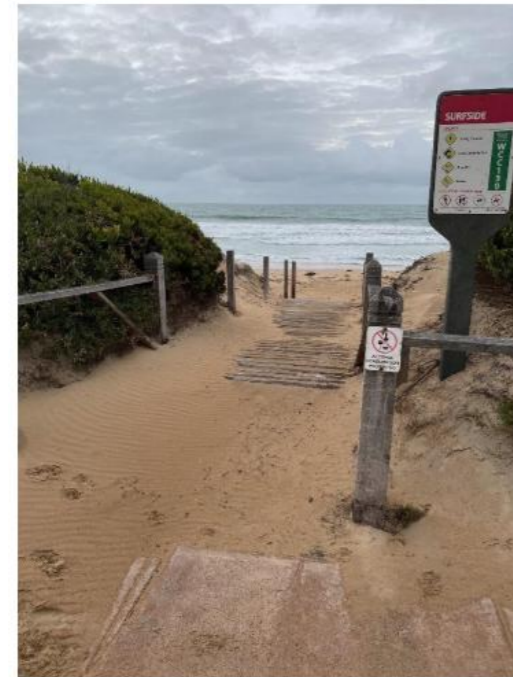


Figure 60 – WCC 131



Figure 61 – WCC 132



Figure 62 – WCC 134 'The Flume'



LADY BAY EAST

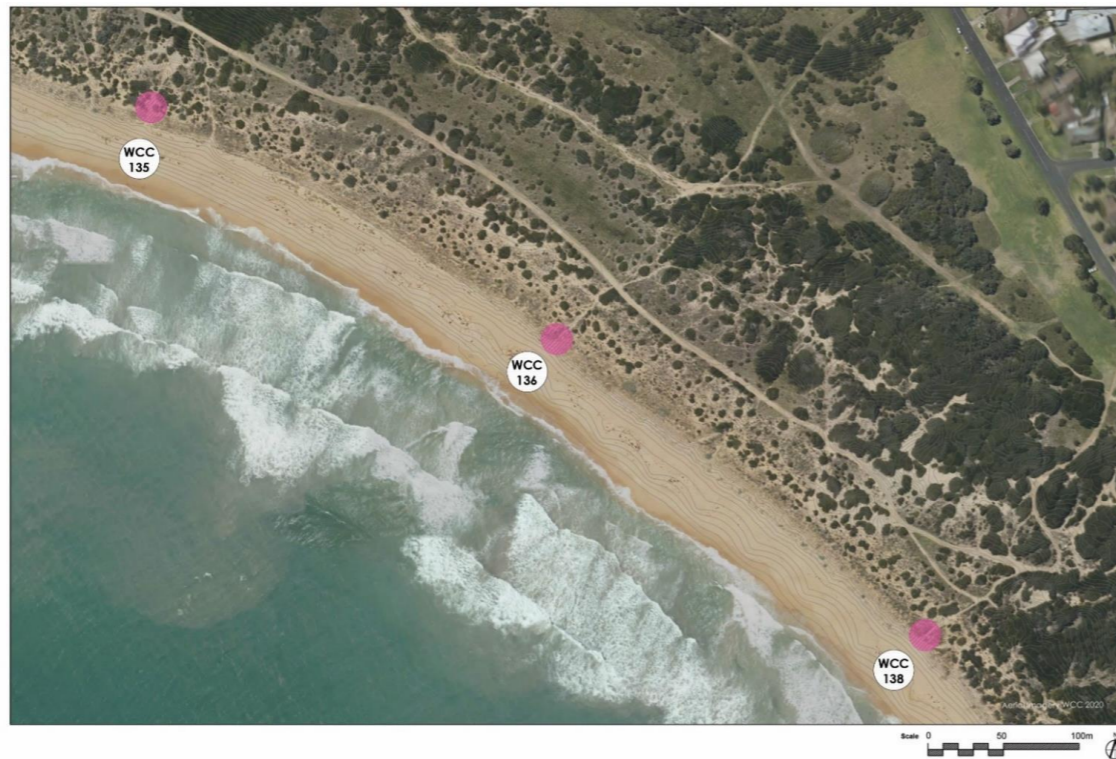
There are three (3) beach access points in this section of Lady Bay East stretches approximately 600 metres.

This area of Lady Bay is a popular place for locals to gain beach access and walks along the coastal trail and path network and is popular with surfers. This area is less trafficked by tourists during the peak summer holiday season than the western end of Lady Bay.

This section of coast includes The Flume – east (WCC135) which can be accessed by path from The Flume car park and Granny’s Grave beach access (WCC138), which can be accessed by path from Hickford Parade.

These three access points are not in close proximity to public amenities, including toilets and are more informal access points.

Figure 63 - Beach Access Point Location Map



STRENGTHS

- Remote and quiet
- Spectacular scenery
- Popular location for surfing
- Extensive coast trail
- Culturally significant area for Traditional Owners

CHALLENGES

- Unauthorised tracks and anti-social behaviour in this area have potential to cause loss of native vegetation, increased erosion and threat to cultural heritage
- Dynamic sand dunes and sand drift and build-up on access paths is a maintenance concern
- Limited beach access for people with special access requirements
- There are no patrolled swimming beaches in this area
- Access in the event of an emergency is limited with no vehicle access points to the beach nearby. The nearest vehicle access point is at the WSLSC

OPPORTUNITIES

- Improve safety
- Protect cultural heritage
- Improve beach accessibility for people with disabilities and those with special access requirements

Figure 64 – WCC135 'The Flume - East'



Figure 65 – WCC136



Figure 66 – WCC136



Figure 67 – WCC138



POINT RITCHIE / MOYJIL

The two (2) beach access points (WCC140 and WCC141) are utilised by locals walking local trails and visitors touring the Point Ritchie / Moyjil precinct. This is a culturally significant area and as described in Section 3.3, this site records unique evidence of early human occupation by the Traditional Owners, for tens of thousands of years, possibly dating beyond 60,000 years. (WCC, 2013)

There is convenient car parking and toilet amenities as well as lookouts and informational signage.

Access structure WCC140 has recently been upgraded with a new staircase constructed to replace the previous timber one. Access WCC141, which provides access to the Hopkins River estuary is nearing the end of its useful life.

Significant risks to cultural heritage in this area, both from nature weather events and processes causing erosion. In accordance with the Conservation Management Plan, protection and control of access within the management area, including the Point Ritchie/Moyjil area, needs to be carefully considered.

Figure 68 - Beach Access Point Location Map



STRENGTHS

- Culturally significant area for Traditional Owners, with highly significant deposits
- Cultural tourist attraction
- Spectacular scenery
- Links to extensive coast trail
- Car parking in close proximity to beach
- Close to public amenities including toilet facilities

CHALLENGES

- Access to beach dependent on tide
- Unauthorised tracks and erosion in this area have potential to cause loss of native vegetation, increased erosion and threat to cultural heritage
- Construction of structures has the potential to threaten cultural heritage
- Very limited beach access for people with special access requirements
- There are no patrolled swimming beaches in this area
- Access in the event of an emergency is limited with no vehicle access points to the beach nearby. The nearest vehicle access point is at the WSLSC
- Steep cliffs make access to beach difficult

OPPORTUNITIES

- Protect cultural heritage
- Improve safety

Figure 69 – WCC140



Figure 70 – WCC140

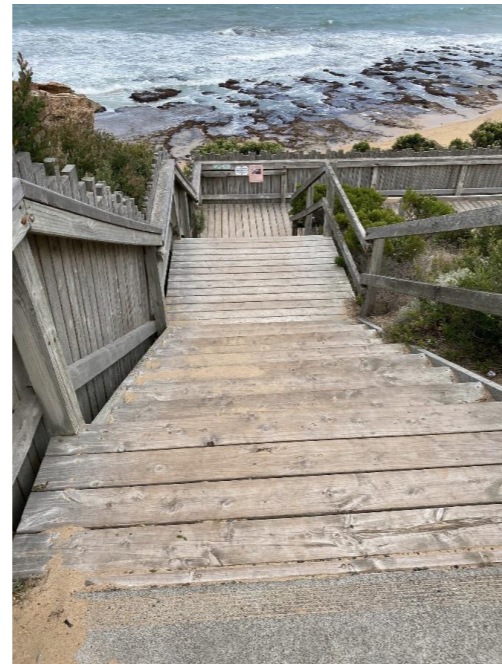


Figure 71 – WCC140

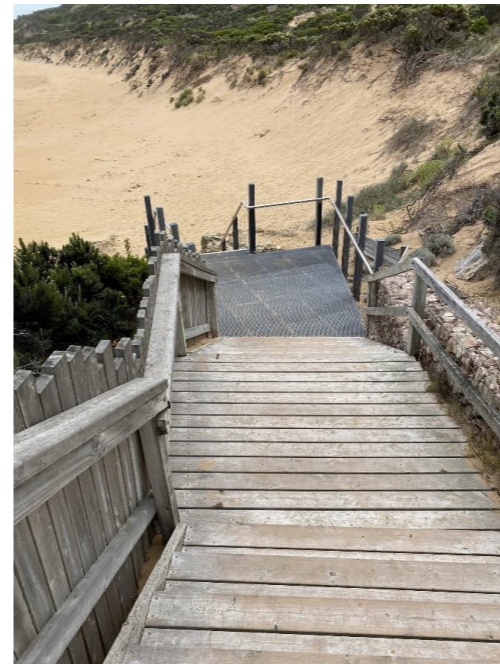


Figure 72 – WCC141



Figure 73 – WCC141



HOPKINS RIVER ESTUARY

Access point WCC142 is a steep staircase that provides access to the west side of the Hopkins River estuary. Anecdotally it is utilised for recreational fishing.

The two (2) access points next to Blue Hole Road (WCC144 and WCC145) are accessed by many locals and tourists stopping to take in the sites of the Hopkins River. It is also a popular dog walking area. There is convenient car parking and toilet amenities.

Figure 74 - Beach Access Point Location Map



STRENGTHS

- Spectacular scenery
- Popular place for recreational fishing and river activities
- Extensive path network
- Car parking in close proximity
- Close to public amenities including toilets on east side of Hopkins River.
- Relatively flat topography on east side of Hopkins River

CHALLENGES

- Steep cliffs on west side of river.
- Unauthorised tracks in this area have potential to cause loss of native vegetation, increased erosion and threat to cultural heritage.
- There are no patrolled swimming beaches in this area
- Access in the event of an emergency is limited in some locations.
- Access point at WCC142 is nearing the end of its useful life.
- The access points at WCC144 and WCC145 are not designed for people with special access requirements

OPPORTUNITIES

- Improve safety
- Protect cultural heritage
- Improve beach accessibility for people with disabilities and those with special access requirements

Figure 75 – WCC142



Figure 76 – WCC142

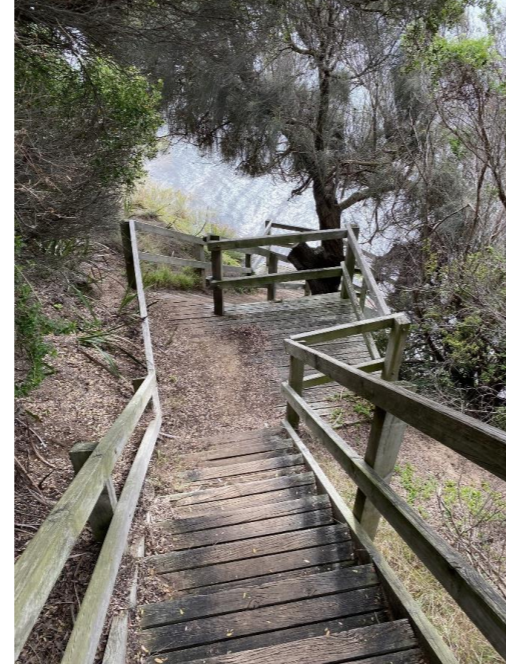


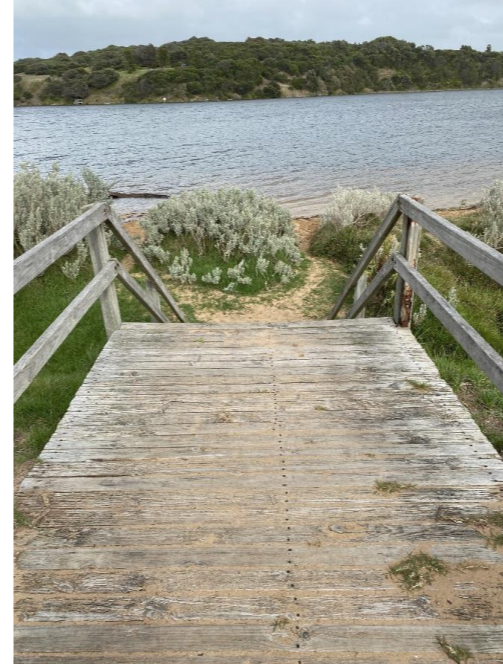
Figure 77 – WCC144



Figure 78 – WCC145



Figure 79 – WCC145

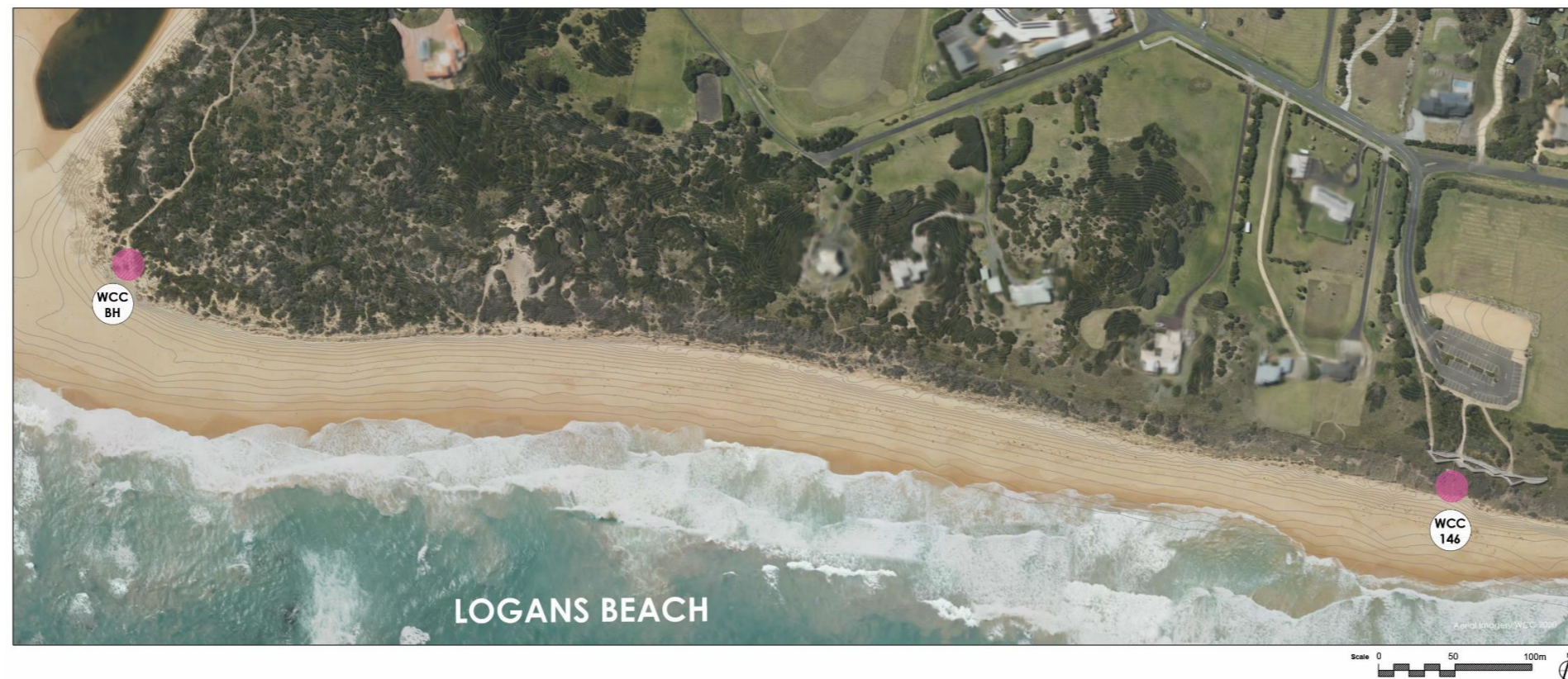


LOGANS BEACH

There are two (2) beach access points providing public access to Logans Beach. One is at the end of the Blue Hole (WCCBH) trail from Blue Hole Road and the other is from the Logans Beach from the Southern Right Whale Nursery viewing platform.

The Logans Beach access point WCC146 is utilised by locals and tourists who visit the site, to get a glimpse of female Southern Right Whales, who regularly return to Logans Beach to calve between June and September. The whales can often be seen within a few hundred metres of the shore. There is a substantial car park located for visitors to the whale nursery viewing platform. But there are no public amenities in this location. The nearest toilet amenities are provided at Blue Hole Road. Logans Beach is also a popular place for people to walk their dogs.

Figure 80 - Beach Access Point Location Map



STRENGTHS

- Remote and quiet
- Spectacular scenery
- Popular location for whale watching and dog walking
- Culturally significant area for Traditional Owners

CHALLENGES

- Limited beach access for people with special access requirements
- High dunes near WCC146 make access difficult
- There are no patrolled swimming beaches in this area
- Access in the event of an emergency is limited with no vehicle access points to the beach nearby

OPPORTUNITIES

- Improve safety
- Protect cultural heritage
- Improve beach accessibility for people with disabilities and those with special access requirements

Figure 81 – WCCBH



Figure 82 – WCCBH

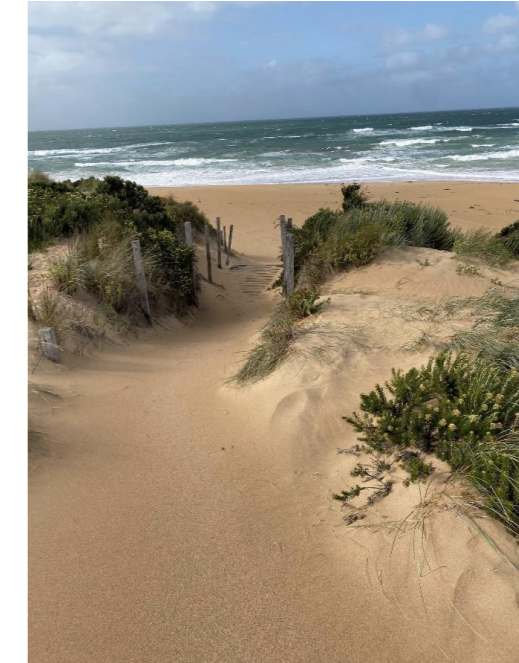
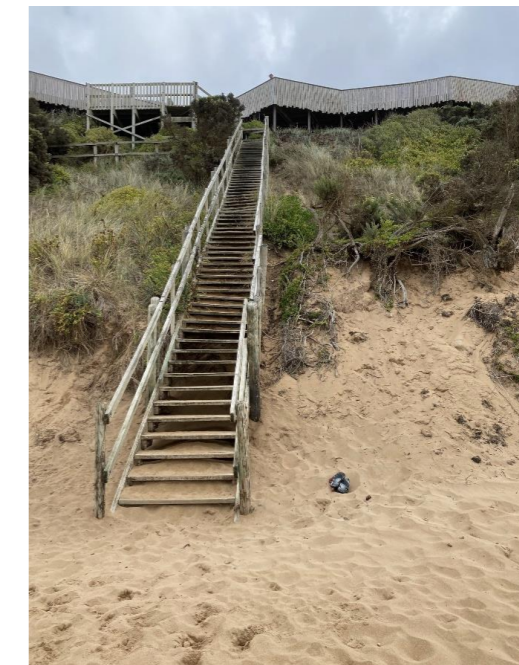


Figure 83 – WCC146



Figure 84 – WCC146



5. RECOMMENDATIONS

SHELLY BEACH, PICKERING POINT LOOKOUT, MERRI RIVER ESTUARY, STINGRAY BAY AND WORM BAY

1. Conduct a safety audit of the walking trail between the Viaduct Road and Shelly Beach, including beach access points WCC101 and WCC107. There are cliffs in relatively close proximity to the access path leading to Shelly Beach and Point Pickering. A safety audit of the cliff face and fencing should be undertaken to provide sufficient evidence that the tracks and beach access points can safely remain open to the public.
2. Investigate opportunities to make safety improvements to Shelly Beach WCC101. Changes may include fencing and surface improvements.
3. Carry out fencing repairs and additional fencing between the Merri Bridge and Shelly Beach to ensure walkers stay on the main track and avoid threats to significant cultural heritage places and deter people from going near cliff edges.
4. Install signage to direct visitors along the main tracks to Shelly Beach.
5. Replace existing staircase at beach access WCC107 near Pickering Point. The suitability of this location as a beach access point should be investigated as part of the safety audit.
6. Develop Viaduct Road Pedestrian Access Plan. Incorporate review of car parking, pedestrian access paths and crossings, pedestrian safety and beach access at WCC111, WCC112 and WCC113. The Plan should provide recommendations to address beach accessibility for people with wheelchairs and special access requirements and ensure emergency vehicle access is provided to the beach at this location. The Plan should include an assessment of the suitability and safety of retaining the three access points in their current locations.
7. Design and construct a new accessible ramp proposed near boat launching facilities. Design and construction of the proposed concrete terraced seating is to have integrated accessible ramp. This access point was adopted as part of the Harbour Master Plan.
8. Investigate opportunities to make safety improvements to the Worm Bay pedestrian and horse beach access ramp at WCC117.
9. Retain access points at the Yacht Club WCCYC and Worm Bay WCC118 as they are. These are relatively new structures with long remaining useful lifespans.

LADY BAY WEST (INCLUDING THE FLUME) AND LADY BAY EAST

10. There are a number of existing timber structures which have short remaining useful life. These should be replaced with staircases incorporating handrails, landings, tactile ground surface indicators and contrasting strips on stairs to make them more accessible. Access points proposed for replacement with staircases include WCC119, WCC120, WCC121, WCC123, WCC129 and WCC130. The replacement of WCC123 and WCC129 are current projects in the planned capital works program.
11. The existing accessible ramp near the Warrnambool Surf Lifesaving Club WCC126 is subject to regular access maintenance issues due to its design, construction materials and proneness to sand build up. It is recommended that this access ramp be replaced with a new accessible ramp. The design and siting of the accessible ramp near the Warrnambool Surf Lifesaving Club WCC126 should be undertaken at the same time as the plans for the proposed Surf Lifesaving Club upgrade/extension to ensure good planning and access to and from main building entrance/s and car parking areas. It is also recommended that a second accessible ramp be provided in Lady Bay West near the eastern end of the holiday park due to it being a high usage area with good path access from the McGennans car park. WCC122 may be an appropriate location for an accessible ramp subject to further investigation of the dune morphology and detailed design.
12. Retain access points at the Lady Bay WCC124 and Lady Bay WCC131 as they are. These are relatively new structures with long remaining useful lifespans.
13. Upgrade matting material of the vehicle access ramp at the Warrnambool Lifesaving Club WCC127. This may be a short-term solution depending on the future long-term plans for the Warrnambool Surf Lifesaving Club and associated vehicle access to the beach. It is not known whether the vehicle access point is proposed to remain in its current location.
14. It is recommended that Lady Bay WCC128 and WCC132 be decommissioned and removed and these areas fenced and revegetated. There are multiple access points provided along this section in front of the holiday park which will ensure convenient beach access is retained. These two access points present regular maintenance issues due to their siting and position in the dynamic sand dune and regular sand coverage. Access to WCC128 has been closed to the holiday park due to maintenance and safety concerns.
15. The access points WCC133 and WCC134 are in very close proximity to each other, approximately 65 metres apart. WCC133 is reaching the end of its remaining useful lifespan and WCC134 has an estimated remaining useful lifespan of 7 years. It is recommended to consolidate WCC133 and WCC134 into one upgraded beach access structure with an accessible ramp to accommodate wheelchairs and people with special access requirements. It is important that the access paths from the holiday park and The Flume car park be maintained in the redesign. The siting and location of the structure in the sand dune will require careful design and consideration in this dynamic sand dune to help avoid sand build up. The design of the new consolidated access point should include emergency vehicle access to the beach in this location (minimum 3m wide for all-terrain vehicle) as well as maintenance vehicles to clear sand away.
16. Retain and improve WCC135, WCC136 and WCC138. These are relatively low usage access points. Investigate ways in which minor improvements can be carried out to enhance safety and extend their remaining useful lifespan.

POINT RITCHIE / MOYJIL, HOPKINS RIVER ESTUARY AND LOGANS BEACH

17. Retain access points at Point Ritchie / Moyjil WCC140. This is a relatively new structure with a long remaining useful lifespan.
18. Replace staircases at Point Ritchie/Moyjil WCC1141 and Hopkins River WCC142 and WCC145.
19. Construct accessible ramp at Hopkins River WCC144 to accommodate wheelchairs and people with special access requirements. Provide all-terrain vehicle access to beach in this location for improved emergency access (although vehicle access is dependent on tidal levels)
20. Investigate opportunities to make safety improvements to Logans Beach access WCCBH. Changes may include fencing and surface improvements. New ESTA marker required at this location.
21. Replace staircase at Logans Beach WCC146. Replace timber stairs between the existing viewing platform/deck and beach. This is a current project in the planned capital works program.

GENERAL

22. Conduct a Vegetation Management Plan review to investigate the management of weeds and species with invasive tendencies, including Coast Tea-tree. Use findings of review to guide the maintenance program and amend planning overlays, where required.
23. Conduct a review of ESTA markers, including review of numbers, siting and information provided on each sign.
24. Investigate and support purchasing of portable beach matting. Liaise with Warrnambool Surf Lifesaving Club to determine options for making portable beach matting readily available during the patrolled beach season. Investigate means of promoting use of beach matting and developing a user-friendly booking method, if required.
25. Conduct a signage audit of directional, informational and regulatory signs, including information regarding dog access to beaches (prohibited or on-leash). Investigate opportunities to incorporate information about culturally and environmentally significant sites/features.
26. Conduct a review of dog access on beaches near known Hooded Plover beach-nesting areas at Blue Hole and Logans Beach, including timing of seasonal access. Engage with BirdLife Australia to discuss dog off-leash impacts on beach-nesting bird breeding.



