



Colac Otway  
SHIRE

**AGENDA**

MEETING OF SPECIAL COUNCIL  
OF THE  
COLAC-OTWAY SHIRE  
COUNCIL

19 SEPTEMBER 2012

at 1:00 PM

COPACC Meeting Rooms, Colac

An audio recording of this meeting is being made for the purpose of verifying the accuracy of the minutes of the meeting. In some circumstances the recording may be disclosed, such as where Council is compelled to do so by court order, warrant, subpoena or by any other law, such as the Freedom of Information Act 1982.

# COLAC-OTWAY SHIRE SPECIAL COUNCIL MEETING

19 SEPTEMBER 2012

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NOTICE is hereby given that the next MEETING OF SPECIAL COUNCIL MEETING OF THE COLAC-OTWAY SHIRE COUNCIL will be held in COPACC Meeting Rooms, Colac on 19 September 2012 at 1.00 pm.

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## **AGENDA**

### **1. OPENING PRAYER**

*Almighty God, we seek your blessing and guidance in our deliberations on behalf of the people of the Colac Otway Shire. Enable this Council's decisions to be those that contribute to the true welfare and betterment of our community.*  
*AMEN*

### **2. PRESENT**

### **3. APOLOGIES**

### **4. MAYORAL STATEMENT**

Colac Otway Shire acknowledges the original custodians and law makers of this land, their elders past and present and welcomes any descendents here today.

Colac Otway Shire encourages community input and participation in Council decisions. Council meetings provide an opportunity for the community to ask Council questions, either verbally at the meeting or in writing.

Questions asked today must relate to the Special Council Meeting Agenda.

Please note that Council may not be able to answer some questions at the meeting. These will be answered later.

Council meetings enable Councillors to debate matters prior to decisions being made. I ask that we all behave in a courteous manner.

An audio recording of this meeting is being made for the purpose of ensuring the minutes of the meeting are accurate. In some circumstances the recording may be disclosed, such as where Council is compelled to do so by court order, warrant, subpoena or by any other law, such as the Freedom of Information Act 1982. It is an offence to make an unauthorised recording of the meeting.

Thank you. Now 30 minutes is allowed for question time. Please remember, you must ask a question. If you do not ask a question you will be asked to sit down and the next person will be invited to ask a question. This is not a forum for public debate or statements.

1. Questions received in writing prior to the meeting (subject to attendance and time),
2. Questions from the floor.

**5. QUESTION TIME**

**6. DECLARATION OF INTEREST**

**OFFICERS' REPORTS**

**Chief Executive Officer**

SC121909-1      DEFINED BENEFIT SUPERANNUATION LIABILITY

**Corporate and Community Services**

SC121909-2      CERTIFICATION OF 2011/2012 FINANCIAL STATEMENTS

**Infrastructure and Services**

SC121909-3      WYE RIVER AND SEPARATION CREEK WASTE SERVICES

**Sustainable Planning and Development**

SC121909-4      ADOPTION OF PLANNING SCHEME AMENDMENT C65 (PART 1)

SC121909-5      COLAC OTWAY FIRE MANAGEMENT PLAN

SC121909-6      NEIGHBOURHOOD SAFER PLACES - TASKFORCE 23 –  
RECOMMENDATION REPORTS

**Rob Small**  
**Chief Executive Officer**



**SC121909-1****DEFINED BENEFIT SUPERANNUATION LIABILITY**

AUTHOR:	Rob Small	ENDORSED:	Rob Small
DEPARTMENT:	Executive	FILE REF:	CLF11/8

**Purpose**

The purpose of this report is to inform Council of its obligations under the Defined Benefits Superannuation Scheme and to update Council on the actions of various Councils and professional bodies in response to the latest call from the Vision Super Trustees.

**Declaration of Interests**

No officer declared an interest under the *Local Government Act 1989* in the preparation of this report.

**Background****The difference between accumulation benefit and plans**

The majority of Australian super schemes are accumulation plans. In accumulation plans the member's retirement benefit is based on the amount of contributions made to their account, plus investment earnings less fees and tax. Unless an industrial or contractual agreement provides otherwise, employers generally only pay compulsory Superannuation Guarantee contributions for their employees (currently 9% of salary). The member receives no undertaking or guarantee as to the level of retirement benefit he or she will receive. The member bears all of the investment risk.

Unlike accumulation plans, the lump sum retirement benefit for a defined benefit member is based on a formula that takes into account years of membership, a benefit multiple and salary at retirement. The application of this formula results in a defined benefit member's retirement benefit being defined in advance. In defined benefit plans, the sponsoring employers bear all of the investment risk.