Figure 85 – Beach Access Recommendations Plan

WARRNAMBOOL BEACH ACCESS - RECOMMENDATIONS PLAN (WEST)



- LEGEND
- Beach Access Point (33 in total within study area)
 - **Retain**
Recently constructed staircase structure:
Worm Bay WCC118
McGenness WCC124
Lady Bay WCC131
Moyji/Point Ritchie WCC140
Recently upgraded boat ramp:
Worm Bay WCCYC
 - **Retain and improve**
 - **Replace with accessible ramp**
Incorporate handrails, landings, tactile ground surface indicators
 - **Replace with staircase**
Incorporate handrails, landings, tactile ground surface indicators and contrasting strips on stairs
 - **New accessible ramp**
Incorporate handrails, landings, tactile ground surface indicators
Currently no constructed beach access at this location
 - **Consolidate with accessible ramp**
Consolidate WCC133 and WCC134 providing a single location for beach access. Replace with ramp (incorporating handrails, landings, tactile ground surface indicators). Provide all-terrain vehicle (ATV) access in consultation with emergency services.
 - ⊗ Decommission and Remove
WCC128 and WCC132
Fence off and revegetate area
 - ▲ Provide emergency vehicle access to beach
 - Existing Path/Trail
 - ⚙ Existing Public Amenities/Toilets
 - Develop Viaduct Road Pedestrian Access Plan
Incorporate review of car parking, pedestrian access paths and crossings, pedestrian safety and siting and design of WCC111, WCC112 and WCC113. Ensure access ramp for pedestrians and access ramp for emergency vehicles are provided.
 - Prepare a risk audit of the track and beach access points between Viaduct Road and Shelly Beach. The audit should assess the risk to visitors taking into consideration the stability of the cliffs and proximity of the trail/path/boardwalks to the cliff.

WARRNAMBOOL BEACH ACCESS - RECOMMENDATIONS PLAN (EAST)



REFER TO LOCATION PLAN (WEST) (ABOVE)

REFER TO LOCATION PLAN (EAST) (BELOW)

Warrnambool Beach Access Strategy
Part 4: Implementation
2022-2037

6.IMPLEMENTATION

The Beach Access Strategy is intended to be implemented over the next 15 years.

Some of the Beach Access Strategy recommendations for renewal and upgraded infrastructure will fall into Council's annual maintenance program. However, others particularly new and replacement infrastructure to a higher service level will require new budget allocations or funding from elsewhere, such as State or Federal grants in order to be completed.

The following Implementation Plan includes recommendations for improvements to Warrnambool's beach access points, over a period of 15 years. The timing for delivery of these recommendations will be dependent on Council priorities and budget allocations and availability of funding programs and grant opportunities.



TABLE 1 - BEACH ACCESS IMPLEMENTATION PLAN 2022-2037

Priority Key: Immediate – Years 1-3, Short-term - 4-6 years, Medium-term, 7-9 years, Long-term – 10+ years, As required

Estimated Cost*: \$ - Up to \$50,000, \$\$ - \$50,000 to \$300,000, \$\$\$ - \$300,000-\$600,000, \$\$\$\$ - Greater than \$600,000

*Note - more accurate cost estimates will be prepared following Round 2 consultation feedback. Final costings will be prepared following project scoping and detailed design.

ACCESS POINT IDENTIFICATION		ASSESSMENT							RECOMMENDATIONS AND IMPLEMENTATION TIMEFRAMES			
Access Structure I.D Code	Asset Description (Asset ID)	Handrail Materials	Walkway Materials	Top Landing Materials	Bottom Landing Materials	Construction Profile	Ancillary Items/ Infrastructure and Facilities	Estimated Remaining Useful Life (Based on 2019 audit and updated in 2022)	Recommendations	(Retain, Replace, Consolidate, Remove, New)	Priority	Estimated Cost
WCC101	Shelly Beach (171399)	None	Informal gravel path	None	None	Ramp	N/A	N/A (Not a constructed structure)	Conduct risk audit of track leading from Viaduct Road to Shelly Beach WCC101. Recommendations are dependent on risk audit findings. Create a single, more defined beach access point at Shelly Beach to avoid unnecessary damage to shorebird habitat.	Retain and improve	Immediate: Fencing improvements, risk audit and install signage Priority of future works dependent on risk audit.	\$ - Fencing and Sign Improvements \$ - Risk Audit Cost of works, dependent on findings of risk audit
WCC107	Pickering Point (171373)	Post and Rail	Timber	Timber	Timber	Stairs	N/A	7 years	Conduct risk audit of track leading from Viaduct Road to Shelly Beach, including WCC107. Recommendations are dependent on risk audit findings.	Replace staircase	Medium-term	\$\$ - Staircase replacement
WCC111	Stingray Bay North (162429)	None	Concrete	Concrete	Sand	Ramp	N/A	7 years	Develop Viaduct Road Pedestrian Access Plan. Incorporate review of car parking, pedestrian access paths and crossings, pedestrian safety and design and siting of WCC111, WCC112 and WCC113. The Plan should provide recommendations to address beach accessibility for people with wheelchairs and special access requirements and ensure emergency vehicle access is provided to the beach at this location. The Plan should include a safety analysis to determine if all three access points should remain open in their current locations.	Replace with accessible ramp Provide emergency vehicle access	Immediate: Develop Viaduct Road Pedestrian Access Plan Short-term: Replace with accessible ramp and provide emergency vehicle access	\$ - Pedestrian Access Plan Cost of works, dependent on findings of pedestrian access plan

Warrnambool Beach Access Strategy – Background Report – April 2022

Access Structure I.D Code	Asset Description (Asset ID)	Handrail Materials	Walkway Materials	Top Landing Materials	Bottom Landing Materials	Construction Profile	Ancillary Items/ Infrastructure and Facilities	Estimated Remaining Useful Life (Based on 2019 audit and updated in 2022)	Recommendations	(Retain, Replace, Consolidate, Remove, New)	Priority	Estimated Cost
WCC112	Stingray Bay – Viaduct Rd (North) (162219)	Post and Rail	Timber and Concrete	Concrete	Sand	Stairs	N/A	4 years	Develop Viaduct Road Pedestrian Access Plan, as per WCC111 recommendation. The design and replacement of the existing staircase structure at WCC112 is a current project in the planned capital works program. Investigate if it is possible to delay the replacement of this structure until the Pedestrian Access Plan has been completed.	Recommendation dependent on Pedestrian Access Plan	Immediate: Develop Viaduct Road Pedestrian Access Plan	Refer to WCC111
WCC113	Stingray Bay – Viaduct Rd (South) (162222)	Post and Rail	Concrete	Concrete	Sand	Stairs	N/A	7 years	Develop Viaduct Road Pedestrian Access Plan, as per WCC111 recommendation.	Recommendation dependent on Pedestrian Access Plan	Immediate: Develop Viaduct Road Pedestrian Access Plan	Refer to WCC111
WCCYC	26B Promenade Beach Access – Yacht Club Car Park (163413)	None	Fibreglass Reinforced Concrete	None	Sand	Ramp	Adjacent pavilion restaurant	37 years	No changes proposed.	Retain	As required: Maintenance to structure	\$ - Maintenance
WCC117	26A Promenade Beach Access (162414)	None	Concrete	Concrete	Sand	Ramp	N/A	17 years	Investigate opportunities to make safety improvements to the Worm Bay beach access ramp at WCC117. This may involve replacement/modifications to the structure	Retain and improve	Short-term	\$\$\$ - Safety improvements
WCC118	Worm Bay Car Park (170357)	Stainless Steel	Fibreglass Reinforced Plastic	Fibreglass Reinforced Plastic	Sand	Stairs	Timber Seat	40+ years	No changes proposed.	Retain	As required: Maintenance to structure	\$ - Maintenance

Warrnambool Beach Access Strategy – Background Report – April 2022

Access Structure I.D Code	Asset Description (Asset ID)	Handrail Materials	Walkway Materials	Top Landing Materials	Bottom Landing Materials	Construction Profile	Ancillary Items/ Infrastructure and Facilities	Estimated Remaining Useful Life (Based on 2019 audit and updated in 2022)	Recommendations	(Retain, Replace, Consolidate, Remove, New)	Priority	Estimated Cost
WCC119	Beach Access Holiday Park (162224)	Post and Rail	Timber	Timber	Timber	Stairs	Shower	2 Years	Existing timber structure has short remaining useful life. Replace with staircase incorporating handrails, landings, tactile ground surface indicators and contrasting strips on stairs to make them more accessible.	Replace staircase	Short-term	\$\$ - Staircase replacement
WCC120	Beach Access Holiday Park (149328)	Post and Rail	Timber	Timber	Sand	Stairs	Shower	2 Years	Existing timber structure has short remaining useful life. Replace with staircase incorporating handrails, landings, tactile ground surface indicators and contrasting strips on stairs to make them more accessible.	Replace staircase	Short-term	\$\$ - Staircase replacement
WCC121	Beach Access Holiday Park (162223)	Post and Wire	Timber	Timber	Timber	Stairs	Shower	2 Years	Existing timber structure has short remaining useful life. Replace with staircase incorporating handrails, landings, tactile ground surface indicators and contrasting strips on stairs to make them more accessible.	Replace staircase	Short-term	\$\$ - Staircase replacement
WCC122	24D Promenade Beach Access – Boardwalk McGennans Car Park (162249)	Timber	Timber	Timber	Sand	Stairs	N/A	0 Years	Investigate the provision of an accessible ramp at WCC122. High usage area with good access to holiday park and McGennans car park. Provision of a ramp at this location is subject to further investigation of the dune morphology and detailed design.	Replace with accessible ramp	Immediate: Replace top steps and fix trip hazards, rough finishes, etc. Short-term: Design and construct accessible ramp	\$ - short term safety improvements to existing structure \$\$\$ - Accessible Ramp

Warrnambool Beach Access Strategy – Background Report – April 2022

Access Structure I.D Code	Asset Description (Asset ID)	Handrail Materials	Walkway Materials	Top Landing Materials	Bottom Landing Materials	Construction Profile	Ancillary Items/ Infrastructure and Facilities	Estimated Remaining Useful Life (Based on 2019 audit and updated in 2022)	Recommendations	(Retain, Replace, Consolidate, Remove, New)	Priority	Estimated Cost
WCC123	24B Promenade Boardwalk – McGennans Car Park (162248)	Post and Rail	Timber	Timber	Timber	Stairs	Top timber deck with 2 timber bench seats	0 Years	Existing timber structure has short remaining useful life. Replace with staircase incorporating handrails, landings, tactile ground surface indicators and contrasting strips on stairs to make them more accessible. This is a current project in the planned capital works program.	Replace staircase	Immediate	\$\$ - Staircase replacement
WCC124	24A Promenade Beach Access (262415)	Stainless Steel	Fibreglass Reinforced Plastic	Fibreglass Reinforced Plastic	Sand	Stairs	Timber Seat	40+ years	No changes proposed.	Retain	As required: Maintenance to structure	\$ - Maintenance
WCC126	Boardwalk – McGennans Car Park (129954)	Timber Post and Rail and Stainless Steel Top Rail on Ramps	Concrete and Hardwood Timber	Concrete	Timber	Ramp	Seats at intermediate landings	12	The existing ramp is subject to regular access maintenance issues due to its design, construction materials and proneness to sand build up. It is recommended that this access ramp be replaced with a new accessible ramp. The design and siting of the ramp should be undertaken at the same time as the plans for the proposed surf lifesaving club upgrade/extension to ensure good planning and access to and from main building entrance/s and car parking areas. Whilst remaining useful life is estimated at 12 years, the maintenance costs are significant and replacement should be considered earlier than 12 years.	Replace with accessible ramp.	Medium-term	\$\$\$ - Accessible Ramp

Warrnambool Beach Access Strategy – Background Report – April 2022

Access Structure I.D Code	Asset Description (Asset ID)	Handrail Materials	Walkway Materials	Top Landing Materials	Bottom Landing Materials	Construction Profile	Ancillary Items/ Infrastructure and Facilities	Estimated Remaining Useful Life (Based on 2019 audit and updated in 2022)	Recommendations	(Retain, Replace, Consolidate, Remove, New)	Priority	Estimated Cost
WCC127	23A Promenade Beach Access (162417)	None	Concrete	Concrete	Sand	Ramp	Next to timber viewing platforms and life saving club and tower	17	Upgrade matting material of the vehicle access ramp at the Warrnambool Lifesaving Club WCC127. This may need to be a short-term solution depending on the future long-term plans for the Warrnambool Surf Lifesaving Club and associated vehicle access to the beach. It is not known whether the vehicle access point is proposed to remain in its current location.	Retain and improve	Short-term: Replacement matting Long-term: reassess appropriateness of location and design if WSLSC building is upgraded/modified/extended	\$ - Replacement Matting
WCC128	22A Promenade Beach Access (162418)	Post and Wire	Flexible Timber and Chain Buried in Sand and Partially Removed	Concrete Promenade	Sand	Ramp	N/A	0	Decommission and remove. Fence off and revegetate.	Remove	Immediate	\$ - Decommission and remove
WCC129	22A Promenade Beach Access (162419)	Post and Wire	Flexible Timber and Chain Walkway	Promenade Concrete Path	Sand	Ramp	Seat	2	Existing timber structure has short remaining useful life. Replace with staircase incorporating handrails, landings, tactile ground surface indicators and contrasting strips on stairs to make them more accessible. This is a current project in the planned capital works program.	Replace with staircase	Immediate	\$\$ - Staircase replacement

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Access Structure I.D Code	Asset Description (Asset ID)	Handrail Materials	Walkway Materials	Top Landing Materials	Bottom Landing Materials	Construction Profile	Ancillary Items/ Infrastructure and Facilities	Estimated Remaining Useful Life (Based on 2019 audit and updated in 2022)	Recommendations	(Retain, Replace, Consolidate, Remove, New)	Priority	Estimated Cost
WCC130	22A Promenade Beach Access (162420)	Post and Wire	Timber Slat and Chain Ramp	Concrete	Sand	Ramp	N/A	2	Existing timber structure has short remaining useful life. Replace with staircase incorporating handrails, landings, tactile ground surface indicators and contrasting strips on stairs to make them more accessible.	Replace with staircase	Immediate	\$\$ - Staircase replacement
WCC131	22A Promenade Beach Access (162421)	Stainless Steel	Fibreglass Reinforced Plastic	Fibreglass Reinforced Plastic	Sand	Stairs	Timber Seat	40+ years	No changes proposed.	Retain	As required: Maintenance to structure	\$ - Maintenance
WCC132	22A Promenade Beach Access (162422)	Post and Wire	Flexible Timber and Chain. Part sand	Concrete Promenade Path	Sand	Ramp	N/A	0 years	Decommission and remove. Fence off and revegetate.	Remove	Immediate	\$ - Decommission and remove
WCC133	22A Promenade Beach Access (162423)	Post and Wire	Flexible Hardwood and Chain. Part sand	Concrete promenade path	Sand	Ramp	N/A	2	<p>WCC133 is reaching the end of its remaining useful lifespan and WCC134 has an estimated remaining useful lifespan of 7 years. Consolidate WCC133 and WCC134 into one upgraded beach access structure with an accessible ramp to accommodate wheelchairs and people with special access requirements.</p> <p>Retain access paths from the holiday park and The Flume car park.</p> <p>The siting and location of the access in the sand dune will require careful design and consideration in this dynamic sand dune to help avoid sand build up.</p> <p>Include emergency vehicle access to the beach in this location (minimum 3m wide for all-terrain vehicle) as well as maintenance vehicles to clear sand away.</p> <p>Maintain bicycle rack, drinking fountain and seating</p>	<p>Consolidate</p> <p>Provide emergency vehicle access</p> <p>Provide accessible ramp</p>	<p>Immediate: Design and safety improvements to existing structure</p> <p>Short-term: Provide emergency vehicle access</p> <p>Medium-term: Consolidate and replace with accessible ramp</p>	<p>\$ - Safety Improvements</p> <p>\$\$ - Emergency vehicle access</p> <p>\$\$\$ - Accessible ramp</p>

Warrnambool Beach Access Strategy – Background Report – April 2022

Access Structure I.D Code	Asset Description (Asset ID)	Handrail Materials	Walkway Materials	Top Landing Materials	Bottom Landing Materials	Construction Profile	Ancillary Items/ Infrastructure and Facilities	Estimated Remaining Useful Life (Based on 2019 audit and updated in 2022)	Recommendations	(Retain, Replace, Consolidate, Remove, New)	Priority	Estimated Cost
WCC134	22A Promenade Beach Access (162424) The Flume	Post and rail and post and wire	Timber deck on landing. Part plastic slat and chain ramp, part sand	Timber	Sand	Ramp	Bicycle rack, drinking fountain and seating	7	Recommendation as per WCC133	Consolidate Provide emergency vehicle access Provide accessible ramp	Same as above (Refer to WCC133)	Refer to WCC134
WCC135	19C Promenade Beach Access: Granny's Grave (171400)	None	Informal Sandy Path	None	None	Ramp	NA	N/A	Retain and carry out improvements to enhance safety and extend their remaining useful lifespan. Define track with fencing upgrades.	Retain and improve	Short-term: Fencing to define track Medium-term: Improvements to beach access	\$ - Fencing \$ - Beach access improvements
WCC136	19B Promenade Beach Access Granny's Grave (171398)	None	Informal Sand Track	Concrete	Sand	Ramp	N/A	0 years	Retain and carry out improvements to enhance safety and extend their remaining useful lifespan. Define track with fencing upgrades.	Retain and improve	Short-term	\$ - Beach access improvements
WCC138	19A Promenade Beach Access: Grannys Grave (162425)	Post and Wire	Timber Slat and Chain	Concrete	Sand	Ramp	N/A	0 years	Retain and carry out improvements to enhance safety and extend their remaining useful lifespan. Define track with fencing upgrades.	Retain and improve	Short-term	\$ - Beach access improvements

Warrnambool Beach Access Strategy – Background Report – April 2022

Access Structure I.D Code	Asset Description (Asset ID)	Handrail Materials	Walkway Materials	Top Landing Materials	Bottom Landing Materials	Construction Profile	Ancillary Items/ Infrastructure and Facilities	Estimated Remaining Useful Life (Based on 2019 audit and updated in 2022)	Recommendations	(Retain, Replace, Consolidate, Remove, New)	Priority	Estimated Cost
WCC140	Beach Access Point: Point Ritchie / Moyjil (162217)	Stainless Steel and recycled plastic	Fibreglass Reinforced Plastic	Fibreglass Reinforced Plastic	Sand	Stairs	Gabion walls	40+ years	No changes proposed.	Retain	As required: Maintenance to structure	\$ - Maintenance
WCC141	Beach Access: Bluehole	Stainless Steel Post and Rail	Concrete Steps and Concrete Path	Concrete	Sand	Stairs	N/A	12 years	Replace with staircase incorporating handrails, landings, tactile ground surface indicators and contrasting strips on stairs to make them more accessible. Whilst remaining useful life is estimated at 12 years, the maintenance costs are significant due to sand build up on concrete steps and risk to users. Replacement or temporary upgrade should be considered earlier than 12 years.	Replace staircase	Immediate: Investigate replacement or short-term upgrade	\$\$ - Staircase replacement
WCC142	5A Promenade Beach Access: Bluehole (162427)	Post and Rail	Timber Steps and Timber Landings	Concrete	Rocks and Sand	Stairs	N/A	7 years	Replace with staircase incorporating handrails, landings, tactile ground surface indicators and contrasting strips on stairs to make them more accessible.	Replace staircase	Medium-term	\$\$ - Staircase replacement
WCC144	Beach Access (North): Bluehole Car Park (171397)	None	Informal Gravel Path	Gravel	Sand	Ramp	N/A	2 years	Construct accessible ramp to accommodate wheelchairs and people with special access requirements. Provide all-terrain vehicle access to beach in this location for improved emergency access (although vehicle access is dependent on tidal levels)	Replace with accessible ramp. Provide emergency vehicle access	Immediate	\$\$ - Accessible Ramp
WCC145	Beach Access (South): Bluehole Car Park (162428)	Post and Rail	Timber	Timber	Sand	Stairs	N/A	0 years	Replace with staircase incorporating handrails, landings, tactile ground surface indicators and contrasting strips on stairs to make them more accessible.	Replace staircase	Immediate	\$\$ - Staircase replacement

Warrnambool Beach Access Strategy – Background Report – April 2022

Access Structure I.D Code	Asset Description (Asset ID)	Handrail Materials	Walkway Materials	Top Landing Materials	Bottom Landing Materials	Construction Profile	Ancillary Items/ Infrastructure and Facilities	Estimated Remaining Useful Life (Based on 2019 audit and updated in 2022)	Recommendations	(Retain, Replace, Consolidate, Remove, New)	Priority	Estimated Cost
WCCBH	Beach Access: Bluehole Trail South (171356)	Post and Wire	Timber Slate and Chain. Part Sand	Gravel	Sand	Ramp	N/A	2 years	Investigate opportunities to make safety improvements to Logans Beach access WCCBH. Changes may include fencing and surface improvements. New ESTA marker required at this location.	Retain and improve	Immediate	\$ - Beach access improvements
WCC146	Stairs: Logans Beach Access (162220)	Post and Rail	Timber Steps and Timber Intermediate Landings	Timber	Timber	Stairs	Adjoins whale viewing platform. Shower on mid-platform	2 years	Replace timber stairs between the existing viewing platform/deck and beach. This is a current project in the planned capital works program. Work with Birdlife Australia to ensure works locations and timing does not impact detrimentally on Hooded Plover nests or broods. Breeding season occurs from late August to March.	Replace staircase	Immediate	\$\$\$ - Staircase replacement
WCC-NEW	Harbour Access	N/A	N/A	N/A	N/A	N/A	N/A	N/A	New accessible ramp proposed near boat launching facilities. Design and construction of the proposed concrete terraced seating is to include integrated accessible ramp.	Construct new accessible ramp.	Medium-term	\$\$\$\$ - Accessible Ramp and Seating

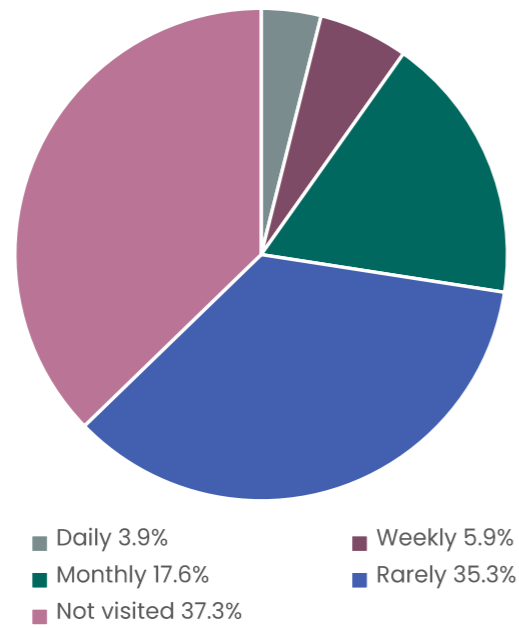
RECOMMENDATIONS AND IMPLEMENTATION TIMEFRAMES FOR FURTHER STUDIES	
FURTHER WORK	Priority
<p>Viaduct Road Pedestrian Access Plan</p> <p>Develop the Viaduct Road Pedestrian Access Plan. Incorporate review of car parking, pedestrian access paths and crossings, pedestrian safety and design and siting of WCC111, WCC112 and WCC113. The Plan should provide recommendations to address beach accessibility for people with wheelchairs and special access requirements and ensure emergency vehicle access is provided to the beach at this location. The Plan should include a safety analysis to determine if all three access points should remain open in the current locations.</p>	Immediate
<p>Vegetation Management Plan Review</p> <p>Conduct a Vegetation Management Plan review, including the management of weeds and species with invasive tendencies, such as Coast Tea-tree (<i>Leptospermum laevigatum</i>), Marram Grass (<i>Ammophila arenaria</i>) and Beach Daisy (<i>Arctotheca populifolia</i>). Use findings of the Plan review to guide the maintenance program and amend planning overlays, where required. Engage with BirdLife Australia to discuss vegetation impacts on beach-nesting bird breeding.</p> <p>A strategic approach is required to ensure that in places where Coast Tea-tree and any weed species are removed that revegetation is densely planted with sufficient erosion control measures in place to avoid creating any new erosion problems. Safety of walkers and cyclists, maintenance of sightlines and ongoing vegetation management requirements, should be considered as part of the review.</p>	Immediate
<p>ESTA Marker Review and Update</p> <p>Conduct a review of ESTA markers, including a review of numbers, siting and information provided on each sign.</p>	Immediate
<p>Risk Audit of Trail (Viaduct Road to Shelly Beach)</p> <p>Conduct a risk audit of the walking trail between the Viaduct Road and Shelly Beach, including beach access points WCC101 and WCC107. There are cliffs in relatively close proximity to the access path leading to Shelly Beach and Point Pickering. A safety audit of the cliff face and fencing should be undertaken to provide sufficient evidence that the tracks and beach access points can safely remain open to the public. The audit should include recommendations to help direct walkers to a single authorised trail, discourage use of multiple trails and improve signage and fencing.</p>	Immediate
<p>Portable Beach Matting</p> <p>Investigate and support purchasing of portable beach matting. Liaise with Warrnambool Surf Lifesaving Club to determine options for making portable beach matting readily available during the patrolled beach season. Investigate means of promoting use of beach matting and developing a user-friendly booking method, if required.</p>	Immediate
<p>Signage Audit</p> <p>Conduct a signage audit of directional, informational and regulatory signs, including information regarding dog access to beaches (prohibited or on-leash). Investigate opportunities to incorporate information about culturally and environmentally significant sites/features.</p>	Short-term
<p>Review Dog Access on Beaches</p> <p>Conduct a review of dog access on beaches near known Hooded Plover beach-nesting areas at Blue Hole and Logans Beach, including timing of seasonal access. Engage with BirdLife Australia to discuss dog off-leash impacts on beach-nesting bird breeding.</p> <p>Provide additional information to dog owners regarding seasonal access, restriction times and prohibited areas for all beaches in Warrnambool, including maps.</p>	Immediate

Beach Access Strategy
Appendices

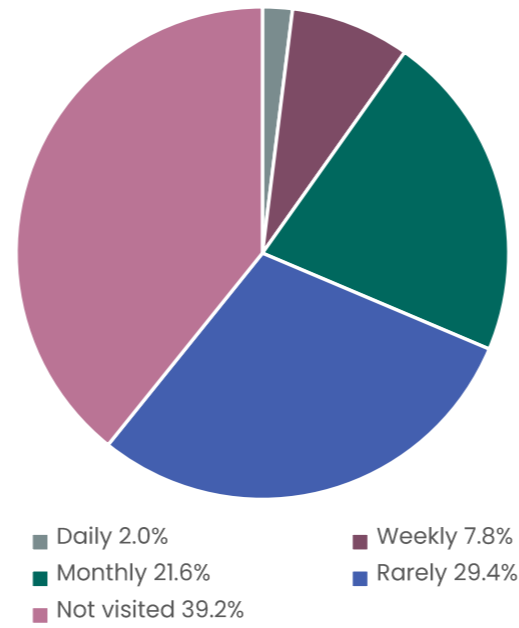
APPENDIX 1: BEACH ACCESS POINT USAGE CONSULTATION RESPONSE

QUESTION: Which access points do you visit and how often?

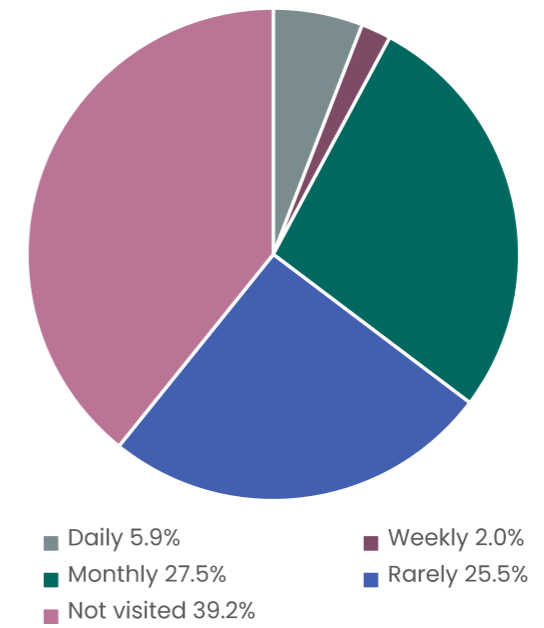
SHELLY BEACH WCC101



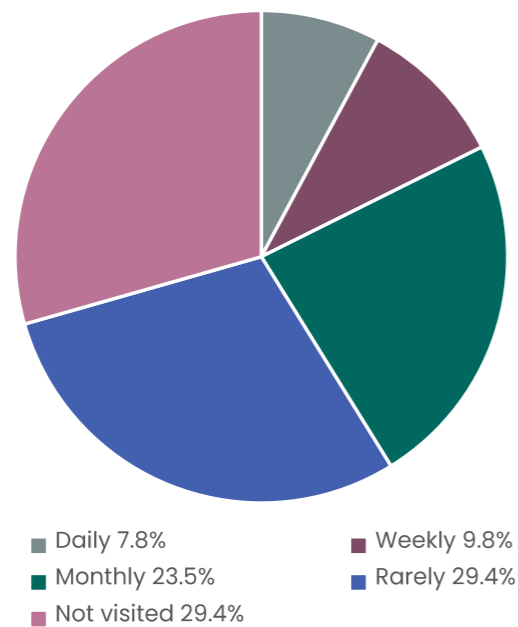
PICKERING POINT WCC107



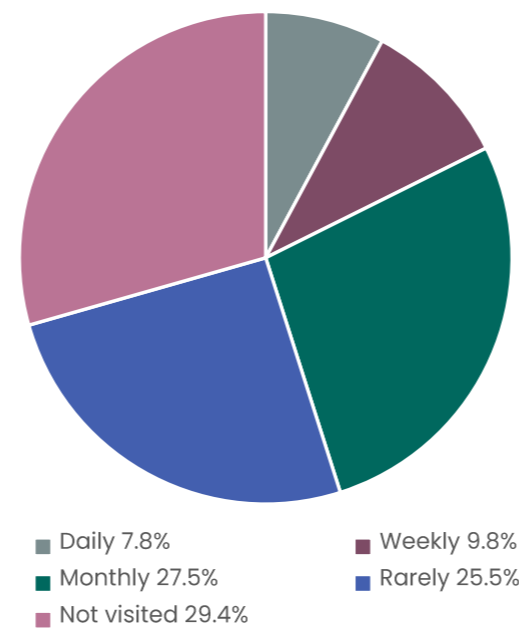
MERRI RIVER ESTUARY WCC111



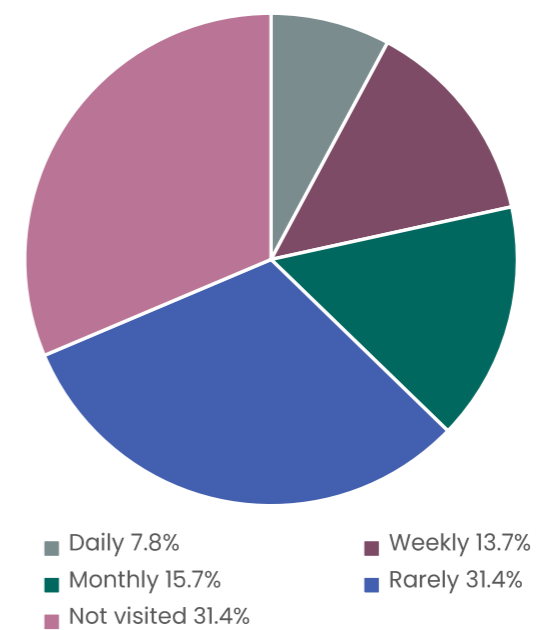
STINGRAY BAY WCC112



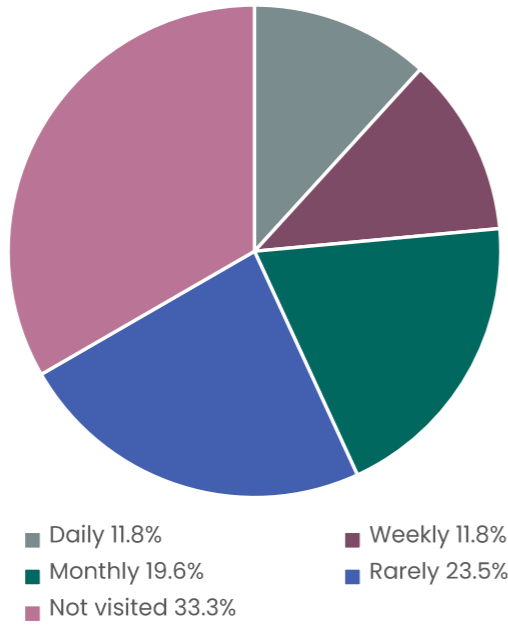
STINGRAY BAY WCC113



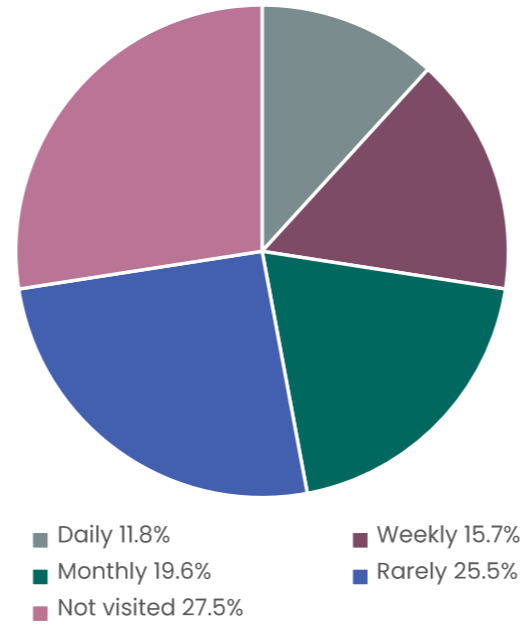
YACHT CLUB WCCYC



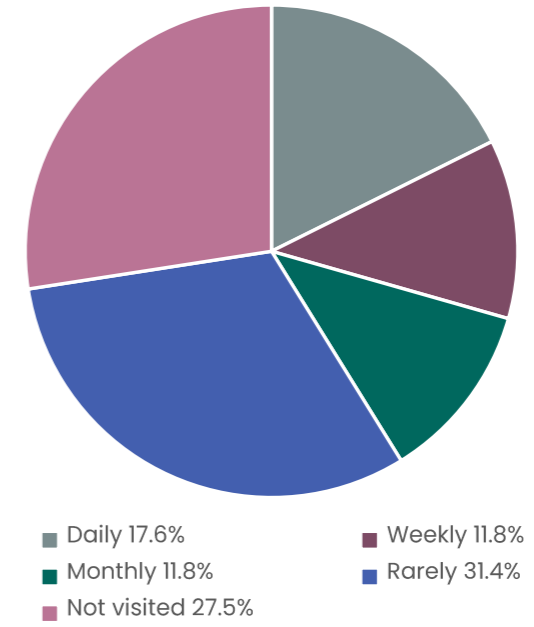
WORM BAY WCC117



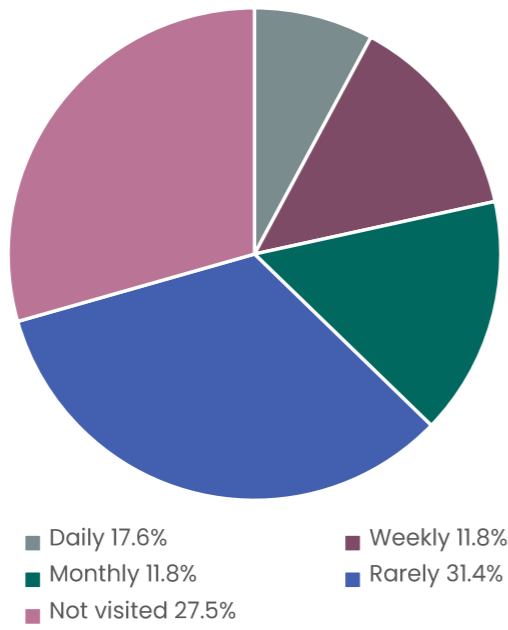
WORM BAY WCC118



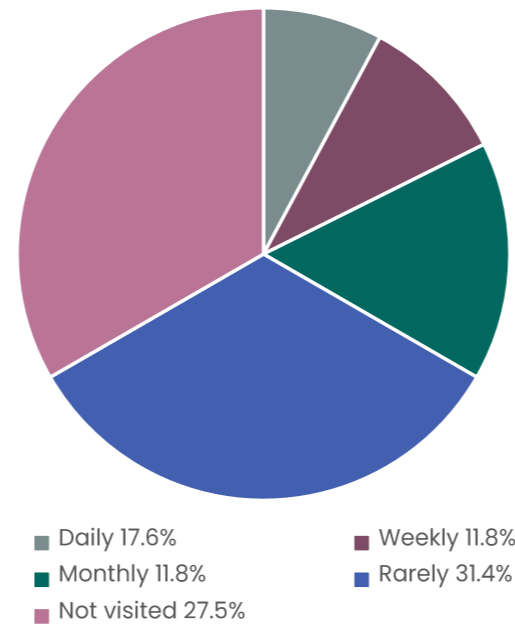
LADY BAY WEST WCC119



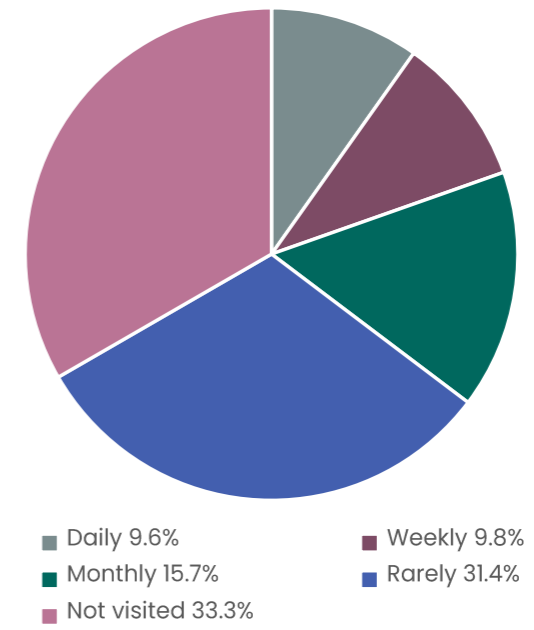
LADY BAY WEST WCC120



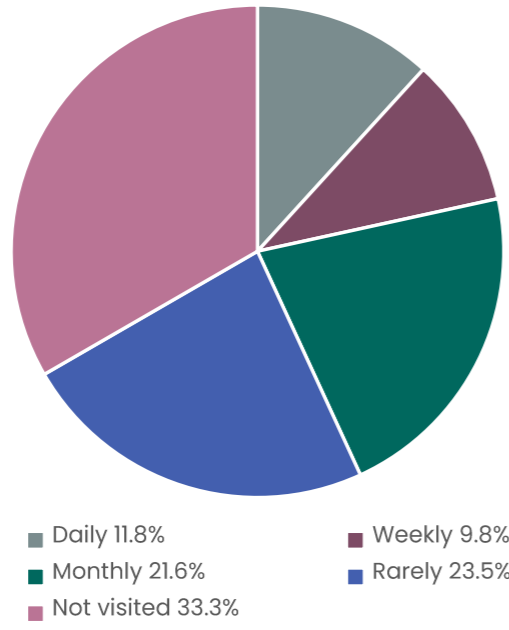
LADY BAY WEST WCC121



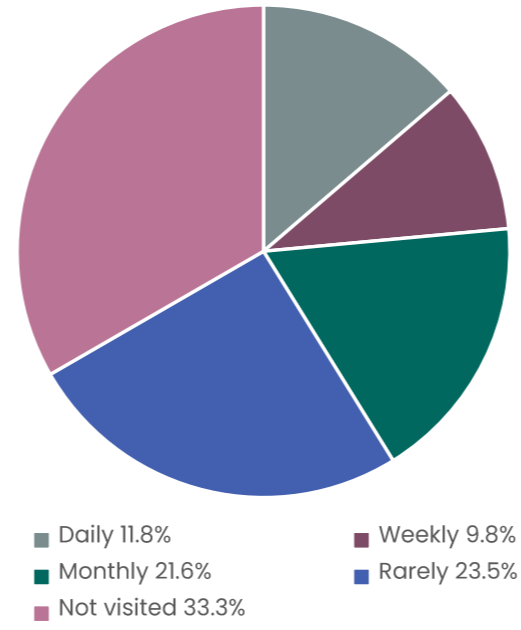
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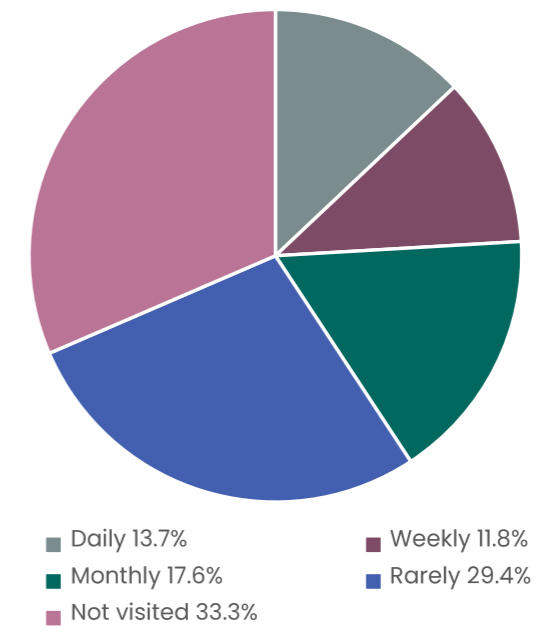
LADY BAY WEST WCC123 (Currently Closed)



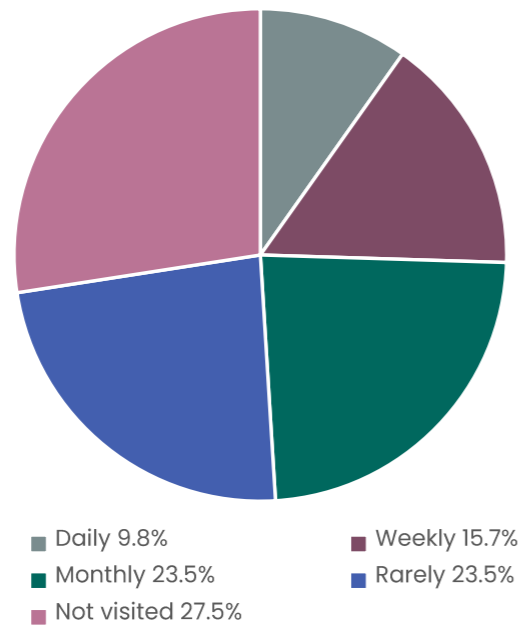
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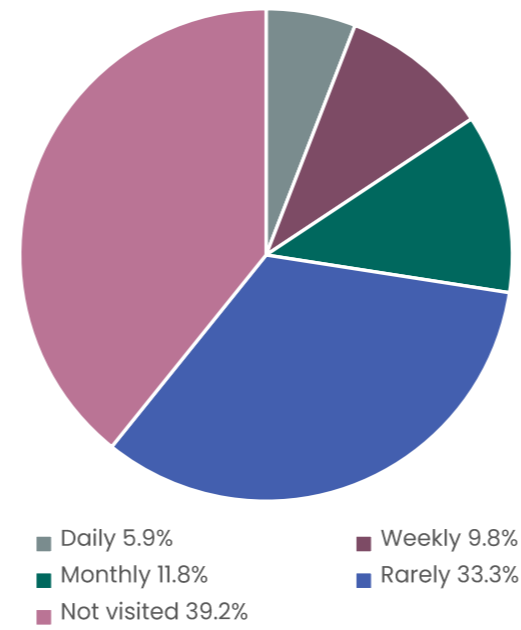
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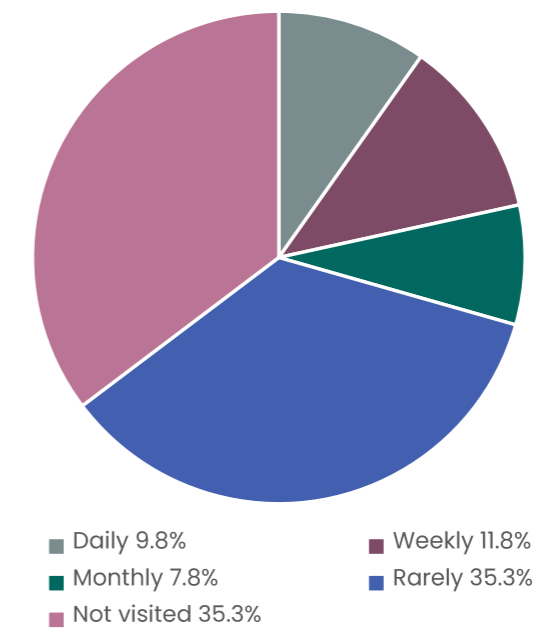
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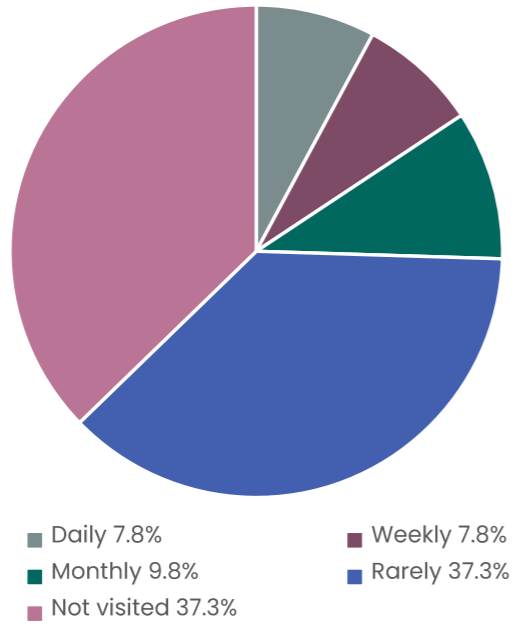
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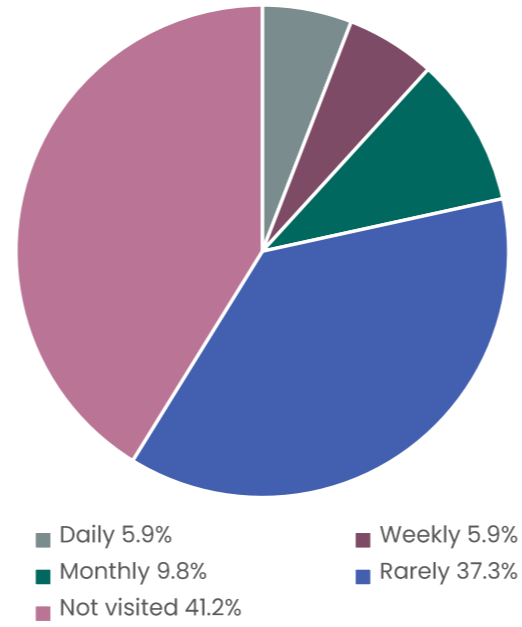
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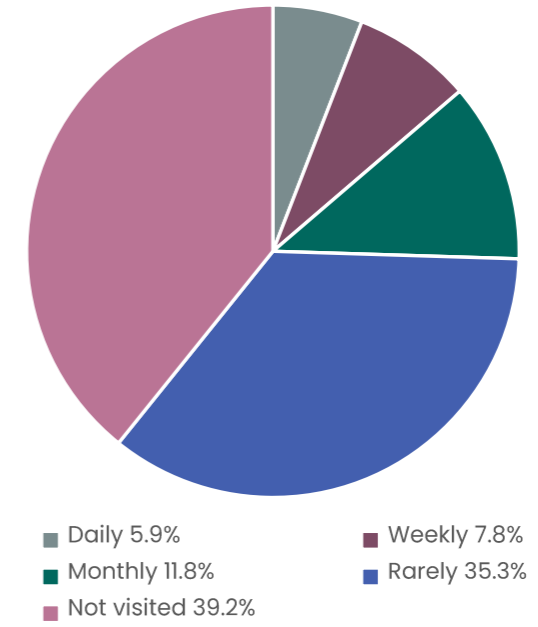
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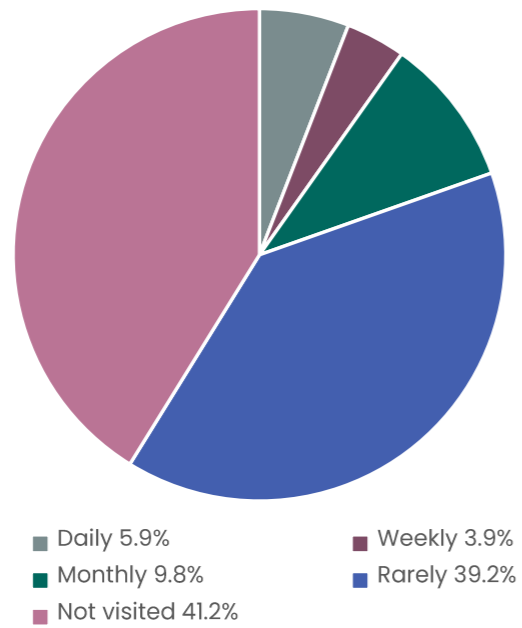
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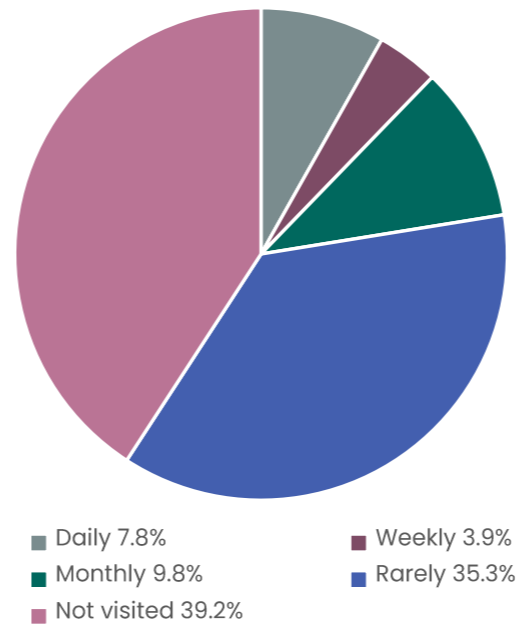
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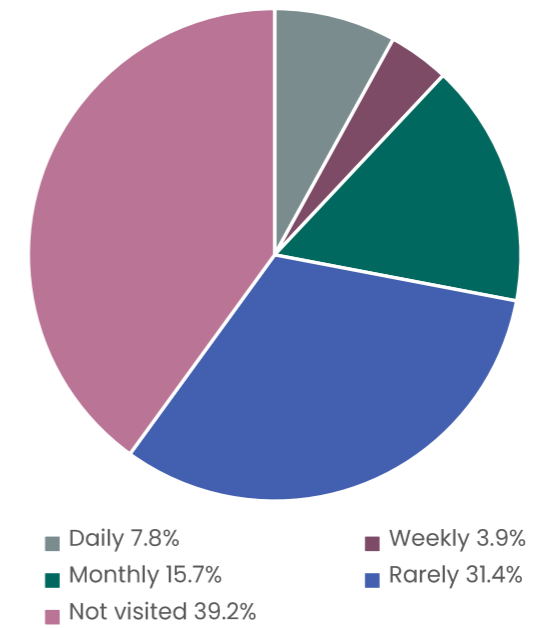
LADY BAY WEST WCC133



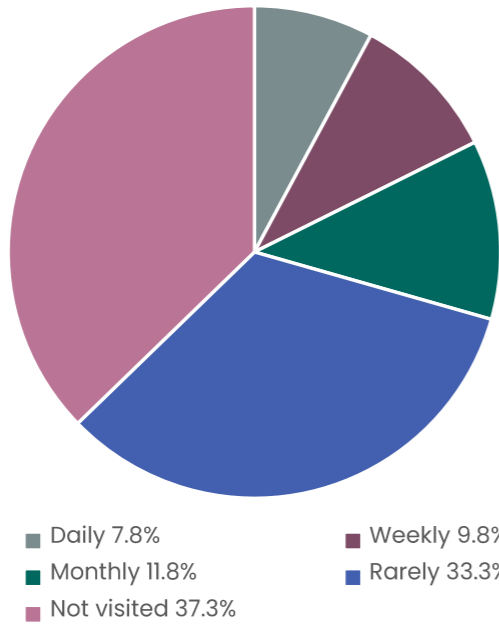
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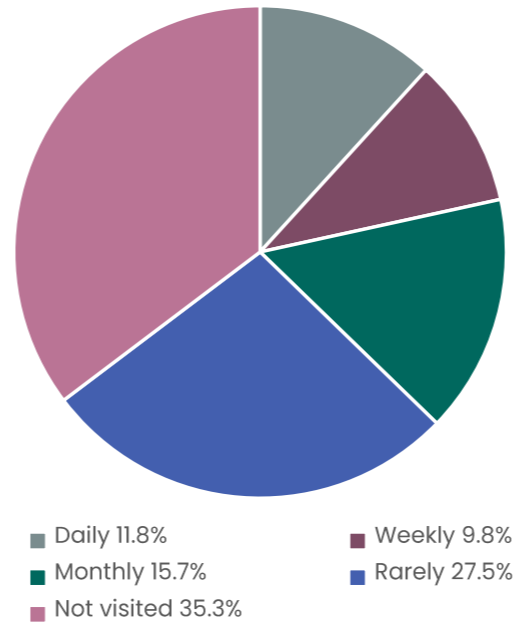
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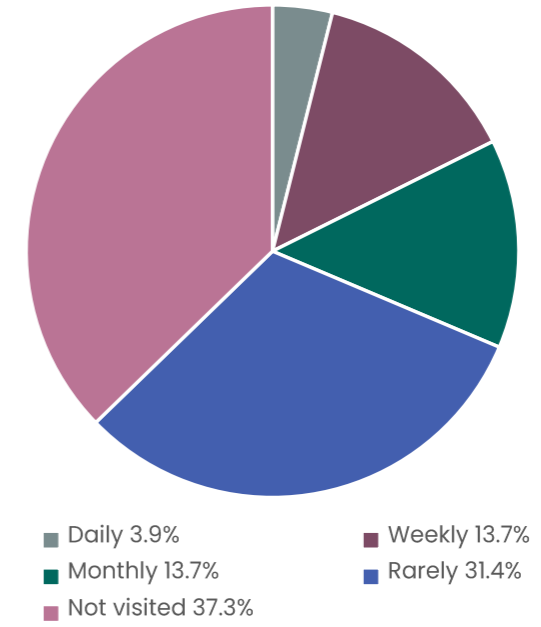
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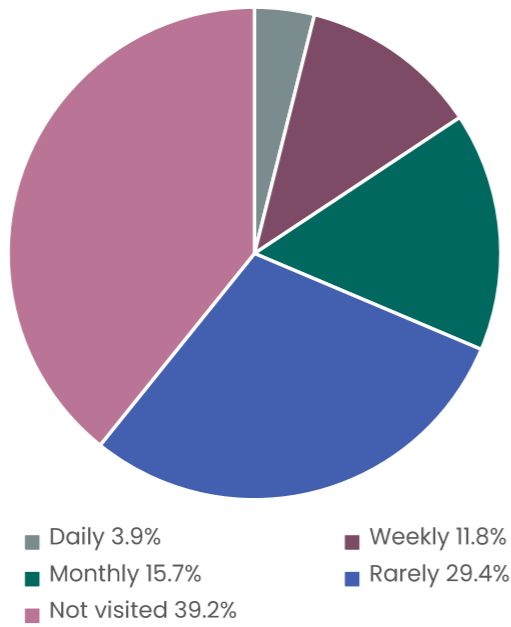
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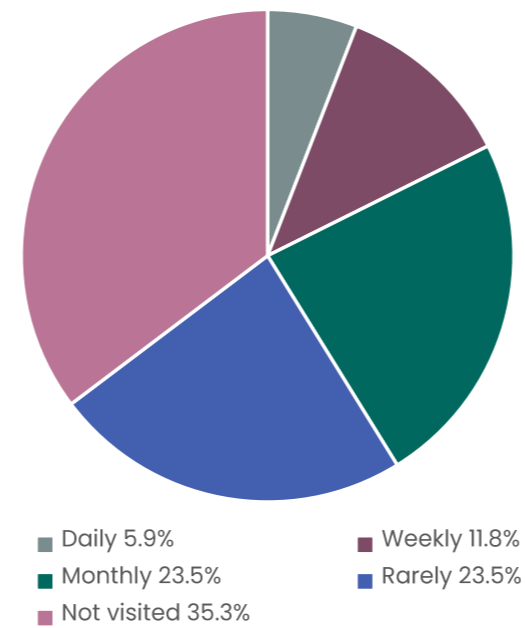
MOYJIL / POINT RITCHIE WCC140



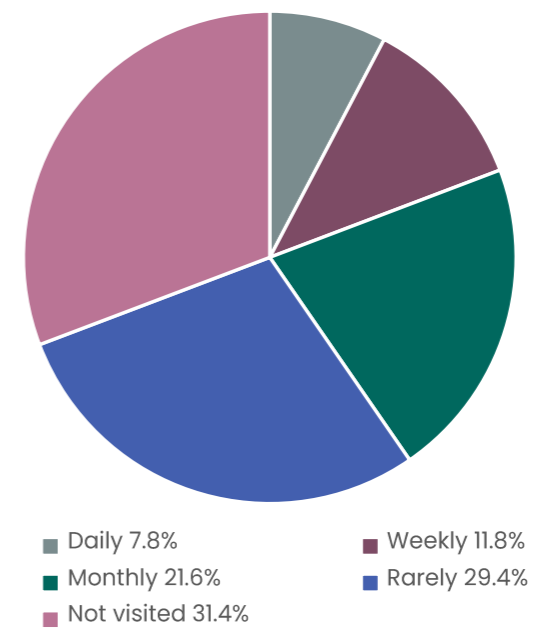
MOYJIL / POINT RITCHIE WCC141

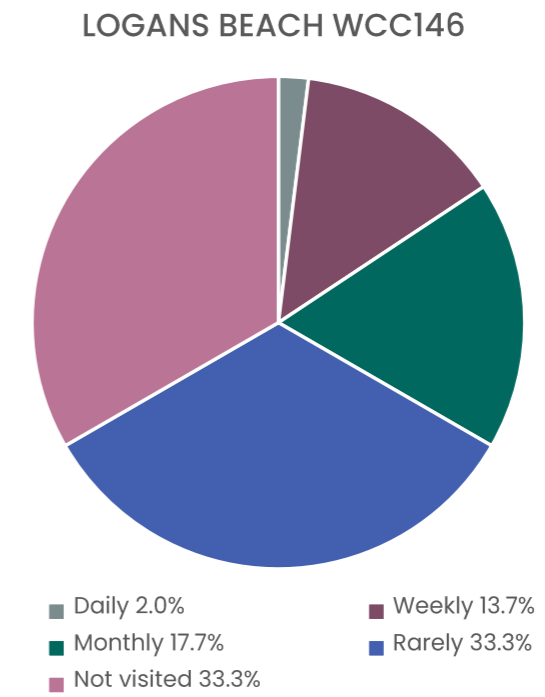
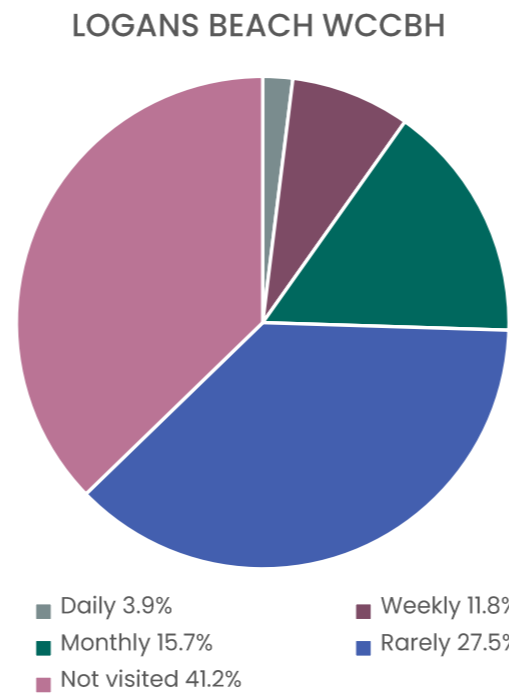
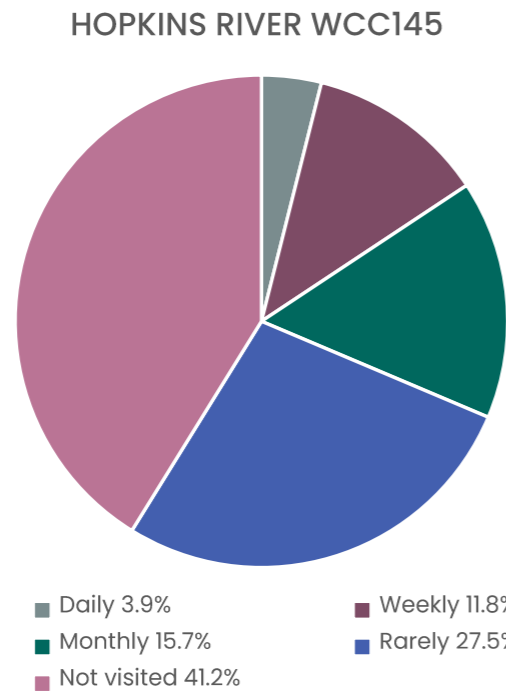


HOPKINS RIVER WCC142



HOPKINS RIVER WCC144





7. REFERENCES

Aboriginal Victoria (AV) (2020) *Cultural Heritage Sensitivity*. Accessed online 19 February 2022, [ACHRIS](#)

Biosis Research Pty Ltd (2012), *Warrnambool Coast Vegetation Management Plan*, Accessed online 26 March 2022, [Microsoft Word - FINAL_12345 Warrnambool Coast VMP FIN 25042012 JK Comments JY comments_NO MAPS JY comments_2](#)

Deakin University (2022), *Victorian Coastal Monitoring Program*. Accessed online 20 March 2022, <https://deakin.maps.arcgis.com/apps/MapSeries/index.html?appid=278166b83d174667811d8bd231c27db8>

Department of Environment, Land, Water and Planning (DELWP) (2014), *Victorian Coastal Strategy*, accessed online 19 February 2022. [Victorian Coastal Strategy \(marineandcoasts.vic.gov.au\)](#)

DELWP (2017), *Protecting Victoria's Environment – Biodiversity 2037*. Accessed online 19 February 2022. [Protecting-Victorias-Environment-Biodiversity-2037.pdf](#)

DELWP (2020), *Siting and Design Guidelines for Structures on the Victorian Coast*, Accessed online 19 February 2022, [Siting-and-Design-Guidelines_May2020_WEB.pdf \(marineandcoasts.vic.gov.au\)](#)

DELWP¹, (2020), *Nature Kit Maps*, accessed online 19 February 2022: [NatureKit Victoria \(biodiversity.vic.gov.au\)](#)

DELWP², (2020), *Marine and Coastal Policy*, accessed online 19 February 2022, <https://www.marineandcoasts.vic.gov.au/coastal-management/marine-and-coastal-policy>

DELWP³, (2022), *Planning Schemes Online*, accessed online 19 February 2022: <https://planning-schemes.delwp.vic.gov.au/>

DELWP⁴, (2022), *Nature Kit – Biodiversity Mapping*, accessed online 26 March 2022: [NatureKit Victoria \(biodiversity.vic.gov.au\)](#)

Leadership Great South Coast Inc, (2022), *Accessible Beach Great South Coast – Advocacy Report*.

Maguire, G., Cullen, M. and Mead, R. (2014), *Managing the Hooded Plover in Victoria: A site by site assessment of threats and prioritisation of management investment on Parks Victoria managed land*. Report to Parks Victoria. BirdLife Australia, Victoria, accessed online 13 August 2020, http://birdlife.org.au/documents/BNB-Parks_Victoria_Managing_the_Hooded_Plover_Report_2014.pdf

RDV (2022), *Regional City of Warrnambool - Regional Development Victoria*, accessed online 19 February 2022: www.rdv.vic.gov.au/victorias-regions/warrnambool

Victorian Coastal Council (2018), *Victoria's Coast and Marine Environments Under Projected Climate Change: Impacts, research and priorities*. Accessed online 19 February 2022: [Victoria's Coast Preparing for the future \(marineandcoasts.vic.gov.au\)](#)

Warrnambool City Council (WCC) (2012), *Warrnambool Coast Vegetation Management Plan* - Biosis Research Pty Ltd. Warrnambool City Council. Accessed online 19 February 2022. [Microsoft Word - FINAL_12345 Warrnambool Coast VMP FIN 25042012 JK Comments JY comments_NO MAPS JY comments_2](#)

WCC (2013) *Moyjil Aboriginal Place – Point Ritchie Conservation Management*, accessed online 19 February 2022, [Moyjil Point Ritchie CMP.pdf \(warrnambool.vic.gov.au\)](#)

WCC (2013) *Warrnambool Coastal Management Plan 2013*, accessed online 19 February 2022, [coastal plan.pdf \(warrnambool.vic.gov.au\)](#)

WCC (2014) *Warrnambool Open Space Strategy*, accessed online 26 March 2022, [Microsoft Word - APPENDIX A - Final Draft Warrnambool Open Space Strategy](#)

WCC (2018) *Lake Pertobe Master Plan 2018*, Accessed online 20 February 2022. https://www.warrnambool.vic.gov.au/sites/warrnambool.vic.gov.au/files/documents/warrnambool/facilities/lake_pertobe/Lake_Pertobe_Master_Plan_with_Appendices.pdf

WCC (2018) *Warrnambool Harbour Master Plan 2018*, Accessed online 20 February 2022. [Warrnambool Harbour Master Plan.pdf](#)

WCC (2018) *Green Warrnambool 2018*. Accessed online 19 February 2022 https://www.warrnambool.vic.gov.au/sites/warrnambool.vic.gov.au/files/documents/council/about/strategic_plans/Green_Warrnambool_FINAL_adopted_3_September_2018.pdf

WCC (2019) *Active Warrnambool Strategy*, Accessed online 20 February 2022. [2588 active warrnambool_0.pdf](#)

Warrnambool 2040 - Community Plan 2019, Accessed online 19 February 2022, <http://w2040.com.au/>

WCC (2020) *Disability, Access and Inclusion Policy 2020-2023*. Accessed online 19 February 2022, [Disability, Access and Inclusion Policy 2020-2023.pdf \(warrnambool.vic.gov.au\)](#)

WCC (2021) – *2021-2025 Warrnambool City Council Plan*, Accessed online 19 February 2022. [WCC Plan 2021-2025 final_0.pdf \(warrnambool.vic.gov.au\)](#)

WCC (2021) *Wild Coast Landscape Master Plan April 2021*, Accessed online 19 February 2022, [Wild Coast Landscape Master Plan_Final April 2021_amended.pdf \(warrnambool.vic.gov.au\)](#)



Justin Harzmeyer
Natural Environment Officer
Warrnambool Civic Centre
25 Liebig Street
Warrnambool, Victoria, 3280
Re. Draft Warrnambool Beach Access Strategy
8/06/2022

Dear Justin,

BirdLife Australia has worked to conserve the Hooded Plover (*Thinornis cucullatus*) and their critical coastal habitats across the Victorian coast for more than 16 years. Through a combination of collaborative on-ground action, research, community awareness and citizen science BirdLife Australia's 'Beach-nesting Birds' team proudly demonstrates one of Australia's most successful stories of conservation success and is able to document the slow but steady population recovery of a threatened species. Critical to ensuring the species does not regress into population decline and to managing escalating threats, is integrating species needs into long-term coastal planning.

We congratulate the Warrnambool City Council on its in depth and thorough draft Warrnambool Beach Access Plan. We have read through the plan and provide the below comments and amendments we believe would improve the environmental values, specifically shorebird values of the Warrnambool coastline:

- 1) Informal access tracks compromise coastal habitat integrity, in particular the EPBC-listed Hooded Plover's breeding habitat and identified as a threat to flora, fauna and cultural heritage in the Wild Coast Landscape Master Plan. Informal tracks such as those that deviate from the Thunder Point car park to Shelly Beach (WCC101) have no defined exit onto the beach, thus the creation of multiple paths dramatically expand the tracks effect on surrounding vegetation and overall habitat. Unmanaged foot traffic where the track exits onto the beach creates an area of up to 100 meters on either side of the exit where the habitat is degraded and disturbed to an extent that prevents shorebirds from using the habitat for nesting. We are thus highly supportive of the measures to carry out additional fencing and signage to better direct traffic between the Merri Bridge and Shelly Beach and suggest traffic be directed to the beach by a single well provisioned exit point.
- 2) Although broadly supportive of the replacement of the staircase at Logans Beach (WCC146) we highly recommend works to occur outside of the Hooded Plover breeding season (breeding season is from late August to March) to minimise the likelihood of the works compromising nearby nests or broods of the Hooded Plover which is known to nest at this location regularly. In the event works must be conducted within the Hooded Plover breeding season we request WCC contact us prior to works commencing to establish if and Hooded Plover (or other beach-nesting bird) breeding attempts would be disturbed or destroyed by the works. These would need to be rescheduled to avoid the time of the active nest/chicks.



- 3) Like the Shelly Beach access, the Logans Beach spit access (WCCBH) suffers from numerous informal tracks that split from the main track and diverge into numerous exit points across the spit. The spit is known to have Red-capped Plover and occasionally Hooded Plovers nesting on it, and the track and its many informal exits have a substantial footprint that deposits users in the middle of this highly valuable nesting habitat. This leads to direct threat of nest/chick crushing and impacts of off leash dogs. Given this track's large dune footprint, the nearby alternative access points (WCC 145 and WCC146) and that this access is deemed as a Category C in the draft plan we recommend this beach access be closed and revegetated.
- 4) We are supportive of the plan to conduct a vegetation management plan review; we wish to be involved in this process (we have substantial knowledge of coastal weeds and their effects on beach-nesting bird breeding). We also would like to see the recent emergence of the invasive Beach Daisy (*Arctotheca populifolia*) which is rapidly colonising South West Victoria and likely already occurs across the WCC managed coast added to the draft access plan.
- 5) Lastly, we are concerned that the highly invasive Marram Grass (*Ammophila arenaria*) was mentioned in the draft plan as "important for erosion control and dune stabilisation. They can also provide habitat for native fauna", statements that directly conflict with the plans goal of "Minimise the impacts of pest plants and animals and decrease damaging land uses and practices". Given that this weed is known for displacing native and threatened beach-nesting bird breeding from the dunes and forcing them to nest lower on the beach where they are more exposed to human related threats and tidal inundation, we suggest such statements are removed from the plan and this strategy of maintaining Marram Grass be reassessed. This weed is actually known to exacerbate loss of sand from the beaches, acting to lock the dune sand in situ so that during dynamic coastal processes, sand from the beach is taken by wave action and redeposited in the ocean. This leads to future loss of beaches. The native Hairy Spinifex instead allows for dynamic sand shifts, rebuilding dunes after a tidal event, and ensuring beaches are resilient over time. This should be the vision for the area, not to retain weed species known to degrade habitat values of threatened species.

Thank you for considering our comments and amendments to the Draft Warrnambool Beach Access Plan. Please let me know if you require further discussion regarding our comments.

Kind regards

A handwritten signature in black ink, appearing to read "Maguire", with a stylized flourish underneath.

Dr Grainne Maguire
Program Leader (Coastal and Wetland Birds), BirdLife Australia
grainne.maguire@birdlife.org.au
0400 910 761



In reply please quote: D2022/024438
Enquiries to: Ian Bail

2 June 2022

Justin Harzmeyer
Natural Environment Officer
Warrnambool City Council
25 Liebig Street Warrnambool 3280

Dear Justin

RE : DRAFT WARRNAMBOOL BEACH ACCESS STRATEGY

Thank you for the invitation to comment on the Draft Warrnambool Beach Access Strategy.

We commend Warrnambool City Council for the development of the strategy, and the principles and implementation approach outlined within it.

Background

Wannon Water operates the Warrnambool Sewage Treatment plant, located just off the coast north-west of Thunder Point, close to Beach Access Point WCC101.

The Warrnambool Sewage Treatment Plant provides sewage treatment services for a population of nearly 36,000 people across Warrnambool, Koroit and Allansford. Around half the incoming flow (influent) is domestic sewage, while the other half is trade waste from local industries including Saputo, Midfield Meats and the Warrnambool saleyards.

Treated water (also known as effluent) produced following treatment of the sewage and trade waste is released to the ocean through an outfall pipe to the west of Thunder Point and just east of Beach Access Point WCC101. This is an area of high wave energy which helps the treated effluent to mix into the sea water. The Environment Protection Authority has approved a licence for a 300-metre mixing zone around the outfall pipe with 16 conditions. This means that there are areas of accessible beach and rocky shoreline within the mixing zone adjacent to beach access point WCC101.

Wannon Water is commencing a significant upgrade of the Warrnambool Sewage Treatment Plant. The upgrade is designed to meet the needs of housing and economic growth in the region. It will ensure the plant has sufficient capacity for a projected increase in sewage volumes while continuing to protect the environment. In parallel with this project, we will be developing a new Effluent Management Strategy for the plant in accordance with the development licence approved by the Environment Protection Authority. The strategy aims to identify alternatives for the disposal of treated effluent from the plant, and specifically to eliminate the mixing zone, or if elimination is not reasonably practicable, reduce its size and eliminate the risks of shoreline attachment. Any works to achieve these outcomes are required to be completed by the end of 2029.

Address PO BOX 1158 Warrnambool VIC 3280 **Email** info@wannonwater.com.au
Phone 1300 926 666 **DX** 28029

wannonwater.com.au

ABN 94 007 404 851





Responding to the draft Strategy:

We provide the following points for consideration in finalising the Warrnambool Beach Access Strategy.

- The analysis for Shelly Beach (Section 4.1, page 40) should include reference to the proximity of beach access point WCC101 to the Warrnambool Sewage Treatment Plant and the adjacent ocean outfall which releases treated effluent. The draft plan indicates our site is a water treatment facility, which is incorrect.
- There are multiple signs along the walking trail near the outfall and beach access point WCC101 erected by Wannon Water indicating that treated effluent is discharged nearby, and in accordance with the EPA licence the area inside the mixing zone is not suitable for swimming or fishing. This risk should be highlighted in the Strategy and considered in any planned access improvements at Shelly Beach.
- Wannon Water is aware that members of the public routinely access the water surrounding the ocean outfall for fishing and spearfishing. This appears to be assisted by several informal beach access tracks and points, and the absence of fencing to prevent such access. We understand that there are also community members who regard this as a safety issue worthy of improvement. The Strategy should acknowledge the dangerous (e.g. steep, unmanaged) nature of these access points and their proximity to an area declared not suitable for swimming and fishing.
- The Strategy should respond to these risks by improving fencing and increasing accessible (multi-lingual) signage to further support the safety of the public, the operation of the treatment plant and the avoidance of conflicting uses at this location.
- The Strategy could include consideration of the relationship between the various trails in the coastal reserve west of Thunder Point used for mountain biking and similar purposes, and the primary path being used for access to Shelly Beach. There are multiple overlapping user groups utilising these paths.
- Once the upgrade of the sewage treatment plant is complete, Wannon Water is committed to working collaboratively with user groups (e.g. WCC, mountain bike club) to rehabilitate the land and trails in the coastal reserve adjacent to our plant.

Wannon Water would welcome the opportunity to review the updated site-specific analysis and recommendations for Shelly Beach prior to publication of the final strategy.

Yours sincerely

Ian Bail
General Manager – Strategic Services

Address PO BOX 1158 Warrnambool VIC 3280
Phone 1300 926 666

Email info@wannonwater.com.au
DX 28029

wannonwater.com.au

ABN 94 007 404 851



Town Planning

Subject: FW: Beach access and environment

From: [REDACTED]
Sent: Monday, 30 May 2022 7:10 PM
To: Green Shared Mail <green@warrnambool.vic.gov.au>
Subject: Beach access and environment

CAUTION: This email originated from outside of Warrnambool City Council. Do not follow guidance, click links, or open attachments unless you recognise the sender and know the content is safe.

I am pleased to see a new ramp at WWC122 beach access is on the priority list. It is essential for older beach goers that use the beach all year round have safe access to the beach off McGennans car park. It is also a priority for families and others camping to access the beach safely especially when most are carrying beach gear, babies and young children.

The seaweed over the summer season banked up against the dunes is also a health and safety issue. The possibility of the dunes collapsing, beach goers surrounded by all sorts of bugs and insects deters campers from the beach and ultimately from Warrnambool. As a regular beach goer all year round I think we are on the right track we just need a few extra steps to make our beach a safe and more healthy environment.

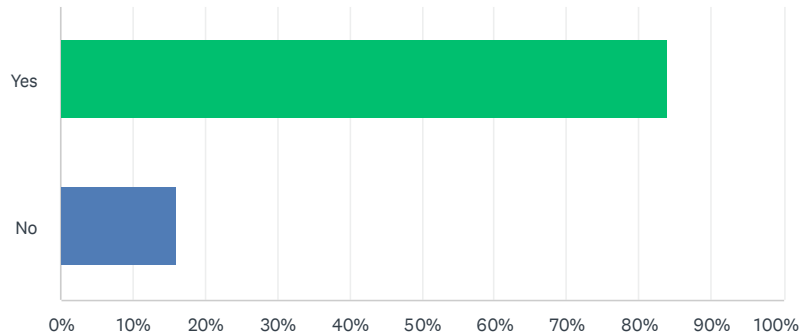
[REDACTED]

Sent from [Mail](#) for Windows.

Draft Warrnambool Beach Access Strategy

Q1 Do you live in the Warrnambool City Council municipality?

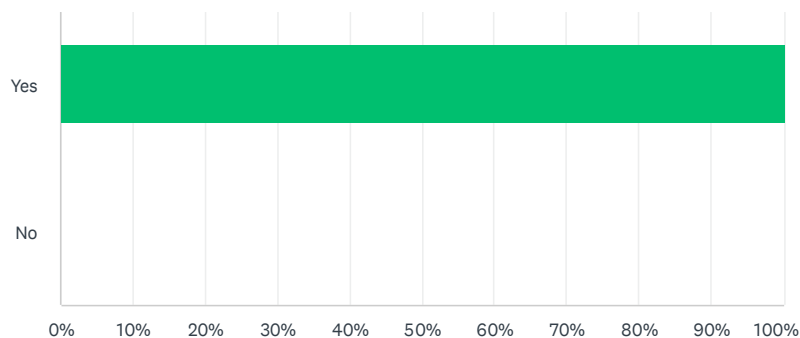
Answered: 75 Skipped: 0



ANSWER CHOICES	RESPONSES	
Yes	84.00%	63
No	16.00%	12
TOTAL		75

Q2 Do you use any of the beach access points identified in the draft Beach Access Strategy?

Answered: 62 Skipped: 13

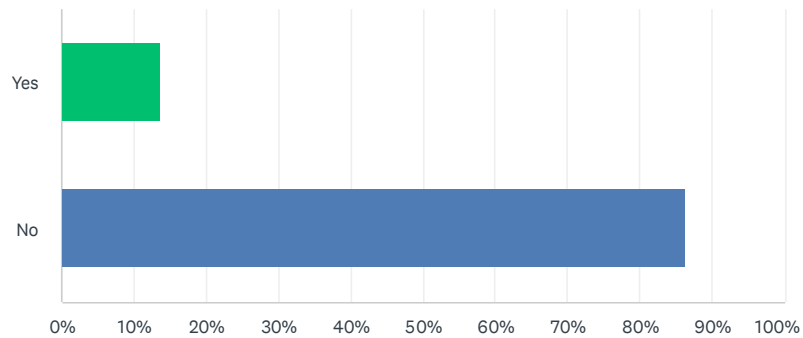


ANSWER CHOICES	RESPONSES	
Yes	100.00%	62
No	0.00%	0
TOTAL		62

Q3 Do you have any special access requirements?

Answered: 59 Skipped: 16

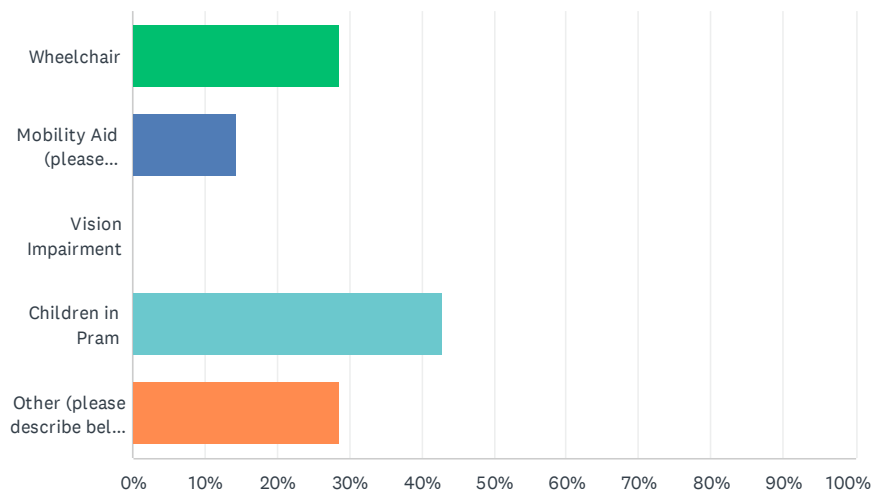
Draft Warrnambool Beach Access Strategy



ANSWER CHOICES	RESPONSES	
Yes	13.56%	8
No	86.44%	51
TOTAL		59

Q4 What are your special access requirements?

Answered: 7 Skipped: 68



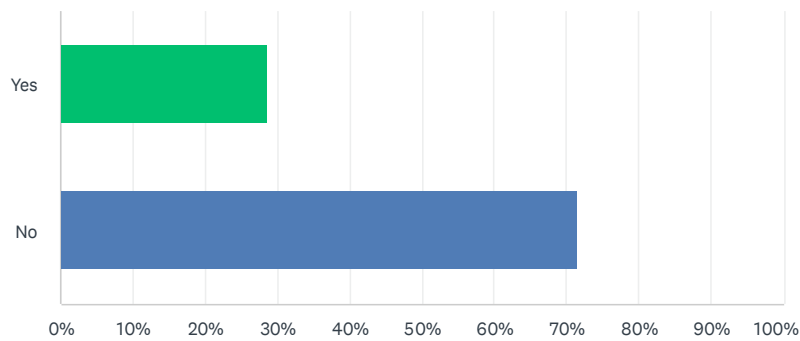
ANSWER CHOICES	RESPONSES	
Wheelchair	28.57%	2
Mobility Aid (please describe below)	14.29%	1
Vision Impairment	0.00%	0
Children in Pram	42.86%	3
Other (please describe below)	28.57%	2
Total Respondents: 7		

Draft Warrnambool Beach Access Strategy

#	COMMENTS	DATE
1	4 wheel walker	5/26/2022 7:53 PM
2	Carrying scuba equipment	5/26/2022 4:23 PM
3	Need ramp at beach for older people	5/25/2022 10:23 AM
4	Kayak launching	5/19/2022 6:04 PM

Q5 Do the current access structure/s to the beach adequately meet your special access requirements?

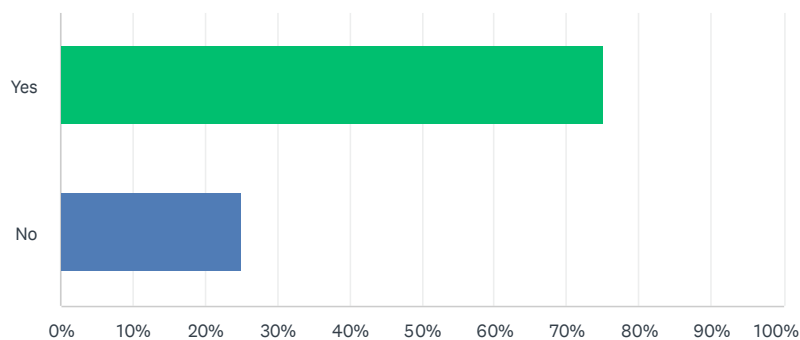
Answered: 7 Skipped: 68



ANSWER CHOICES	RESPONSES	
Yes	28.57%	2
No	71.43%	5
TOTAL		7

Q6 Does the draft Beach Access Strategy address your concerns?

Answered: 4 Skipped: 71



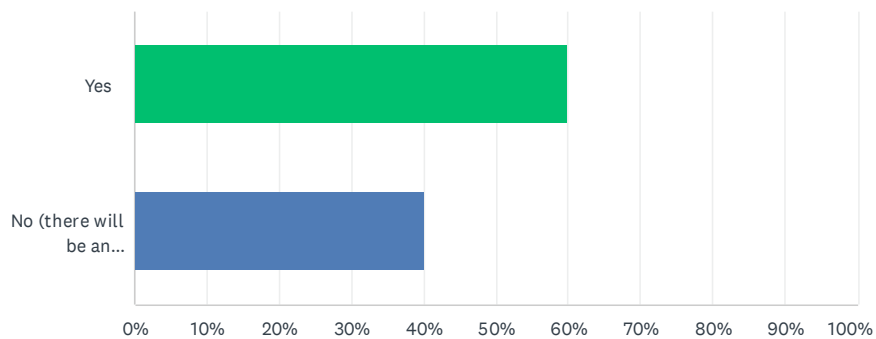
Draft Warrnambool Beach Access Strategy

ANSWER CHOICES	RESPONSES
Yes	75.00% 3
No	25.00% 1
TOTAL	4

#	PLEASE TELL US WHY	DATE
1	Access for the disabled	5/26/2022 7:54 PM

Q7 Does the draft Beach Access Strategy address the needs of the community and result in improved beach access in Warrnambool?

Answered: 35 Skipped: 40

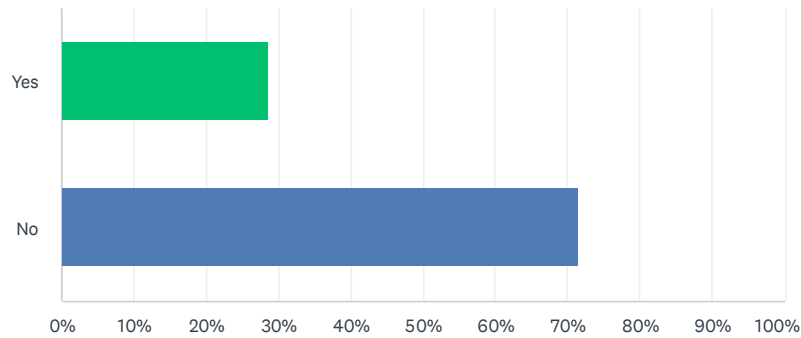


ANSWER CHOICES	RESPONSES
Yes	60.00% 21
No (there will be an opportunity to describe why later in the survey)	40.00% 14
TOTAL	35

Q8 Are there any recommendations (listed in Section 5 of the draft Beach Access Strategy) you see as the most important/urgent)?

Answered: 21 Skipped: 54

Draft Warrnambool Beach Access Strategy



ANSWER CHOICES	RESPONSES
Yes	28.57% 6
No	71.43% 15
TOTAL	21

#	IF 'YES' PLEASE DESCRIBE THE MOST IMPORTANT/URGENT RECOMMENDATION TO YOU.	DATE
1	ACCESS RAMP AT WWC122	5/30/2022 4:57 PM
2	Vegetation clearing - some areas are overgrown and I do not feel comfortable there alone	5/26/2022 6:07 AM
3	Lighting along beach path	5/26/2022 6:06 AM
4	Restoration of the access points with limited future.	5/16/2022 9:41 PM

Q9 Do you have any other comments about the draft Beach Access Strategy?

Answered: 10 Skipped: 65

#	RESPONSES	DATE
1	If it is as i understand WWC122 is a new ramp then this is a welcome inclusion on the priority list	5/30/2022 4:57 PM
2	I do not recall toilet facilities being included nor showers	5/26/2022 6:08 AM
3	The disabled path is nearly unusable most of the year	5/25/2022 3:47 PM
4	My biggest issue is seaweed at the existing Pavilion Boat ramp. trying to get a small wheel boat trailer over this mountain is an effort going out and near impossible after hours on the water. the frontend loader work done this year was great but needs continuous effort for safety and aesthetics. The odour at the café is often so bad it is not worth a visit.	5/19/2022 6:13 PM
5	I believe it's all wrong. Warrnambool needs to make better use of its natural attraction, i.e.Lady Bay. Access to the beach(es) is important but better yet Make the beach area and surrounds a 12/12 attraction rather than just the holiday season(s) 4/12. Forget the dunes and their complete retention, build, or allow to be built, commercial enterprises around Lady Bay that are of interest to, not just the tourists, but the locals as well. Lawns, parks, like Apollo Bay, leading to the beach. More employment, more local use, more interest, and attraction, for tourists. Use our natural resource, LB, to its best advantage!	5/16/2022 9:50 PM
6	Worm bay access needs to have safer access due to the over grown vegetation on the right hand side which hinders dangers from riders approaching at speed up the incline!	5/16/2022 9:48 PM
7	It's all wrong! More access not less, development of the foreshore to provide a 12/12 attraction not just holiday season(s) 4/12 usage.	5/16/2022 9:34 PM

7.8. COMMUNITY SMALL INFRASTRUCTURE FUND

DIRECTORATE : City Infrastructure

PURPOSE:

This report seeks Council to consider the submitted projects under the Community Small Infrastructure Fund.

EXECUTIVE SUMMARY

- Council has an opportunity to adopt new projects brought to their attention by the community under the Community Small Infrastructure Fund on a quarterly basis or as required.
- Officers compile a list of projects provided from initiatives within the Community that are assessed as providing community benefit under the programs established criteria. Councillors are presented the projects for consideration during a Councillor briefing.
- For a project to proceed to implementation it must be considered and decided upon at a Council meeting
- The balance of the Community Small Infrastructure Fund after the allocation to previously approved projects is estimated at \$732,835. This sum represents a total prior to the consideration of the project listed below.
- There is an amount of \$371,198 in the proposed 2022/23 budget which, if approved, would increase the total fund to \$1,104,033 prior to the consideration of the projects listed below.

MOVED: CR DEBBIE ARNOTT
SECONDED: CR BEN BLAIN

That Council allocate the following amounts, dependent upon relevant planning and building permits, from the Community Small Infrastructure Fund:

- 1. Warrnambool Artists Society Carpark - \$30,000;**
- 2. Warrnambool Community Gardens Quarry Stage 2 - \$150,000 (pending landowner consent); and**
- 3. McGennans Carpark Change Shelters - \$30,000 (pending landowner consent).**

CARRIED - 7:0

BACKGROUND

Councillors established the Community Small Infrastructure Fund (SIF) as part of the 2014/15 Budget process with 0.5% of rates specifically allocated towards it. In addition, \$250,000 was allocated into the fund based on savings from the 2013/14 capital works program.

A further 0.5% of rates were added to the fund as part of the 2015/16 budget process. As such, the Fund now receives 1% of rate revenue annually.

The SIF has guidelines and evaluation criteria to ensure that the adopted projects are meeting the objective of the fund and assessed on a consistent basis. Projects that are adopted as part of this program require resolution by Council.

The consideration and adoption of new projects will be done on a quarterly basis to ensure initiatives which may arise during the year may be considered rather than needing to be held over for the full budget cycle.

ISSUES

The program has been designed to allow Council to respond to Community needs around small infrastructure projects that meet key selection criteria.

The officers have compiled a list of projects for Councillor consideration.

Council has established the following Guiding Principles and Processes for use of the Fund:

- Councillors can make submissions to the Fund throughout the year.
- Projects should address the SIF Criteria.
- Projects that are non-compliant will be removed from the process and communicated back to Councillors and lead proponents for the project within the community.
- If projects are available for funding under another funding stream (ie. Asset Renewal or a Capital Works project bid) they will be excluded from this process.
- Projects should not exceed a contribution from Council of \$200,000 and roadworks including roundabouts are specifically excluded from the Fund.
- Officers shall then collate all submissions and prepare cost estimates and SIF submissions forms for evaluation.
- All previously submitted projects that have not been successful will remain on the SIF Project list for future evaluation unless specifically removed.
- Projects will be evaluated by the Recreation and Assets Working Group (RAWG) in accordance with the SIF Evaluation Criteria, ranked and presented to Council for decision.
- Additional allocations replenish the fund as per resolution of Council annually during the budget process.
- The SIF should not be exhausted each year.

Two of the listed projects within the report require a consent from DELWP. Should Council agree to the projects going ahead, the funding allocations will be conditional on consent being received.

The two projects in question are the McGennan's Car Park change shelters and the Community Gardens Quarry stage 2 projects. With resource issues currently within DELWP locally, there is no timeframe available for the consents to be provided.

Considered Projects

Council has received 3 projects from community groups for consideration. These projects have been assessed by an internal working group (RAWG) and scored in accordance with the Community Small Infrastructure Fund evaluation criteria.

The submitted projects are:

Warrnambool Artist Society Carpark

Project will result in improved disability access and safety for members and visitors which will result in greater participation and inclusion. Project has been designed in consultation with stakeholders and costed by Council. Works will be managed and completed by Council.

RAWG Assessment & Comments: Assessed and supportive of project.

Warrnambool Community Gardens

The project will manage stormwater that has historically flowed into the 'Council Quarry' at Warrnambool Community Garden. This Quarry has been converted to a grassed amphitheatre (currently being completed) to be used as a multipurpose event space. An all-abilities pathway and toilets will be constructed.

The project will divert high stormwater flows via a new pipe and junction pits to an intake area in the quarry floor where it will safely drain away and control and reticulate low flows into the 120m gully that leads into the quarry amphitheatre. This gully will have infrastructure and landscaping installed to create a vegetated creek, pathway and outdoor education facility that will be used by schools and others for environmental education activities. This vegetated 'creek' will also be a new attraction at Warrnambool Community Garden that will keep visitors on site for longer than currently. This will include more visitors for more time to our weekly farmers market leading to more sales.

The project will enable the quarry amphitheatre to be used for a range of events such as music festivals, weddings and markets without risk of inundation from heavy rainfall. To support visitation and events, the project will install an all-abilities pathway around the perimeter of the quarry, leading from the Market Flat and HUB building around the quarry, to the market garden, chicken yard and communal garden areas and back to the HUB.

Approvals: Land manager consent has been granted for gully works. Landowner (DELWP) consent has been partly granted and full consent is currently being sought. Consent has been granted by Wannon Water to augment its existing storm water and drainage infrastructure. Consent required for construction of toilet.

Procurement: We will procure goods and services locally. Procurement for major items will be by obtaining quotations per item or project component and selecting the best value quotation. Wannon Water may require part of the project to procure via tender in line with its procurement policy (not finalised at this stage).

RAWG Assessment & Comments: Prepared to provide RAWG consent and project is pending Landowner Consent.

McGennans Carpark Change Shelters

As part of the McGennans carpark amenity block upgrade project, Councillors proposed pursuing a suitable alternative for people wishing to quickly change near the public shower and beach access steps, rather than having to walk down to the amenities block located 120m away.

The project proposes installing 2-3 temporary small change shelters located near the carpark to allow beachgoers to quickly change after undertaking water-based activities. These change shelters would be in addition to amenities block which will hopefully help alleviate pressure on the amenities block during busy times of the year.

Approvals: Council continue to work with DELWP in ensuring the structures are in accordance with the *Siting and Design Guidelines for Structures on the Victorian Coast* and will achieve Marine and Coastal Act (MACA) consent. In discussion with DELWP, there may be a requirement that the shelters are temporary structures and be set for an initial 2-to-3-year trial. The structures will be designed so that they will be able to be relocated to another site if need be. Officers are working with the Municipal Building Surveyor to determine whether a building permit will be required for the structures.

Procurement: it is estimated that the cost per shelter will be approximately \$6,000 to \$10,000 each, however, this is dependent upon the final design and construction method approved by DELWP as part of the MACA consent.

RAWG Assessment & Comments: Happy for the project to progress, pending Landowner consent.

FINANCIAL IMPACT

The estimated cost of the projects is \$210,000. The Community Small Infrastructure Fund is budgeted annually at approximately 1% of rate income and the projects listed for consideration will be within the allocated budget.

LEGISLATION / POLICY / COUNCIL PLAN CONTEXT

5 An effective Council

5.1 Leadership and governance: Council will be a high-functioning team committed to respectful relationships, collaboration and ongoing engagement. It will provide strong, effective leadership, sound governance and informed decision-making

5.2 Engaged and informed community: Council will ensure ongoing community engagement to identify changing needs and priorities when developing and delivering services and programs.

5.5 Organisational and financial sustainability: Council will ensure organisational and financial sustainability through the effective and efficient use of Council's resources and assets.

TIMING

If adopted the projects will be scheduled into the current capital program and resources reviewed for the appropriate delivery mechanism within reasonable timelines.

COMMUNITY IMPACT / CONSULTATION

The projects submitted all have a basis of expressed community support and need. Projects have been submitted for consideration by Councillors following discussions with the relevant community groups involved in the proposals.

Projects are reviewed by officers to understand the scope, costing and development information prior to them being considered by Councillors at briefing sessions. Councillors then work through the relative merits of submitted projects.

Projects are submitted and reviewed on a quarterly cycle to ensure the timeliness of projects being considered.

LEGAL RISK / IMPACT

Each project that is put forward through the Community Small Infrastructure Fund will have its own risk assessment performed.

OFFICERS' DECLARATION OF INTEREST

No declarations.

COLLABORATIVE PROCUREMENT

Collaborative procurement will be considered during the delivery phase of the projects.

ATTACHMENTS

1. SIF Project Status List June 2022 [7.8.1 - 1 page]

Small Infrastructure Fund Projects Status List

Current Approved Projects in Progress	Cost Estimate
• Japanese Gardens – improvements and access (Additional \$10k from foundation)	\$20,000
• Foreshore Basketball Court	TBC
• Warrnambool Croquet Club - Veranda Roof	\$20,000
• BMX Track Concrete Surfacing	\$150,000
• Warrnambool Theatre Group - Extension to Goodwin Hall	\$110,000
• The Dragon Boat Club – Storage Shed	\$70,000
• Old Collegians Football Netball Club Shelter	\$30,000
Balance of Funds after Approved Projects	\$732,835
• Proposed 2022/23 Budget Allocation	\$371,198
Balance of Funds after Proposed 2022/23 Budget Allocation	\$1,104,033

Projects to be Evaluated/Re-evaluated (Cut or Continue)	Cost Estimate
• Warrnambool Artist Society Carpark	\$30,000
• Warrnambool Community Gardens – Quarry Stage 2	\$150,000
• McGennans Carpark Change Shelters	\$30,000

Recently Completed Projects	Actual Cost
• Russell Creek Cricket Club - Jetty Flat Oval Rabbit Exclusion Fence	\$97,025
• Rooneys Rd (Nicolls Dr to Darwinia St) – Brauer College	\$130,675
• Northern Entrance Landscape	\$60,073
• Heatherlie House – Additional Lighting/CCTV	\$56,492
• Dennington Progress Association Carparking	\$30,295
• Community Dog Park (including extension and drinking fountain)	\$71,451
• Hopkins River Access Hoist	\$35,695
• Jubilee Park Woodford Toilet Block (minor landscaping to occur)	\$162,997
• Koroit Street Playground – Picnic Table (Opposite M Power)	\$8,952
• RSL Carpark Footpath Linkage	\$29,366
• Jamieson Street Footpath Linkage	\$14,170

7.9. PUBLIC TREE PLANTING AND MAINTENANCE POLICY - POST CONSULTATION

DIRECTORATE : City Infrastructure

PURPOSE:

To adopt the Public Tree Planting Policy following a period of public consultation, seeking submissions to the reviewed policy.

The policy has been re-named the Public Tree Planting and Management Policy to capture trees in public open space.

The Policy was advertised for over a month seeking submissions on the policy and no submissions were received.

EXECUTIVE SUMMARY

- The existing policy, titled Street Tree Planting and Management Policy was initially adopted by Council in May 2017 and re-adopted following review in February 2021.
- Council resolved to commence a subsequent review of the policy 1 year from the adoption in 2021.
- It was proposed to re-name the policy Public Tree Planting and Management Policy to better reflect the management of the entire asset class of trees across the municipality.
- The policy is to be read in conjunction with the Planting and Management Guidelines that acts as a procedural document to assist in guiding informed decision making, particularly on species selection.
- Modifications to the policy include.
 - Strengthening of the species selection criteria
 - Identifying the appropriate naming of the policy and,
 - Referencing the Guidelines document as accompanying documentation.
- The attached reviewed policy (refer **Attachment 1**) is presented following a full consultation period, to enable it to be adopted by Council at the July Scheduled meeting.

MOVED: CR RICHARD ZIEGELER

SECONDED: CR BEN BLAIN

- 1. That Council adopts the reviewed Public Tree Planting and Management Policy.**
- 2. That the policy be reviewed by July 2025.**

CARRIED - 7:0

BACKGROUND

Street trees and trees in public open space are often a topic for community discussion and opinions can be divided on aspects of public tree assets.

The main point of conjecture is the selection of a suitable species and the infrastructure adjacent to the trees, whether it is utilities, footpath/road or private infrastructure, that may be affected by the tree.

Council has over 8,000 vacant sites on streets (nature strips) that are suitable for new plantings. There are also targets within the Warrnambool 2040 plan regarding a percentage increase in green canopy for the city.

There are many varied opinions on what constitutes a suitable species, particularly for street trees and this can lead to a random spread of multiple different trees along a single street.

ISSUES

The differing views on the value of public trees across any municipality can spark fierce public debate and controversy.

As part of the process around new plantings and providing suitable levels of information to adjacent residents when undertaking a program, the characteristics of the choice of species is provided in the communications with the residents prior to planting.

Public education on the management of trees is required to ensure that there is a clear understanding of the value of trees, both financially and to the local environment, the facts are that trees will drop leaf litter and that some infrastructure is repairable following damage from the tree roots.

FINANCIAL IMPACT

Tree Planting and Management is included in a number of infrastructure budgets and reserve funds are accumulated via developer contributions.

LEGISLATION / POLICY / COUNCIL PLAN CONTEXT

2 A Sustainable environment

2.1 Natural environment: Council will enhance open spaces and infrastructure that support a healthy community, wildlife, flora, fauna and biodiversity.

2.3 Environmental impact and a changing climate: Council will encourage innovation and initiatives that minimise Warrnambool's environmental impact.

4 A connected, inclusive place

4.1 Effective planning: Council will ensure its planning acknowledges the unique character and attributes of local places and that that supports social connection, equitable access, appropriate housing and sustainable population growth.

4.4 Sustainable practices: Council will promote and encourage the implementation of sustainable design across the municipality including the attractiveness, safety, accessibility and functionality of our built environment.

TIMING

Once adopted, the policy will be available via the Council Website.

COMMUNITY IMPACT / CONSULTATION

The policy was advertised via the Yoursay Web Site, the local media, social media and the Council Noticeboard via the Standard. The advertising period concluded on June 10 and no submissions were received at that point.

LEGAL RISK / IMPACT

The aim of the policy is to reduce risk to Council of litigation by selecting appropriate species for each location and utilising professional advice at every opportunity.

The Policy also enables action to be taken against anyone who prunes, damages, kills or removes trees without approval.

OFFICERS' DECLARATION OF INTEREST

No officer involved in the preparation of this report, or the plan has declared a conflict of interest.

COLLABORATIVE PROCUREMENT

Not applicable

CONCLUSION

It is recommended to Council that the reviewed Public Tree Planting and Management Policy be adopted.

ATTACHMENTS

1. ECM 10761754 v4 Street Tree Planting Management Policy Approval Feb [7.9.1 - 5 pages]



WARRNAMBOOL
CITY COUNCIL

Public Tree Planting and Management Policy



POLICY TYPE: COUNCIL
APPROVAL DATE: 4 July 2022
REVIEW DATE: 30 June 2025

STREET TREE PLANTING AND MANAGEMENT POLICY



DOCUMENT CONTROL

Document Title:	<i>Street Tree Planting and Management Policy</i>
Policy Type:	<i>Council</i>
Responsible Branch:	<i>Infrastructure Services Branch</i>
Responsible Officer:	<i>Director City Infrastructure</i>
Document Status:	<i>Adopted</i>
Approved By:	Council
Approved Date:	<i>4 July 2022</i>
Review Date:	<i>30 June 2025</i>

STREET TREE PLANTING AND MANAGEMENT POLICY



1. INTRODUCTION

- **Purpose**

The purpose of this policy is to ensure that a consistent approach is applied to the planting and ongoing management of street trees within Municipal streetscapes and the urban environment.

- **Scope**

This policy is applicable to Council Officers and Managers of Warrnambool City Council, as well as the wider community. It covers the whole lifecycle of trees, from planning and species selection, maintenance activities to removals, it also covers tree protections and unauthorized activities. This applies to all street and reserve trees on Council managed land.

- **Definitions**

Term	Definition
The City	The Municipality of Warrnambool
Council	Warrnambool City Council
Streetscape	The visual elements of a street (e.g., streets, buildings, vegetation, medians and nature strips), that combine to form the street's character.
Urban Environment	The human made surroundings that provide the setting for human activity, including, commercial and residential areas, buildings, parks and open spaces and their supporting infrastructure.
Street tree	A tree or shrub growing within the road reserve, including nature strips, separators and medians.

- **References**

- Warrnambool Planning Scheme
- Electricity Safety (Electric Line Clearance) Regulations 2015
- Councils Electric Line Clearance Management Plan
- Warrnambool City Council Community Engagement Policy.
- Municipal Road Management Plan
- Health and Wellbeing Plan
- Green Warrnambool 2018
- Naturestrip Landscaping Policy & Guidelines
- W2040 (Goal 13)
- Street Tree Planting and Management Guidelines

STREET TREE PLANTING AND MANAGEMENT POLICY



2. POLICY OBJECTIVES

- To ensure consistency in the approach to street tree planting and management.
- To define Council's responsibilities in street tree planting and management.
- To ensure that proper consideration is given to trees in the planning and design of the built environment.
- To ensure trees contribute to the values of the urban landscape, including greening for biodiversity and climate adaptation.
- To ensure that the amenity value of street trees is retained and enhanced.
- To implement the 2040 Goal of Green Warrnambool for urban areas to have 30% vegetation canopy cover.
- To implement the 2040 Goal of Adaptable Warrnambool for Environmental Sustainable Development principles to be used for all new developments and upgrades.
- To implement the 2040 Goal of Adaptable Warrnambool for all new infrastructure (including street trees) is designed for the changed and changing climate.
- To provide informed and consistent decision making in street tree matters for Council, Council staff, developers and the community.
- To select species that are appropriate for the desired location, particularly street trees. Consideration will be given to potential infrastructure damage (public & private), impact on utilities through root intrusion or canopy growth, impact on road users through site lines and canopy encroachment into traffic lanes and potential issues with allergies to adjacent residents. Refer to 2.17 of the Street Tree Planting and Management Guidelines.

3. POLICY PRINCIPLES

Council has responsibility for the planning, establishment, maintenance and removal of all street trees located within the City's streetscapes.

All decisions related to street trees will be based on the following principles:

- Street trees are valuable community assets that positively contribute to the well-being of the community, and to the built and natural environment.
- Council is committed to planting and maintaining street trees which are visually, historically, or environmentally valuable to the community.
- Council recognises that the historic Norfolk Island Pines are an iconic feature within our City and is committed to their protection.
- Council acknowledges that management and preservation of street trees will be sufficiently accounted for in the annual budget.
- Council will consult and engage the community and affected landowners where large scale plantings, significant streetscape works or tree removal works are to take place.

STREET TREE PLANTING AND MANAGEMENT POLICY



- Street tree planting programs will prioritise areas of high vacancy rates and where walkability is deemed lower than average for Warrnambool.
- Where urgent tree removal works are required, Council will endeavor to notify property owners prior to removal works. If landowners cannot be contacted, public safety needs to precede consultation.
- Council will encourage the development of staff skills in arboriculture and consider recruitment of suitably qualified staff.
- Council will encourage community participation in public tree planting and ongoing maintenance where appropriate.
- Council will refer to the preferred tree species list published on Councils website to determine species selection. A mix of Indigenous and exotic species will be selected appropriate to the area and conditions.
- Street trees that provide habitat and environmental benefits will be encouraged.
- Council will undertake proper species selection, placement and planting of trees to reduce long term risks.
- Council will consider the potential damage to infrastructure, maintenance requirements, and legislation in species selection.
- Council will only remove street and public open space trees that are in poor health, or which Council believes pose an unacceptable risk to the community, or as part of a broader streetscape renewal. Street trees are not removed or trimmed to facilitate development or to enhance vistas for property owners.
- Council will prosecute persons who prune, damage, kill or remove street trees without approval.
- Urban design treatments and streetscape renewal will incorporate measures to protect the health of proposed and existing trees.

4. GOVERNANCE

4.1. Owner

Director City Infrastructure

4.2. Review

The Manager Infrastructure Services will review the policy for any necessary amendments no later than two (2) year after its formulation or the last review.

4.3. Charter of Human Rights Compliance

It is considered that this policy does not impact negatively on any rights identified in the Charter of Human Rights Act (2006).

7.10. VOLUNTEER STRATEGY

DIRECTORATE: Community Development

PURPOSE:

This report recommends that Council endorse the Volunteer Strategy, prepared by the Capacity Access & Inclusion Branch and outlined below.

EXECUTIVE SUMMARY

- A draft Warrnambool City Council Volunteering Strategic Plan 2021 – 2024 (the Strategy) has been prepared.
- A public exhibition period of two weeks has been undertaken, with no submissions being received.
- The Strategy will ensure Volunteer Connect can respond to new and emerging needs of volunteers at Council, including those wanting to volunteer and volunteer programs.
- Volunteer Connect will also be well-placed to provide education, training, networking, and personal development for volunteers involving organisations, clubs, and groups.
- The aim is to 'Inspire people in the South West to experience volunteering, to make a difference, build a community and give back one person at a time.'

MOVED: CR DEBBIE ARNOTT
SECONDED: CR ANGIE PASPALIARIS

That Council adopt the Warrnambool City Council Volunteering Strategic Plan 2021-2024 .

CARRIED - 7:0

BACKGROUND

Volunteers have long been a crucial part of the fabric of Warrnambool City Council and our community. Volunteers play an integral role in groups, clubs and not for profit organisations to operate and serve the community. Volunteering is an essential part of Warrnambool City Council (WCC) and provides a valuable contribution that grows civic pride and confidence while supporting our community.

Warrnambool and the southwest have one of the highest volunteering rates in regional Victoria, where more than a quarter of residents (24.6%) volunteer. Warrnambool as a community relies heavily on the generosity of volunteers to run programs that provide connection, health and wellbeing to its people. People, in turn, use volunteering to connect give back for personal growth, health and wellbeing. Investing in volunteering will continue Warrnambool's reputation as a great place to live.

The community told us volunteering is essential to them because it is rewarding, improves mental health and provides opportunities to connect with others, give back and meet new people.

Warrnambool City Council has been running Volunteer programs for over 30 years and currently has 308 Volunteers that work across twelve different programs. The current estimated cost savings to Council provided through volunteering is over \$1.3 million dollars.

The development of the volunteer strategy provides a framework to build a solid and sustainable volunteering culture. It provides a vision that,

- Champions a culture of volunteerism that advocates and celebrates volunteers,

- Strengthens our community by actively supporting social inclusion and diversity through volunteering and;
- Sustains volunteerism by delivering a sustainable service through being aligned with best-practice and contemporary trends in volunteering.

The Warrnambool City Council Volunteering Strategic Plan 2021 (WCCVS21) – refer **Attachment 1** was developed in response to the funding changes to all Volunteer Resource Centres in Victoria, Covid-19, and the Warrnambool 2040 Plan (W2040 Plan).

The purpose of this plan is to set the direction for Volunteer Connect which is the central hub for all things volunteering at Council. The WCCVS21 is aligned with Warrnambool 2040 Plan (W2040 Plan) and Council's vision of 'a thriving city at the heart of coast and country'. The plan will support Council to deliver effective volunteer programs and to increase volunteering opportunities in the community. By improving the experience and accessibility of volunteering, this plan can ensure Volunteer Connect is well positioned to foster social inclusion and wellbeing objectives.

ISSUES

The Warrnambool City Council Volunteering Strategic Plan 2021 - 2024 Volunteer Strategy includes the following areas:

Strategic Goal 1 - Champion: Volunteer Connect champions a culture of volunteerism that advocates and celebrates volunteers through

- Education & Advocacy
- Endorsing the use of technology to support volunteering
- Supporting the growth of neighborhoods with volunteering
- Collaboration with Volunteer Involving Organisations
- Use of best practices
- Celebrating & recognizing Volunteer
- Encouraging Staff to Volunteer

Strategic Goal 2 - Strengthen: Volunteer Connect will strengthen our community by actively supporting social inclusion and diversity through volunteering.

- Foster, encourage & collaborate genuine relationships with young people, people living with Disability, Migrants, LBGQTA+ & First Nations communities to volunteer.

Strategic Goal 3 - Sustain: Volunteer Connect will deliver a sustainable service through being aligned with best-practice and contemporary trends in volunteering

- Providing meaningful opportunities for volunteers
- Create a Reward & Recognition Plan
- Coordinated an approach to communication with volunteers
- Make the most of online platforms to recruit & retain volunteers
- Create a volunteer management framework
- Embed Better Impact as the internal Volunteer management system.

Review the current Volunteer Connect staffing structure to align with successful implementation of strategy.

Policies and Training Audit: WCC has a range of internal employee related policies, strategies and training to ensure that staff are protected and managed to reduce the incidence of risk and negate negative behaviours. Volunteers are entitled to be protected and managed by these same mechanisms. A policy audit identified that not all WCC Council policies are specific to volunteers.

A gap analysis is an opportunity for us to compare our policies with industry peers and national standards to create solid volunteer policies that will support a new management framework.

Of particular importance is the update of the Volunteer Policy which was due for review in 2014.

In addition, the following procedures and processes require review and tools to be developed:-

- Volunteer screening
- Volunteers role in supporting the child safe policy
- Volunteer handbook
- Volunteer management handbook

Training Required

- Human Resources Volunteer Induction
- Child safety
- OH & S
- Volunteer management induction

Database Update

The Volunteer on-boarding processes and database has historically captured limited demographic or diversity information beyond age and gender. Moving forward we will collecting data on:-

- Culture/Race
- Gender preference/identification
- First Nations
- Disability

Recurring Themes found during the research and development of the volunteer strategy include the need for:-

1. Improve Volunteer Management
2. Increase Social Inclusion and Diversity
3. Strengthen Recruitment and Retention
4. Advocate Volunteerism
5. Develop a Reward and Recognition program
6. Improve Communication
7. Engage Online Platforms
8. Value Feedback and Consultation

FINANCIAL IMPACT

Volunteering contributes an estimated \$1.3 million per annum to Council. In 2019, the value of volunteering to Victoria was \$58.1 billion.

Positive volunteer involvement has significant social and individual benefits and increases Council's reputation. While difficult to quantify this also have an indirect economic benefit.

The Volunteer Strategy development costs will be funded from Capacity Access and Inclusion Branch budget.

LEGISLATION / POLICY / COUNCIL PLAN CONTEXT

1 A healthy community

1.1 Be a welcoming and inclusive city: Warrnambool will be a city that is more welcoming to all and which fosters diversity.

1.2 Engage with the Aboriginal community: Council will pursue improved partnerships and meaningful engagement with Aboriginal people to grow opportunities and better outcomes for Aboriginal people.

1.3 Health and wellbeing : Council will take action to improve health, wellbeing and safety outcomes for Warrnambool's community.

1.4 An accessible city: Council will improve physical and social accessibility to community services, facilities, places and precincts.

1.5 Recreation, arts, culture and heritage: Council will support opportunities to participate in a wide range of recreational, arts and cultural programs that promote activity, wellbeing, diversity heritage and which increase community connectedness. Community learning pathways: Council will support and encourage lifelong learning that helps build community resilience and preparedness for change.

3 A strong economy

3.1 Build on competitive strengths: Council will support initiatives that foster ongoing development and investment in the industries which underpin Warrnambool's economic strengths and comparative advantages

4 A connected, inclusive place

4.3 Stronger neighbourhoods: Council will foster neighbourhood connections and capacity building including the development of inclusive recreational and cultural opportunities.

5 An effective Council

5.1 Leadership and governance: Council will be a high-functioning team committed to respectful relationships, collaboration and ongoing engagement. It will provide strong, effective leadership, sound governance and informed decision-making

5.2 Engaged and informed community: Council will ensure ongoing community engagement to identify changing needs and priorities when developing and delivering services and programs.

5.3 Customer-focused services: Council will continue to develop a program of Council services that are delivered to the community's satisfaction.

5.4 High-performance culture: Council will foster an organisational culture to support engaged, committed and high-performing staff for the effective delivery of Council's services and programs.

TIMING

Routine

COMMUNITY IMPACT / CONSULTATION

The *WCC Volunteering Strategic Plan 2021* has also been informed by consultation with volunteer involving organisations, volunteers, prospective volunteers, and Council staff. Consultation included the following activities:

- An online survey for volunteer involving organisations
- An online survey for Warrnambool City Council (WCC) volunteers
- An online survey for WCC Coordinators
- An online survey for WCC former volunteers
- An online survey for volunteers in the Warrnambool community
- One focus group with Senior Management and a Director from Warrnambool City Council
- Three focus groups with WCC Volunteer Coordinators, Supervisors and their Managers
- Interviews with relevant Council staff

The draft Strategy was placed on public exhibition for a period of two weeks, with no submissions being received.

LEGAL RISK / IMPACT

Low / Reputational

Development of the strategy will ensure risk to Council is managed through actions and evaluation opportunities.

OFFICERS' DECLARATION OF INTEREST

N/A

CONCLUSION

In response to the changing volunteer landscape the volunteer strategy will strengthen Council's role in supporting volunteer activity both internally and externally across the community. The strategy aims to achieve this by:-

1. Champion: Volunteer Connect champions a culture of volunteerism that advocates and celebrates volunteers
2. Strengthen: Volunteer Connect will strengthen our community by actively supporting social inclusion and diversity through volunteering.
3. Sustain: Volunteer Connect will deliver a sustainable service through being aligned with best-practice and contemporary trends in volunteering

WCC Volunteer Connect will lead by example through promoting best practice and continuous improvement in volunteering, facilitating access to contemporary resources and training and promote diversity in volunteering.

Volunteer Connect 2021 Vision Statement 'Inspire people in the south west to experience volunteering, to make a difference, build a community and give back one person at a time'.

ATTACHMENTS

1. 3075 Volunteering Strategic plan 2021 - 2024 [7.10.1 - 26 pages]



Warrnambool City Council

Volunteering

Strategic Plan

2021 - 2024



Volunteers are everywhere.

Volunteers work in so seamlessly and professionally within organisations, teams and alongside paid staff that sometimes you may not realise they are there.

Yet they are so fundamental to everyday living that if our volunteers were not performing the roles they do it would very quickly become evident how much they were needed! Here in Warrnambool about 20,000 meals on wheels are delivered annually with the help of hard-working volunteers who use their own vehicles. This service simply could not be provided without volunteers.



Volunteers might not be paid but there are important obligations, even a quid pro quo, that exist between volunteers and the organisations they help. Volunteers might seek experience, fulfillment, social interaction and perhaps an opportunity to “give back” after a successful professional working life. In return, volunteer-involving organisations need to provide safe working environments, equipment and instruction; and a way to say thank you to those who give their time without financial reward.

At a time when so much is competing for people’s time and attention, it is no surprise to learn that in some areas volunteerism is declining. Pronounced volunteer shortages exist in the sectors - disability services, young people and health - which often struggle to attract and retain paid staff.

We’re extremely fortunate that in Warrnambool our rates of volunteerism are above the national average. As a community we love helping out, it’s a long-standing habit we have. Within Council volunteers are integral to many of our operations from conservation projects to our visitor experiences at Flagstaff Hill.

Attracting people to volunteering will not always be a happy accident. We need to create an environment and framework that makes it easier for volunteers and volunteer-involving organisations to achieve mutually beneficial outcomes. That’s what makes this Volunteering Strategic Plan so important.

So if you have a connection to volunteering, whether as a volunteer or an organization, this strategy offers guidance and insight and I recommend it.

Finally, to all those who volunteer that most precious resource, time, a huge thank you. We recognise and acknowledge your efforts.

Cr Vicki Jellie AM
Mayor
Warrnambool City Council

Acknowledgement of Country

The City of Warrnambool is on Peek Whurrong country and acknowledges the Gunditjmarra / Marr Nation people as the Traditional Owners of the land.

We pay our respects to Elders & Leaders past, present and emerging for they hold the memories, the traditions, the culture and the hopes of the Gunditjmarra / Marr Nation people.

Cr Richard Ziegeler, 2021 Victorian Senior of the Year: Healthy & Acting Living winner Uncle Locky Eccles and Senior of the Year nominee Trevor Hearfield. All volunteer extensively in the Community.





Executive Summary

Volunteers have long been a crucial part of the fabric of Warrnambool City Council and our community. Volunteers play an integral role in the ability of groups, clubs and not for profit organisations to operate and serve community. Volunteering is an essential part of Warrnambool City Council (WCC) and provides a valuable contribution which grows civic pride and confidence while offering support to our community.

The Warrnambool City Council Volunteering Strategic Plan 2021 - 2024 has been developed and guided by desktop research and community consultation. It will set the direction for Volunteer Connect in the continued support and growth of volunteering. It will ensure Volunteer Connect is well placed to respond to new and emerging needs of the Council, including those wanting to volunteer, volunteer programs and to provide education, training, networking and personal development for volunteer involving organisations, clubs and groups.

The objective of Volunteer Connect is to ensure volunteering is valued, enhanced, and supported. In doing so Volunteer Connect will contribute to making Warrnambool a thriving and resilient community by providing opportunities for people to:

- participate in community life
- build a sense of inclusion, identity and belonging
- develop skills and knowledge
- use their skills and time to do something for others

Volunteer Connect enriches lives and connects communities through volunteerism so that volunteering can contribute to Warrnambool's thriving community.

Volunteer Connect 2021 Vision Statement

'Inspire people in the South West to experience volunteering, to make a difference, build a community and give back one person at a time'

Three strategic goals have been defined to enable Volunteer Connect to fulfill its vision are:

1. **Champion:**

Volunteer Connect champions a culture of volunteerism that advocates and celebrates volunteers

2. **Strengthen:**

Volunteer Connect will *Strengthen our community* by actively supporting social inclusion and diversity through volunteering.

3. **Sustain:**

Volunteer Connect will deliver a sustainable service through being aligned with best-practice and contemporary trends in volunteering

Purpose

The Warrnambool City Council Volunteering Strategic Plan 2021 (WCCVS21) was developed in response to the funding changes to Volunteer Resource Centres in Victoria, Covid-19, and the Warrnambool 2040 Plan (W2040 Plan). The purpose of this plan is to set the direction for Volunteer Connect.

The WCCVS21 is aligned with Warrnambool 2040 Plan (W2040 Plan) and Council's vision of 'a thriving city at the heart of coast and country'. The plan will support Council to deliver effective volunteer programs and to increase volunteering opportunities in the community. By improving the experience and accessibility of volunteering, this plan can ensure Volunteer Connect is well positioned to foster social inclusion and wellbeing objectives.

Methodology

Research and desktop analysis

The WCCVS21 has been informed by research and desktop analysis including:

- A literature review of the volunteering context, including local, state and national trends for volunteers and volunteer involving organisations
- Learnings and impacts arising from the COVID-19 pandemic
- Policies and Strategies Audit
- An analysis of volunteering trends observed by Volunteer Connect
- The Warrnambool 2040 Plan
- Warrnambool's Health and Wellbeing Plan

Consultation

The WCC Volunteering Strategic Plan 2021 has also been informed by consultation with volunteer involving organisations, volunteers, prospective volunteers, and Council staff. Consultation included the following activities:

- An online survey for volunteer involving organisations
- An online survey for Warrnambool City Council (WCC) volunteers
- An online survey for WCC Coordinators
- An online survey for WCC former volunteers
- An online survey for volunteers in the Warrnambool community
- One focus group with Senior Management and a Director from Warrnambool City Council
- Three focus groups with WCC Volunteer Coordinators, Supervisors and their Managers
- Interviews with relevant Council staff

The outcomes of the surveys, working groups and reviews are in the Volunteer Connect Strategy Engagement, and the Volunteer Connect Contextual Review reports.

The priorities identified from the consultation informed the development of the Warrnambool City Council Volunteering Strategic Plan 2021 including the strategic goals, objectives and actions.

Actions related to volunteering in other Council Plans have also been reflected in this document to ensure they are captured.



Volunteering:
time willing given for the common good & without financial gain¹. The term 'Volunteering' has many faces & includes various actives for many different groups.



Context

Formal volunteering nationally

Formal volunteering can be defined as volunteering that takes place within organisations in a structured way². The 2016 Census data showed that 19% the Australian population volunteered in the community. The General Social Survey³ (GSS) reported 28.8% of Australian adults were active participants in formal volunteering.

It is important to note the conflicting results between the 2016 Census and GSS. With the 2016 Census stating an increase in volunteering and the GSS stating a decline. Variances against data collection, survey populations, survey periods are likely of most influence; also to consider is how respondents define formal volunteering. For this contextual review, a greater emphasis has been placed on the GSS data set as it is the most recent national data that focuses on defining and measuring volunteerism.



To complement the GSS and 2016 Census data, several additional data sources were reviewed including the 2016 State of Volunteering in Australia Report⁴, data from GoVolunteer and a literature review. As a critical finding, there appears to be a disconnect between the volunteer roles that people are interested in and the roles which volunteer involving organisations (VIO's) are offering⁴. The State of Volunteering in Australia Report cited that 86% of VIOs are routinely unable to fill volunteer roles. Certain sectors such as Animal Welfare and the Arts and Culture are consistently oversubscribed with potential volunteers placed on wait lists, whereas other sectors including Disability Services, Young People and Health typically are unable to fill volunteering roles⁴.

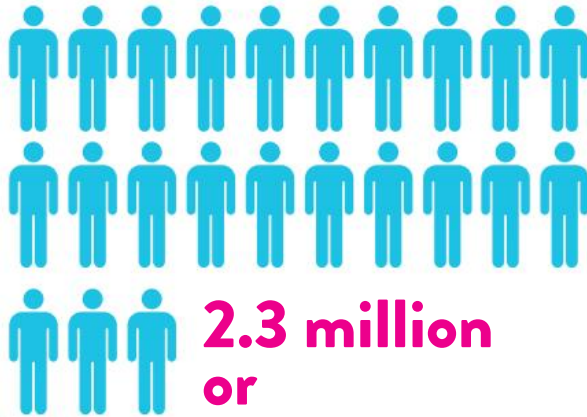
Additional insights captured in the State of Volunteering in Australia Report include:

- Barriers preventing individuals from volunteering include lack of flexibility, personal expenses incurred and burdensome administrative requirements;
- VIOs are generally under resourced, and this can inhibit their ability to engage with volunteers who may require additional support such as people living with a disability, people with language barriers and establishing Employee Supported Volunteering programs; and⁴
- VIOs typically are yet to meaningfully adapt to technology changes such as conducting volunteer recruitment online or by providing virtual volunteering opportunities.

When assessing the national context, there are a range of challenges faced by the sector including a decline in formal volunteering, limited resourcing within VIOs and a disconnect between the volunteering roles that people are interested in and the roles that VIOs are offering.



Volunteering in Victoria



Victorians donated at least
507.7 million
volunteer hours
to the community in 2019

The value of
volunteering to
Victoria was \$58.1
billion in 2019.

Volunteering adds immense
value to the Victorian economy
while strengthening our
community and the health and
wellbeing of its people.





Council Plan

The Warrnambool City Council Plan includes the vision of 'A thriving city at the heart of coast and country'. The volunteer strategy finds support within the following goals:-

A healthy community	<ul style="list-style-type: none"> • Be a welcoming and inclusive city Engage with the Aboriginal community • Health and wellbeing • An accessible city • Recreation, arts, culture and heritage
A strong economy	<ul style="list-style-type: none"> • Build on competitive strengths
A connected, inclusive place	<ul style="list-style-type: none"> • Stronger neighbourhoods
An effective Council	<ul style="list-style-type: none"> • Leadership and governance • Engaged and informed community • Customer-focused services • High-performance culture



Warrnambool 2040 Plan

Warrnambool's 2040 plan, defines a 20-year community vision for Warrnambool and was created by the community. W2040 represents the objective goals for Warrnambool's environment, economy, place, and people and is the result of an extensive consultation process that will ensure the Council is well positioned to meet the future needs of its residents.

The four priority Visions of the W2040 plan are:

- Our People: Warrnambool will be a city where all people thrive;
- Our Place: Warrnambool will be Australia's most livable regional city;
- Our Economy: Warrnambool will be Australia's most resilient and thriving regional economy;
- Our Environment: Warrnambool will be Australia's most sustainable city.

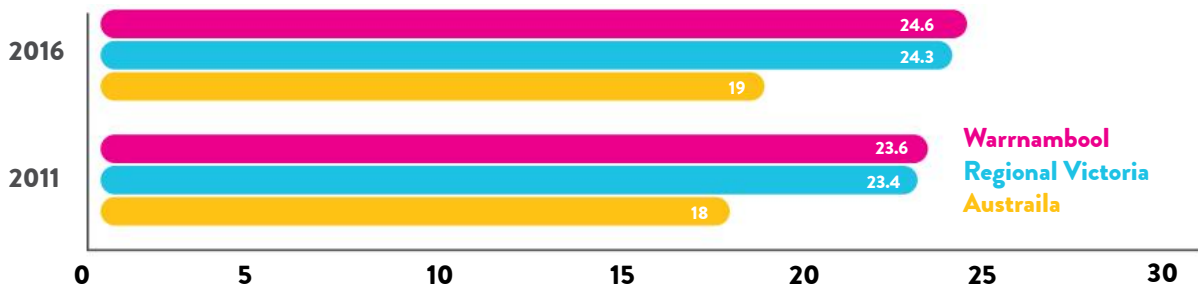
Warrnambool 2040	Volunteer Connect Alignment
Warrnambool is a welcoming and inclusive city	<ul style="list-style-type: none"> • Volunteering provides opportunities for new residents to connect with community and build relationships • Volunteer groups, clubs and organisations can provide support and connection to new and existing residents.
Warrnambool is a safe and connected community	<ul style="list-style-type: none"> • Volunteering offers support to people as an avenue to remain connected to their community and maintain their independence • Volunteering offers vulnerable and disadvantaged people the opportunity to connect with their community and develop relationships.
Warrnambool's people are healthy	<ul style="list-style-type: none"> • Research shows that volunteering is good for your health, wellbeing and social connection. • Volunteering can provide an avenue for people to stay active
Warrnambool is a learning community	<ul style="list-style-type: none"> • Volunteering can provide pathways to learning, upskilling and may provide pathways to employment • Encourage staff to volunteer and share their skills with the community • Provide opportunities for volunteers to share knowledge and skills developed through their career or life experience.
Warrnambool will embrace digital innovation and technological change	<ul style="list-style-type: none"> • Volunteer programs designed to help community embrace digital innovation and technological change. Bridging the gap of the digital divide especially in disadvantaged groups.
Natural Warrnambool: Enjoy, love, respect, and care for the natural environment	<ul style="list-style-type: none"> • Volunteers programs including Land Care, Sea Shepherd etc. support and foster love, respect and education about our Natural Environment • Encouraging people to get back to nature with volunteering • Encourage integration of environmental sustainability into all volunteers roles where possible/feasible

The importance of volunteering to the City of Warrnambool is clear. To support the community the Council will continue to invest in Volunteer Connect to enable a strong volunteering culture.

Volunteering in Warrnambool

Warrnambool City Council (WCC) recognises the valuable contribution that volunteers make in the municipality. Warrnambool and the south-west has one of the highest rates of volunteering in regional Victoria, where more than a quarter of residents (24.6%) volunteer.

Rates of Volunteering of Warrnambool Residents versus Regional Victoria & Australia



Warrnambool as a community relies heavily on the generosity of volunteers to run programs that provide connection, health and wellbeing to its people. People, in turn, use volunteering to connect, give back, for personal growth and for health and wellbeing. Investing in Volunteering will continue Warrnambool's reputation as a great place to live.

The community told us volunteering is important to them because it is rewarding, improves mental health and provides opportunities to connect with others, give back and meet new people.

Quotes from local VIO's

Volunteers bring unique life experience and skill sets. Residents love the engagement with "non uniformed" team members We offer volunteering to diverse cohort incl. adults with learning difficulties, people living with disability, younger generations, which we believe supports the community as a whole.

Our organisation is reliant on volunteers to exist. No volunteers = No Ongoing organisation.

We run a non for profit community event every 12 months to benefit Warrnambool. Without volunteers we would be unable to do that.

'Volunteering is essential to community growth and wellbeing, as well as personal growth and health'

'It is what makes the community a great place to live'

Quotes from local volunteers

When asked where residents would like to find information about volunteering, they replied::

- Newspaper, Media, advertisements on radio or Facebook.
- Volunteer expo
- Go volunteer



Volunteering at Warrnambool City Council

The Warrnambool City Council has been running Volunteer programs for over 30 years and currently has 308 Volunteers that work across twelve different programs. The current cost savings to Council provided through volunteering is over \$1.3 million dollars.

Council relies on volunteers to service

- Meals on Wheels, made up of 20% of WCC volunteers, deliver 15900+ meals per month to vulnerable people, contributing **20,000+ hours** annually
- Lighthouse Theatre ushers support & enhance the patrons experience, **3750 hours**
- Flagstaff Hill, made up of 31% of WCC volunteers, volunteers activate the village through dressing to the period and demostarting period exhibits, **9000+ hours**
- Visitor Centre, volunteers encourage visitors to the area to explore Warrnambool, **400 + hours**
- Archie Graham Community Centre, made up of 21% of WCC , volunteers create meaningful social connection opportunities through their involvement in physical activities, technology support, indoor activities, trips & outings to total **3000+ hours**
- Archie Café, provides a place for people to connect, **2210 hours**
- Library, delivering books to the vulnerable through the mobile library and activating community activities within the Library
- Gardens for Wildlife, help residents enhance their garden to encourage native wildlife to better support a healthy environment.
- Art Gallery, volunteers contribute **720 hours** annually, enhancing the customer experience by providing a meet and greet service.
- West Warrnambool Neighbourhood House – Volunteers help create safe and supportive neighbourhoods by assisting with operations and connection to people through programs
- Child services and Kindergarten, provide support to young children to learn
- Aquazone, Volunteers support fitness programs provided to the community
- Archie Social Groups, volunteers support people who are isolated, living with disability, or facing challenges by helping as an extra resource activating and running social programs and events.



Why volunteering is important to Council

Volunteer Connect is the central hub for all things volunteering at the Warrnambool City Council. The Volunteer Connect team plays an integral role in providing support to all volunteer programs across Council including advertising, interviewing and on boarding new volunteers. Additionally, Volunteer Connect provides advice on current best practice standards and maintains the volunteer data base.

They bring joy and are our best advocates for what we do in the Community.

Volunteers help create a community hub that ticks along in a spirit of generosity because people interact by giving & receiving. Volunteering enables people to have meaningful community experience.

We wouldn't survive without them. They engage people and bring the place to life.

Volunteers have the opportunity to continue to use their knowledge and skills developed during their career. Great use of them as community resources.





COVID – 19 Impact on Volunteering

Throughout 2020-21, the COVID-19 global pandemic impacted all aspects of society in ways that we could not have predicted. Volunteering is one of these areas. With forced or partial lockdowns and restrictions making on-site volunteering impossible, many volunteer programs were suspended. Further to this, concerns about health and transmission resulted in individuals limiting their exposure to public places impacting volunteering.

Additional Insights captured in the Australian National University's Centre for Social Research & Methods Report offer a valuable reflection of the impact that COVID has had on volunteering:

- Volunteers had a higher level of life satisfaction prior to COVID than non-volunteers;
- There was a substantially smaller decline in life satisfaction as well as lower levels of psychological distress for those volunteers who were able to continue volunteering compared to those who ceased volunteering; and
- Volunteers who were able to continue volunteering during COVID coped better

While the linkage between volunteering and positive mental

health outcomes is well established, this data provides immensely valuable reinforcement of just how important volunteering is.

COVID -19 Effects on Volunteering in Warrnambool.

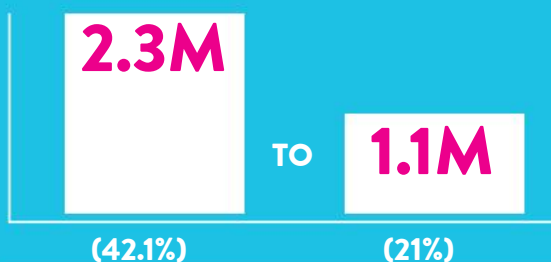
Pre Covid both Warrnambool City Council (WCC) and Volunteering Involving Organisation (VIO's) were experiencing an increase in Volunteers coming into their programs.

During Covid, 87% of VIO's surveyed had experienced a considerable decrease in volunteer numbers.

Feedback from WCC and VIO's indicated volunteers did not express concern over COVID-19. Most wanted to get back to volunteering as soon as possible, with some volunteers opting to find new volunteering roles with essential services to stay connected during COVID-19.

Volunteering is essential to Australia's COVID recovery as both an avenue to improve the mental health and life satisfaction of the volunteers themselves and supplement and expand upon the services that volunteer involving and community organisations can offer.

The initial COVID-19 impact in April-May 2020 saw a 50.2% decline in the volunteering participation rate from



There was a net decline in volunteering hours of almost two thirds (64.1%)

Strategic Direction

What we learnt for our Research & Review

Policies and Training Audit

WCC has a range of internal employee related policies, strategies and training to ensure that staff are protected and managed to reduce the incidence of risk and negate negative behaviors. Volunteers are entitled to be protected and managed by these same mechanisms.

A policy audit identified that not all WCC Council policies are specific to volunteers. A gap analysis is an opportunity for us to compare our policies with industry peers and national standards to create solid volunteer policies that will support a new management framework.

Of particular importance is the update of the Volunteer Policy which was due for review in 2014. In addition, the

following procedures and processes require review and tools to be developed.

- Volunteer screening
- Volunteers role in supporting the child safe policy
- Volunteer handbook
- Volunteer management handbook

Training Required

- Human Resources Volunteer Induction
- Child safety
- OH & S
- Volunteer management induction

Database Update

The Volunteer on-boarding processes and database has historically captured limited demographic or diversity information beyond age and gender.

Moving forward we will collecting data on

- Culture/Race
- Gender preference/identification
- First Nations
- Disability

Demographic data on WCC Volunteers Age and Gender



Warrnambool City Council in Volunteer Survey 2021 Results

83 survey respondents of a possible 294

- 47% of survey respondents have been at WCC for less than 3 years
- 32% volunteered up to 10 years
- 11% of volunteers have been volunteering with Council anywhere from 15 years to 30 years.

Volunteers who have been volunteering for long periods generally come from the Arts and Visitor Services/Flagstaff Hill who had 20% of responses in the 10 year to 30+ year range.

A vast majority of survey respondents volunteer on a regular and frequent basis volunteering more than twice a week, with a high proportion volunteering 1 to 2 times per week.

83%
of Volunteers found volunteering with WCC rewarding.

70%
had a positive experience being recruited by Council,

89%
felt confident about their volunteer roles and responsibility,

83%
felt they had received the appropriate training and support to perform duties.

44%
of people surveyed would recommend volunteering at WCC



Opportunities for Improvement

1. Recruitment and Communication

A common thread amongst respondents was that they felt unhappy with the recruitment process and that their volunteer role suffered from a lack of communication, excessive paperwork, and a lack of clear and concise policies and procedures. In addition they felt they were not being recognised as valued members of the Council team.

2. Volunteer Connect role supporting WCC Volunteers

When asked how Volunteer Connect (VC) has supported their journey to volunteering at WCC,

- 40% responded they took my initial enquiry,
- 26% replied they sent me information about how to apply and
- 38% were interviewed for the volunteer role by VC.
- 13% reporting regular contact with VC
- 22% are unsure of who VC is
- 19% skipped VC to signed up directly with area they volunteer in.

3. Former WCC Volunteer Survey (Volunteers who are no longer active with Council as of 2021) 55 former volunteers responded

- 37% of those former Volunteers are currently volunteering elsewhere.
- 77% were at council less than five years.
- Main reasons for leaving was: 1. employment, 2. health reasons, 3. Lack of Communication 4. Covid-19. 5. Travel or moving out of the area 6. Lack of support and/or appreciation.

Opportunities for improvement include: improving communication to create an inclusive culture, more variety in roles, and exit interviews and feedback mechanisms



Volunteer Connect's role in building capacity of Volunteer programs

What we do well?

- Advertising or Referrals
- Initial intake paperwork
- Co-ordination & Facilitation of South West Volunteer Network

How will Department of Social Services funding changes impact your Volunteer program?

Until June 30, 2021 Volunteer Connect had been funded by the Department of Social Services through the Volunteer Management activity (VMA), and part funded by WCC. All current funding agreements under the Volunteer Management Activity (VMA) have now ceased.

VIOs have been reliant on Volunteers Connect to advertise and refer volunteers. They have expressed concern that taking these tasks on will leave them with less time to deliver or coordinate their programs, which may impact the Volunteers experiences, whereas WCC will benefit from more internal support.

The VIOs told us the main challenges they will face when delivering their volunteer program over the next five years.

Top three challenges for VIOs

- Volunteer Recruitment
- Sourcing funding, grants and sponsorship to support your volunteer program
- Resources (people and time) to effectively deliver volunteer engagement

Top four challenges for WCC

- Resources (people and time) to effectively deliver volunteer engagement
- Red tape / and or regulatory requirements
- Influencing within my organisation, so volunteers and my role are valued
- Engaging diverse volunteers (younger, older, CALD communities, people with disabilities)

Importance of South West Volunteer Network (SWVN)

- 100% of WCC Coordinators, Managers or Supervisors are members of SWVN.
- 88% attended meetings in the last 6 months.
- 53% of VIO's attended South West Volunteer Network meetings recently and in the past.

Reasons for not attending included: time poor, distance, other work conflicts, interest level, technology deficiencies, meeting haven't been beneficial in the past and three VIO's were unaware of meetings.

Participation in Volunteer Connect Training Opportunities

63% of WCC and 73% of VIO's responded that they had not attending this training in the last six months.

Main reasons for not attending: time poor, not aware of training, training offered was not relatable or of benefit.

The role of Volunteer Connect in supporting volunteer programs at WCC

WCC Volunteer Coordinators described their role in supporting volunteer programs and managing volunteers as not being recognised in their position description. Instead, it is an expected unacknowledged addition to someone's position. This results in time-poor supervisors that don't have enough time to dedicate the effective management of Volunteers, hindering their ability to suitably engage with Volunteers, use the volunteer database platform and start new volunteer programs/roles.

The support WCC Volunteer Coordinators receive from Volunteer Connect varies greatly across programs areas. There is a large gap between Coordinators feeling supported and others feeling unsupported. Employees are seeking clarity about Volunteer Connects role and responsibilities. Coordinators also want to see streamline process and policies to make things flow better.

Use of Internal Volunteer Database: Better Impact

Only 3 of the 12 Volunteer Coordinators are using Better Impact.

Reasons for use; the occasional visit to update a Volunteers contact details, keep track of birthdays and emergency contacts.

Better Impact is a seen as a barrier for most.



Recurring Themes

1. Improve Volunteer Management: creation of a volunteer management framework and implementation of a volunteer data base to stream line processes and procedures. Improved management practices will reduce duplication and create a supportive approach to managing volunteers at Warrnambool City Council.

2. Increase Social Inclusion and Diversity: provide opportunities for young people, people from diverse backgrounds, LBGQTA+ communities, First Nations and people living with disabilities to engage with volunteering to create sustainable volunteerism in the community.

3. Strengthen Recruitment and Retention: empower, support and educate volunteer programs to use best practice recruitment and retention strategies. Provide meaningful opportunities for volunteers to volunteer.

4. Advocate Volunteerism: Promote the benefits of volunteering and encourage the community to volunteer. Post-Covid, there will be a need to reengage the community in opportunities that are open in volunteering. Promote the benefits of volunteering and encourage the community to volunteer.

5. Develop a Reward and Recognition program: celebrate and recognise volunteers to inspire wider community appreciation of volunteer's contribution to the community.

6. Improve Communication: develop strong communication mechanisms to ensure key stakeholders receive information that is relevant to their needs, builds on their feedback and creates positive working relationships.

7. Engage Online Platforms: Embrace online platforms to deliver volunteer training, support and resources.

8. Value Feedback and Consultation:

Provide opportunities for regular feedback to ensure that Volunteer Connect meets the needs of its volunteers and volunteer programs.



Strategic Goal 1 Champion:

Volunteer Connect champions a culture of volunteerism that advocates and celebrates volunteers

Objective	Action	What success looks like	Year commencing
1.1 Provide education and advocacy to develop a positive culture of volunteerism in the community.	1.1.1 Profile internal and external volunteers, use this information in public publications to raise awareness of Volunteering.	The Warrnambool community is aware of all Volunteer agencies & volunteer opportunities, increasing the number of people volunteering	2022
	1.1.2 Develop a marketing campaign using the motivations of interviewed volunteers to engage and educate the community about volunteerism in Warrnambool.	Barriers/stigma around what motivates people to volunteer are broken down, community shows signs of engaging with & enjoying volunteering more diversely.	2022
	1.1.3 Advocate all levels of government, peak bodies, stakeholders, and businesses about the benefits of volunteering and the need to fund and support this sector to thrive.	Volunteering is funded in a sustainable way that allows for organisations to grow and flourish into the future.	2022
1.2 Endorse a central platform unique to the Warrnambool community that will help people engage with & offer to volunteer.	1.2.1 Explore web based platforms to support volunteerism in Warrnambool	The Web platform has become known as a one-stop-shop for all things volunteering. With access to resources and volunteer opportunities.	2022
	1.3 Support the growth of strong neighbourhoods through volunteering	1.3.1 Research how Volunteer Connect supports neighbourhood advocates to recruit volunteers to expand opportunities & engagement.	Advocates in the community can grow their neighbourhoods social opportunities. People can come together to connect.
1.3 Support the growth of strong neighbourhoods through volunteering	1.3.2 Use education, marketing, and promotion to let people know how they can get involved in their local neighbourhoods.	Neighbourhoods are busy hubs that offer people opportunities to engage and socialise.	2024
	1.3.3 Promote the use of knowledge & skills learned over a lifetime to volunteer in order to share.	People have an opportunity to share their skills and knowledge with the Community	2024
	1.4 Collaborate with the community, offering a diverse range of training, networking & professional development for leaders of volunteers, community groups and not for profit organisations	1.4.1 Facilitate, promote and grow the South West Volunteer Network. Offer opportunities for VIOs, clubs & groups to attend training/workshops which empower them to create sustainable volunteer programs	The network is known to all VIOs, Clubs and Groups and is used as a platform to network, learn and keep up to date with the volunteering sector

Objective	Action	What success looks like	Year commencing
	1.4.3 Create a library of resources made up of both written and spoken information relating to volunteering for use by the community.	The community has access to tools to support volunteer programs	2023
1.5 Provide education & resources to encourage best practices for volunteering, volunteers, and volunteer organisations	1.5.1 Review current resources and update in line with best practice.	Have a library of resources that are up to date and current.	2022
1.6 Explore options to celebrate and recognise Volunteers in our Community	1.6.1 Explore ways that we can expand how we recognise volunteers in the community on a regular bases.	A calendar of events is created that recognises volunteers	2022
1.7 Encourage Staff to volunteer	1.7.1 Create transparent processes and policy for on boarding Corporate Volunteers	Local businesses commence volunteering with WCC expanding our volunteer base & creating new relationships to work together.	2022
	1.7.2 Educate and encourage staff to volunteer by collaborating with local VIOs to create pledges for WCC staff to volunteer their time.	Staff are aware of their ability to Volunteer inside work hours to give back to the community.	2023



Strategic Goal 2 Strengthen:

Volunteer Connect will *Strengthen our community* by actively supporting social inclusion and diversity through volunteering.

Objective	Action	What success looks like	Year commencing
2. Foster, encourage & collaborate genuine relationships people living with Migrants, Disability, LBGQTA+ & First Nations communities through education and introductions.	2.0.1 Create strategies to encourage younger volunteers to engage, along with education on retaining them into the future.	The demographics of Volunteering in Warrnambool is more diverse, in turn building a sustainable future.	2023
	2.0.2 Develop strategies to increase social inclusion & diversity for volunteering with Council, particularly for those living with disability, residents from CALD backgrounds & First nations.	Council has a diverse range of volunteers through its programs	2022
	2.0.3 Create training & resources to encourage VIOs and community groups to increase social inclusion & diversity in their volunteering	The community has a diverse range of people engaging with and supporting volunteering	2022
	2.0.4 Develop clear guidelines around accessible communication and language used in written material to ensure we are inclusive to a diverse range of people.	People have access to communication from Volunteer Connect in a format related to their situation, i.e. a different language, speaking rather than written, etc.	2022



Strategic Goal 3 Sustain:

Volunteer Connect will deliver a sustainable service through being aligned with best-practice and contemporary trends in volunteering

Objective	Action	What success looks like	Year commencing
3.1 Use education and best practices to provide meaningful opportunities for Volunteers to Volunteer.	3.1.2 Conduct a review of WCC volunteer positions to identify if volunteers have valuable & meaningful roles. And that these positions are in line with best practices.	Volunteers have meaningful experiences while volunteering that aligns with their aspirations/reasons for volunteering.	2022
	3.1.2 Research opportunities to change some volunteer positions to encourage more organic roles to help expand volunteering in specific spaces	Volunteers can use their specific skills and knowledge to volunteer, in turn opening up and expanding programs that may be offered.	2023
	3.1.3 Create new roles and different volunteer opportunities that are not tied to physical space, i.e. virtual volunteering	Expand the offering that Council has for volunteers and increase the opportunity for people to engage	2024
3.2 Create a cohesive Reward & Recognition plan for Volunteers at Warrnambool City Council	3.2.1 Review current WCC reward and recognition practices to create a structured reward and recognition practice	Volunteers feel valued in their role at Council. They have a consistent experience throughout all programs at Council.	2022
3.3 Establish a coordinated approach to communication with volunteers, including marketing, promotion & communication plans	3.3.1 Create a Communication Plan to strengthen WCC communication with its volunteers.	WCC volunteers receive regular communication that builds their relationship and sense of belonging to the Council.	2023
	3.3.2 Create a yearly marketing plan & budget for Volunteer Connect to recognise/promote volunteering at WCC & the South West.	Volunteer Connect regularly acknowledges volunteer events, markets itself, volunteerism & the programs it supports to increase awareness in the community.	2023
3.4 Create cohesive & coordinated approaches to recruitment & retention, making the most of online platforms to engage with volunteers.	3.4.1 Evaluate each volunteer program, use this information along with national standards to seek support from Council to resource volunteer programs correctly.	Volunteer program within WCC are resourced in line with best practice.	2022
	3.4.2 Create volunteer management guidelines around minimum resources to consider when delivering volunteer programs.	Staff at WCC are aware of what is required to successfully deliver a volunteer program.	2022

Objective	Action	What success looks like	Year commencing
	3.4.3 Create training for WCC leaders of volunteers, supervisors, and coordinators on how to manage volunteers successfully.	Leaders of volunteer, Supervisor and Coordinators feel confident managing volunteers.	2023
	3.4.4 Communicate the role of Volunteer Connect with WCC volunteers and employees.	WCC Volunteers & employees know/understand how Volunteer Connect can support their volunteer journey.	2022
3.5 Create a volunteer management framework to streamline the processes & procedures of volunteering and managing volunteers at Warrnambool City Council. Embed Better Impact in practices as the internal Volunteer management system.	3.5.1 Review all current WCC policies and procedures	Gaps have been identified, and new best practice policies and procedures have been created	2022
	3.5.2 Initiate a WCC induction and create a Volunteer Handbook that helps educate volunteers about WCC expectations, processes and procedures.	WCC Volunteers are inducted to Council via Volunteers Connect	2022
	3.5.3 Create an innovative way to engage people in understanding the WCC code of conduct and other policies.	All volunteers are comfortable and understand their role as a volunteer at WCC	2024
	3.5.4 Use WCC Better Impact platform to create training opportunities for Volunteers	Volunteers are using Better Impact to upskill, learn new things and expand their knowledge.	2023
	3.5.5 Create program-specific training in WCC Better Impact to help Volunteer managers, supervisors or coordinators at WCC improve their induction process and reduce the time required to do this.	As part of their WCC induction, volunteers have access to training to help them commence their new roles.	2024
	3.5.6 Develop a WCC volunteer management guide/handbook for Volunteer managers, supervisors or coordinators	Volunteer managers, supervisors or coordinators are working in a consistent framework and understand how WCC engages and managers volunteers	2022



Implementation and monitoring

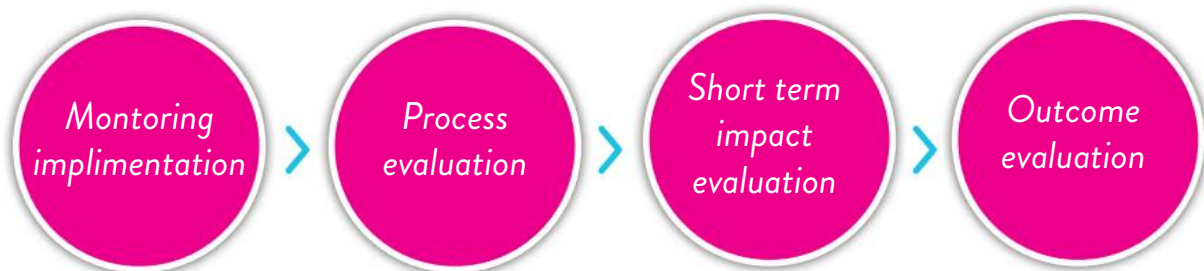
The implementation of the strategy will be led by Volunteer Connect, we will guide collaborative efforts that support volunteering activities across the community, with a focus on the facilitation of community volunteering events and activities that promote and celebrate volunteering; facilitating access to training for volunteer leaders, and community organisations; and diversifying volunteering. Implementation of the strategy will be staged over three years with most actions commencing in the first year of the strategy.

Monitoring and evaluation of this strategy

The monitoring and evaluation of the strategy will consist of four key elements:

1. Regular monitoring and recording of the implementation of the Action Plan.
2. Process evaluation of the Action Plan's implementation with a focus on whether implementation is reaching the intended stakeholders, the quality of implementation, and if all actions are being implemented.
3. Outcome evaluation for each goal with a focus on the long term change in:
 - Culture of volunteerism in the community
 - Warrnambool City Council Volunteering experiences and rates of volunteering
 - The capability of volunteer leaders and volunteer involving organisations

This monitoring and evaluation process will provide the mechanism to prompt when a review of this strategy is required



Resources

Warrnambool 2040 Plan

Healthy Warrnambool 2021-25 Plan

Australian Bureau of Statistics, 2016 Census

Australian Bureau of Statistics, 2019. General Social Survey

Volunteering Australia, 2015. Volunteering Australia Project: The Review of the Definition of Volunteering

2016 State of Volunteering in Australia Report

2020 State of Volunteering in Victoria Report

Australian National University's Centre for Social Research & Methods Report

Volunteering Australia & PWC, 2016. State of Volunteering in Australia

Department of Social Services, 2021, Volunteer Management Activity Summary

Volunteering Australia, 2015: The National Standards for Volunteer Involvement.

This Strategy was prepared with the assistance of Flutterbye Sustainable Volunteering.





7.11. ADVISORY COMMITTEE/REFERENCE GROUP REPORTS

DIRECTORATE : City Infrastructure

PURPOSE

This report contains the record of one Advisory Committee meeting.

REPORT

1. Warrnambool Airport Reference Group – 23 May 2022 – refer **Attachment 1**.

NOTES:

- I. Note Item 6, meeting with Moyne Shire to discuss Airport Management, Operations, and its value to the Region.
- II. Note Item 9, that construction of any new Hangars/Buildings in the Aviation Business Park be in accordance with current guidance so that hangars project a common appearance”
- III. Note Item 16, as previously All agreed Council's position that no change to the MSA occur in order to protect the Airspace”
- IV. Note Item 27.1, the Reference Group indicated growing concern regarding urban growth in the airport environs. Moyne should ensure that planning applicants are advised of aviation activity (noise) 24 hours.

ATTACHMENTS

1. Minutes WARG 23 May 2022 1 (1) [7.11.1 - 9 pages]

MOVED: CR RICHARD ZIEGELER
SECONDED: CR DEBBIE ARNOTT

That the record of the Warrnambool Airport Reference Group meeting held on 23 May 2022, be received.

CARRIED - 7:0

WARRNAMBOOL REGIONAL AIRPORT REFERENCE GROUP (WRARG) MINUTES			
Date:	Monday 23 May 2022.	Time: 11.00 am.	Location: Airport Terminal.
Meeting Objective:	Discussion & Advise on Airport Operations and Development, Security, and Emergency Management.		
Attendees:	Stephen Lucas (Chairman) Cr Max Taylor (Warrnambool City) Jim Doukas (Moyne Shire) John Stuart, Errol Stewart, Ken Veal, Duncan Richardson (Off Shore Services)		
WCC Attendees:	David Leahy (Director City Infrastructure) Julie Anderson (Manager Governance, Property, Projects, & Legal) Terry O'Sullivan (Airport Reporting Officer, ARO)		
MSC Attendees;	Vicki Askew Thornton.		
For Information:	Shane Robe (ARO)		
Apologies:	Brett Davis (Acting CEO Moyne Shire) Michelle Grainger (Manager Energy Projects) Chris Daffy, Troy Bently, Dan Guillaumier (Babcock Chief Pilot HEMS4)		
No	Discussion	Who	Action
1.	Welcome & Apologies.		
2.	Declaration of conflict of interest.		Stephen Lucas – Hangar Owner/Aero Club. John Stuart – Hangar Owner. Errol Stewart – Hangar Owner/Aero Club. Ken Veal – Hangar Owner/Aero Club.
3.	Confirmation of minutes of Meeting Monday 21st February 2022. Minutes tabled as follows: Executive Management Team Meeting 22 nd March. Council briefing 28 th March. Council Meeting 4 th April.		Moved: Cr Max Taylor. Seconded. John Stuart. Carried.
4.	Business arising from the Minutes.	All.	Nil.
5.	CASA, 2020 Manual of Standards, MOS, for Airports, Certification and Airport Operations Manual. Airport Operations Manual submitted to CASA Tuesday 3rd May 2022.	Terry O'Sullivan.	Airport to operate as a "Certified" Airport as per 2020 Manual.

6.	<p>2017 Airport Development Plan, ADP.</p> <p>Future development of the Airport is centred on enhancing safety and catering for larger Aircraft as the region grows.</p>	David Leahy.	<p>ADP has listed and prioritised works required to enhance and improve the capability of the Airport short, medium, and longer term.</p> <p>No funding is currently allocated to implement works identified in the ADP.</p> <p>Warrnambool City to meet with Moyne Shire to discuss Airport Management, Operations, and its value to the Region.</p> <p>Going forward there is a need for a Strategic Plan to complement the ADP.</p>
7.	<p>Hangar Construction Lot 21.</p> <p>Site marked out in readiness for construction of a Hangar, 15 x 15m, Aviation Park (North side of Dews Hangar 22)</p>	For information.	Noted by group.
8.	<p>Hangar/Building Construction Lot 14.</p> <p>Live Fire Hub. Proponents are seeking further advice around planning requirements for the activity.</p>	Terry O'Sullivan.	Noted by group.
9.	<p>Hangar Construction Lot 19.</p> <p>Recent request received by Council.</p> <p>I'd like to gain an understanding if a container mounted structure 18 m x 15 m would be agreeable for the Warrnambool Aviation Park? It would be a hybrid container structure which is fully engineered and certified to the higher Wind Region B standard (YWBL is only categorised as a lower Region A) A good example of a container mounted structure is at the Woolsthorpe Hotel.</p>	Terry O'Sullivan.	<p>Concept presented to group for consideration with proposed structure being a curved plastic (similar to shelter in outdoor area at Woolsthorpe Hotel and cover over betting ring at Warrnambool Racecourse) mounted on 2 x shipping containers.</p> <p>Much discussion took place structure and all agreed that proposed not an appropriate structure for the Aviation Park.</p>

			<p>Moved: Cr J Doukas. Seconded: John Stuart.</p> <p>“That construction of any new Hangars/Buildings in the Aviation Business Park be in accordance with current guidance so that hangars project a common appearance”</p> <p>Carried.</p>
10.	<p>Leases/Site Fees.</p> <p>Further discussion and consultation is required in relation to Lease agreements which will be a large task because of the variety of leases in existence.</p>	Julie Anderson.	<p>Chairman to have discussion with Manager Governance, Property, Projects, & Legal, on leases.</p> <p>Consultation with the Reference group to be part of review as soon as practical.</p>
11.	<p>Runway 04/22.</p> <p>Runway swept Thursday 24th March and available for Aircraft movements as per updated published information.</p> <p>Threshold markings and ID Number marked: 04: Tuesday 29th March. 22: Wednesday 30th March. Centreline: Monday 4th March.</p>	Terry O'Sullivan.	<p>Usage of the Runway has increased post sealing works.</p> <p>The final seal has been delayed due to inclement weather. Works rescheduled to September/October when the pavement temperature is raised to an appropriate level.</p> <p>Turning nodes each end are planned along with line markings.</p>
12.	<p>RAP Funding.</p> <p>Round 3 of the Regional Airports Program (RAP) was announced Wednesday 23rd March. Grants of between \$20,000 and \$5 million are available to cover up to 50 per cent of eligible project costs.</p>	David Leahy.	<p>Council did not apply for funding on this occasion as no allocation in Budget to match funding.</p>

<p>13.</p>	<p>Fees and Landing Charges.</p> <p>Income to date as follows: Avdata charges \$31K Local Commercial Operators \$6K " Recreational " \$4K</p> <p>Fees for 2022/2023 to increase as follows: \$11.00/Tonne MTOW (up from \$10.00) All other by CPI 1.75%.</p>	<p>For information.</p>	<p>Reference Group requests to be consulted during the budgetary process in future.</p>
<p>14.</p>	<p>Obstacle Limitation Surfaces, OLS.</p> <p>ARO maintains ongoing consultation with neighbouring property owners with regard to any vegetation identified infringing the approach, transition, and take off surfaces.</p> <p>As the vegetation is on private land then consent to trim/remove vegetation is required.</p> <p>Cypress Hedges and Poplar trees trimmed at 22 Sim's Rd (Approach Runway 31) Monday 7th, Tuesday 8th, & Wednesday 9th March.</p>	<p>For information.</p>	<p>Noted by Group.</p> <p>Very beneficial to maintain liaison with neighbouring property owners.</p> <p>Annual OLS Survey of the Take-Off, Approach, Transitional, & Visual Segments Surface in accordance with Part 139 MOS, Chapter 12, plus measurements to enable determination of longitudinal and transverse gradients for Runways, Taxiways, & Aprons scheduled for late June.</p>
<p>15.</p>	<p>Communications & Water Towers.</p> <p>Telstra are planning and in discussion with Council and the Community regarding installation of a 35 metre (AGL) Communications Tower in the township of Bushfield at 63 McKenzies Road. The RL 87.3 AHD for this tower and is well below RL of 200 AHD as specified on the Airports OLS Charts.</p> <p>Wannon Water will be constructing a Water Tower at 174 Aberline Road. The RL 69.3 AHD for this tower and is well below RL of 217.2 AHD</p>	<p>Terry O'Sullivan.</p>	<p>Neither tower infringes the OLS for the Airport.</p> <p>Council to request that the Towers be obstacle Lit (steady red light) and published in ERSA.</p>

<p>16.</p>	<p>Windfarm Developments.</p> <p>Council Officers to provide update at Meeting.</p> <p>16.1. Willatook.</p> <p>16.2. Woolsthorpe. E-Mail received 6th May from proponent. Enerfin Energy Services are seeking a planning approval for turbines of 230 m tip height at the proposed Woolsthorpe Wind Farm.</p> <p>Aviation study findings recommend this would require the flying minimum safe altitude (MSA) within 10 nautical miles of the airport (Woolsthorpe WF at its closest point is 8 nautical miles from Warrnambool airport runway) to be raised from 2100 ft to 2300 ft.</p> <p>We understand this could potentially impact flight landings from the north by requiring more instrument guided landings (more expensive).</p> <p>Our consultant was of the belief the majority of Sharp Airways operations was between Warrnambool and Melbourne, and that flights from Melbourne approach the runway from the south, and would not be affected by a raise in the MSA.</p> <p>We obviously want to engage with you and Sharp Airways, regarding points 4 & 5, to understand how you might be impacted by our request. And if our request does impact you, how we can address this and compensate those affected.</p> <p>16.3. Hawkesdale.</p>	<p>David Leahy. Vicki Askew Thornton. Terry O'Sullivan.</p>	<p>Currently finalising plans with DEWLP and should be out on public exhibition shortly.</p> <p>E-Mail received 19th May from proponent. Considering timeframes and your meeting on the 23rd, it would be best if we could please postpone your consideration on this matter. We are presently working through some other points but look forward to the opportunity to revisit this with you. As mentioned previously, we would like to come say hi in person.</p> <p>Much discussion took place on request to raise the MSA and Local Operators and Offshore Services Australasia have concerns on requested change to the MSA.</p> <p>Moved: John Stuart Secoded: Ken Veal</p> <p>“As previously All agreed Council’s position that no change to the MSA occur in order to protect the Airspace”</p> <p>Carried.</p> <p>Woolsthorpe are awaiting approval to connect into grid at the Yangery power station. Council to be mindful of transmission line route from Wind Farm site to the power station.</p> <p>Pending outcome of recent Court hearing instigated by local Residents.</p>
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	<p>16.4. Hexham.</p> <p>16.5. Ryan Corner.</p>		<p>Currently subject to Environment effects statement.</p> <p>Ryan Corner, construction commenced, no impact of Airport flight procedures.</p> <p>Thanks to Vicki from Moyne Shire for the update on developments. Both Councils to keep each other informed on requests, discussions, etc.</p>	
17.	<p>Airside Access.</p> <p>Reminder that vehicular airside access be only for specific aviation related movements and be kept to absolute minimum especially on Main Apron.</p>		<p>Access on Apron is now minimal.</p> <p>Operating Aircraft have right of way at all times.</p>	
18.	<p>On/Off Shore operations.</p> <p>Off Shore Operations for the Thylacine Gas Rig and Ocean Onyx operations continue.</p> <p>Footpath recently constructed from Hangar 3 to Airside/main apron for ease of off shore operations.</p>		<p>Noted by Group.</p>	
19.	<p>Airport Works & Maintenance.</p> <p>Taxi lane servicing Hangars 2-7 sheeted with fine crush rock Thursday 24th February.</p> <p>The Apron pavement is subject to ongoing failure due to larger and heavier Aircraft. Pavement repairs undertaken by Council Staff on main apron Thursday 7th April, and intersection of Runway 31 and Taxiway C Tuesday 17th May.</p> <p>Crack sealing undertaken Wednesday 6th & Friday 8th April.</p>	<p>Terry O'Sullivan.</p>	<p>Noted by Group.</p>	

	<p>Week commencing 28th March a program of drain cleaning was undertaken.</p> <p>Thursday 17th and Friday 25th March full day of applying Herbicide on runway strips, drains, and grazing land to control noxious weed.</p>		
20.	<p>Aviation Park Fire Service/CFA Air Base.</p> <p>Water supply used, around 170,000 litres, Sunday 17th April, fire at Bligh property east of Airport.</p> <p>Supply used again early hour's morning of Friday 6th May, fire in Mailors Flat.</p>	For information.	<p>Noted by Group.</p> <p>ARO to discuss with CFA Commander, David FERGUSON, the possibility of the WCC MERO's phone having access to the CFA's Supplementary Alerting Service, SAS, reason being that WCC are advised immediately of fire/incident at Airport or in close proximity of the Airport.</p>
21.	<p>Flight Training.</p> <p>Murray Medway, Great Southern Flying School (Barwon Heads) Currently providing training. Council in discussion regarding fees.</p> <p>Brendan Reidy, based at Colac Airport, has advised of his intention to provide RAA training commencing 1st July.</p>	Terry O'Sullivan.	<p>Noted by Group.</p> <p>Ideally a provider should be based locally and have aircraft on site.</p>
23.	<p>Regular Passenger Transport, RPT, Service.</p> <p>Previously discussed that to attract a larger operator, primarily Tourism based, Runway 13/31 needs to be strengthened and lengthened to cater for larger and heavier Aircraft.</p>		<p>The Bendigo/Sydney service provided by Qantaslink has exceeded all expectations.</p> <p>ARO regularly fields calls about a service and enquiries are not only about Warrnambool/Melbourne service, but to other Capitol/Major Cities.</p>

<p>24.</p>	<p>Aero Club Redevelopment.</p> <p>Coming out of the COVID19 Pandemic the Club has had much discussion on its future direction. Initial plans were to demolish the existing Clubrooms and construct a larger facility to cater into the future. The Club has reviewed its plans and are of the view that this is now cost prohibitive post COVID, ie cost and access of materials, sourcing labour, meeting DDA requirements, etc.</p> <p>The Club would like to pose the question of Council of the possibility of maybe acquiring the Office Space/Building (former Warrnambool Aviation Office/Training Space) The Club is off the view that this space, with some internal and external works would meet the Clubs requirements going forward.</p>	<p>Ken Veal.</p>	<p>Request considered by Senior Management and is happy to provide approval for this to occur with Aero Club entering into a lease agreement.</p> <p>The Club advise that they are willing to coexist with Council (Office & use of facilities for Council/Airport Staff)</p> <p>The Club is well aware of future plans and priorities for the Airport as outlined in the Airport Development Plan 2021 .</p>
<p>25.</p>	<p>Drag Race Club.</p> <p>Club advice that it is their intention to run 1-2 events later this year.</p>	<p>For information.</p>	<p>Noted by Group.</p>
<p>26.</p>	<p>Miscellaneous.</p> <p>26.1. Aircraft movements May Race Week. All went well with Aircraft arriving for the Races. Thanks To Chris DAFFY for helping out with parking and to Stephen and Ken for use of apron area at respective Hangars.</p> <p>26.2. Tony Laws, Airmid, Air Taxi in area by 2025.</p> <p>26.3. Residence has been painted, new carpet, etc. Ludeman Real Estate have it advertised for rent.</p> <p>26.4. HEMS4, compass swing ?</p>	<p>Terry O'Sullivan.</p>	<p>Noted by Group.</p> <p>Chair advised that, despite recent press, this proposal as described was uncommercial.</p> <p>For information.</p>

27.	General Business. 27.1. Raised again regarding increased development in vicinity of Airport, planning overlays ANEF etc.		The Reference Group indicated growing concern regarding urban growth in the airport environs. Moyne should ensure that planning applicants are advised of aviation activity (noise) 24 hours.	
28.	Next Meeting. Close of Meeting.		Monday 15 st August 2022. 12.20pm.	

7.12. INFORMAL MEETINGS OF COUNCIL REPORTS

DIRECTORATE : Executive Services

PURPOSE

The purpose of this report is to provide Council with copies of Informal Meetings of Council (previously known as “Assembly of Councillor Records”) as previously required under section 80A(2) of the Local Government Act 1989.

BACKGROUND INFORMATION

Section 80A(2) of the Local Government Act 1989 required the record of an Assembly of Councillors to be reported at an ordinary Council meeting.

Assembly of Councillor Records are no longer a requirement in the Local Government Act 2020 as of 24 October 2020. However, under Council’s Governance Rules, a summary of the matters discussed at the meeting are required to be tabled at the next convenient Council meeting and recorded in the minutes of that Council meeting.

REPORT

The record of the following Informal Meetings of Council are enclosed:-

1. Tuesday 14 June 2022 – refer **Attachment 1**.
2. Monday 27 June 2022 – refer **Attachment 2**.

ATTACHMENTS

1. Assembly of Councillors Record 14 June 2022 [7.12.1 - 1 page]
2. Assembly of Councillors Record 27 June 2022 [7.12.2 - 2 pages]

MOVED: CR DEBBIE ARNOTT
SECONDED: CR RICHARD ZIEGELER

That the record of the Informal Meetings of Council held on 14 and 27 June 2022, be received.

CARRIED - 7:0

Informal Meeting of Council Record	
Name of Committee or Group (if applicable):	Informal Meeting of Council (Councillor Briefing)
Date of Meeting:	14 June 2022
Time Meeting Commenced:	3.03pm
Councillors in Attendance:	Cr. V. Jellie, AM, Mayor Cr D. Arnott Cr B. Blain Cr. A. Paspaliaris (Zoom) Cr. M. Taylor Cr. R. Ziegeler
Council Officers in Attendance:	Peter Schneider, Chief Executive Officer Petr Utri, Director Corporate Strategies (Zoom) David Leahy, Director City Infrastructure Andrew Paton, Director City Growth Tina McLeod, Acting Director Community Development Julie Anderson, Manager Governance, Property, Projects & Legal David Harrington, Manager Financial Services (left meeting at 3:29pm) Luke Coughlan, Manager Infrastructure Services (3:45pm – 4:41pm) Paul Cugley, Coordinator Engineering Services (3:45pm – 4:41pm)
Other persons present:	
Apologies	Cr. O. Akoch
Matters Considered:	<ol style="list-style-type: none"> 1. The 2021-2025 Council Plan (2022 Revision) - (3.03pm - 3.05pm) 2. Warrnambool City Council Budget 2022-2023 - (3.05pm - 3.15pm) 3. Community Small Infrastructure Fund - (3.15pm - 3.29pm) 4. Airport Reference Group Meeting Minutes 23 May 2022 - (3.30pm - 3.35pm) 5. Volunteer Strategy - (3.35pm - 3.36pm) 6. Pavilion Ramp Cover - (3:37pm - 4.00pm) 7. City Centre Pedestrian Priority Crossings At Roundabout Evaluation Report -(4.00pm - 4.40pm)
Other Matters Considered	Councillor and Officer Matters (4.41pm- 5.02pm) Heatherlie Homes letter tabled Darebin Community Battery Map for CBD parking Reid Oval game on Friday night Flagstaff Hill feasibility study Positive trip to Parliament house last week. Kindergarten Services Cars at Fletcher Jones Spring Street advocacy documentation to Councillors via email Bushfield telecommunications Tower
Councillor Conflicts of interest Disclosures:	
Councillor /officer Name: Nil	
Meeting close time:	5:23pm
Record Completed by:	Julie Anderson Manager Governance, Property, Projects & Legal.

Informal Meeting of Council Record	
Name of Committee or Group (if applicable):	Informal Meeting of Council (Councillor Briefing)
Date of Meeting:	27 June 2022
Time Meeting Commenced:	3.00pm
Councillors in Attendance:	Cr O. Akoch Cr B. Blain Cr A. Paspaliaris (joined meeting at 3:11pm) Cr M. Taylor Cr R. Ziegeler
Council Officers in Attendance:	Peter Schneider, Chief Executive Officer Peter Utri, Director Corporate Strategies Andrew Paton, Director City Growth Tina McLeod, Acting Director Community Development Julie Anderson, Manager Governance, Property, Projects & Legal
Other persons present:	Craig Fraser, CEO, South West Healthcare (3:00pm – 3:52pm) Jamie Brennan, Executive Director, South West Healthcare, Redevelopment & Infrastructure (3:00pm – 3:52pm) Leon Fitzgerald, Chairman, Audit & Risk Committee – ZOOM (3:58pm – 4:07pm) Wendy McGorm, Acting Finance Manager (4:00pm – 4:16pm) Rob Wandell, Coordinator City Development (4:22pm – 4:52pm) Julie McLean, Coordinator City Strategy (4:22pm – 4:59pm)
Apologies	Cr D. Arnott Cr V. Jellie, AM, Mayor
Matters Considered:	<ol style="list-style-type: none"> 1. Presentation – South West Healthcare (3:00pm – 3:52pm) 2. Community Small Infrastructure Fund - (3.53pm - 3.50pm) 3. Audit & Risk Committee Self-Assessment - (4.00pm - 4.07pm) 4. Audit & Risk Committee Charter Update - (4.07pm - 4.08pm) 5. May 2022 Monthly Finance Report - (4.08pm - 4.16pm) 6. Community Satisfaction Survey - 2022 Results - (4.16pm - 4.21pm) 7. Public Tree Planting and Maintenance Policy - Post Consultation -(4.21pm - 4.22pm) 8. Amended Development Plan - 15 Dales Road (4.22pm - 5.39pm) 9. Planning Permit PP2021-0356 - 1-5 Cooper Street - (4.39pm – 4:52pm) 10. Warrnambool Beach Access Strategy - (4:53pm - 4.56pm) 11. Rezoning of Kings College and Royal Court - Planning Scheme Amendment C210warr - (4.56pm - 5.00pm) 12. Customer Service Report and Customer Charter Review - (5.00pm - 5.01pm) 13. Related Party Declarations - (5:01pm – 5:05pm) 14. Verbal Report - Brierly Reserve Stage 1 Eastern Oval Redevelopment - Funding Submission - (5:06pm - 6.45pm) 15. Request for Lighthouse Theatre Hire Fee Waiver - (5:10pm – 5:17pm)

	<p>Cr Taylor left the meeting at 5:10pm</p> <p>Cr Taylor returned to the meeting at 5:17pm</p> <p>16. Submission To Moyne Wind Farms Yoursay - (5.17pm – 5:22pm)</p> <p>17. Reid Oval Update (5:23pm – 5:23pm)</p> <p>18. Mayoral Diary Update - (5.23pm – 5:23pm)</p>
6	<p>Councillor and Officer Matters</p> <p>Nil</p>
<p>Councillor Conflicts of interest Disclosures: Item 4.1 – Cr Taylor (member of Legacy)</p>	
<p>Councillor /officer Name: Nil</p>	
Meeting close time:	5:23pm
Record Completed by:	Julie Anderson Manager Governance, Property, Projects & Legal.

7.13. MAYORAL & CHIEF EXECUTIVE OFFICER COUNCIL ACTIVITIES - SUMMARY REPORT

PURPOSE

This report summarises Mayoral and Chief Executive Officer Council activities since the last Ordinary Meeting which particularly relate to key social, economic and environmental issues of direct relevance to the Warrnambool community.

REPORT

Date	Location	Function
3 June 2022	Warrnambool	Mayor & Chief Executive Officer - Minister Jaala Pulford, Minister for Innovation, Medical Research and the Digital Economy announcement regarding upgrading mobile connectivity in Warrnambool.
8 – 9 June 2022	Melbourne	Mayor, 3 Councillors & Chief Executive Officer advocacy visit with various Ministers and State Government politicians.
16 June 2022	Virtual	Mayor & Chief Executive Officer – Regional Cities Victoria Meeting.
17 June 2022	Warrnambool	Cr Akoch represented the Mayor at the launch of the Warrnambool GALS (Girls as Leaders) Deakin University STEM (science, technology, engineering and maths) program.
19 - 22 June 2022	Canberra	Mayor, 3 Councillors & Chief Executive Officer – National General Assembly of Local Government.
20 June 2022	Warrnambool	Cr Taylor represented the Mayor at the Wellways official opening of the new Warrnambool office.
24 June 2022	Melbourne	Mayor & Deputy Mayor – MAV State Council meeting.

MOVED: CR BEN BLAIN

SECONDED: CR ANGIE PASPALIARIS

That the Mayoral & Chief Executive Officer Council Activities – Summary Report be received.

CARRIED - 7:0

8. NOTICE OF MOTION

No Notices of Motion have been received.

9. GENERAL BUSINESS

Nil.

10. URGENT BUSINESS

Nil

11. CLOSE OF MEETING

The meeting closed at 7.09pm.

CHAIRMAN