Known as the LASF Defined Benefits Scheme, members who commenced prior to 25 May 1988 have an on-going right to choose to take up to half of their lump sum benefit as a pension. The pension is payable for life, indexed to CPI. On the death of a pensioner, their surviving spouse is generally entitled to a reduced (two-thirds) pension.

The defined benefit super scheme was closed to any new entrants with the repeal of the *Local Authorities Superannuation Act (LAS Act)* in 1998.

On 30 June 1998, the State Government repealed the LAS Act. From 1 July 1998 LASF became a "regulated fund" under Commonwealth legislation; the *Superannuation Industry (Supervision) Act 1993*. Under the Act, actuarial investigations are required at least every 3 years. Since 1998 the following factors contributed to fluctuations in the financial position of the Plan:

- Closed, defined benefit plans become more volatile over time. No new members join the plan and the salary base on which contributions are based declines as working members progressively retire.
- As membership drops, so plans become more susceptible to changes in salary growth, inflation, investment returns and membership demographics.

- The lack of surplus from the years prior to becoming a regulated fund means there were no reserves to draw upon when the Plan suffered adverse experience.

Fluctuations in the financial condition of closed defined benefit plans are common. They explain the volatility in the condition of the LASF Defined Benefit Plan that has occurred.

- In 2002 there was an unfunded liability of \$127 million; largely caused by a downturn in share markets following the collapse of internet companies (the “dot.com bubble”) and the terrorist attacks in the USA.
- By 2005 the Plan had a (small) \$23 million surplus.

Assessing the financial position of a defined benefit plan involves the actuary making a comparison between the assets of the fund and the estimate of the total liabilities for present and past members, including pensioners. Establishing the appropriate funding level involves the actuary making assumptions about various economic, financial and demographic factors over the life of the current membership. The assumptions include:

- The rate of inflation
- The rate of salary increases amongst defined benefit members
- The return on investments
- Pensioner mortality rates
- The incidence of:
  - Resignations
  - Retirements
  - Death and disability claims.

Since the closure of the scheme to new members, there have been three calls on Councils with respect to the ability of the fund to service the obligations of its then current and future superannuants. These calls have resulted from various actuarial assessments.

Council borrowed funds to pay off \$863,000 levied in 2004, paid directly for a call of \$580,316 in 2011 and now faces a call on 1 July 2013 of \$3,181,869.

The attached letter dated 31 July 2012 refers to the call and indicates the value of our call that is composed of the following elements:

Council's share of the shortfall:	\$2,740,588
Contributions tax (if paid on or before 1 July 2013)	<u>\$ 477,280</u>
<b>Total call:</b>	<b>\$3,181,869</b>

### **Council Plan / Other Strategies / Policy Leadership and Governance**

Council will fulfil its leadership, statutory and legal obligations to its community and staff in a way that is: fair, ethical, inclusive, sustainable, financially responsible and meets the needs and practical aspirations of current and future generations.

### **Issues / Options**

This matter has been discussed in forums including G21, Great South Coast, Local Government Professionals (LGPro) CEOs Forum, Municipal Association of Victoria and Local Governance Association.

It is clear that this most recent call may not be the last.



Glenelg Shire has asked for our support (and that of other Councils) in taking part in a central effort to pursue the exemption to the scheme contributions and facilitate a legal fund to seek legal advice on behalf of contributing Councils.

I have indicated that Colac Otway Shire supports this approach. The LGPro CEOs' Group endorsed this approach at its recent meeting.

Moyne Shire has taken a more direct approach by moving a motion at its 23 August 2012 meeting to the effect that:

"The Council writes to the Trustees of Vision Super requesting to immediately withdraw from the Defined Benefits Scheme"

This resolution was a response to the Vision Super's Chief Executive Officer indicating that a Council has a right to withdraw from the fund subject to:

- i. The subject Council having no unfunded liabilities
- ii. Consent of the Trustee.

It seems unlikely that the second condition would be met without a significant financial settlement. We will await the outcome of Moyne's application with interest.

### **Proposal**

That Council supports the centralised approach to challenging the call with particular emphasis on:

- Supporting an independent legal opinion organised by Glenelg Shire and LGPro
- Support the Local Government Group in seeking a waiving of the contributions tax, in our case, of \$477,280.

### **Financial and Other Resource Implications**

The potential of this fund to provide unanticipated calls in the future can be mitigated by the establishment of a reserve against such a call as we did a few years ago. Minor expenditure on legal fees or contributing to joint initiatives are not seen as significant.

### **Risk Management & Compliance Issues**

Council is currently obliged to respond to the call by 1 July 2013.

### **Environmental and Climate Change Considerations**

Nil

### **Community Engagement**

The community engagement strategy follows the recommendations of the Colac Otway Shire Council Community Engagement Policy of January 2010, which details five levels of engagement – inform, consult, involve, collaborate and empower.

The method selected would be inform.

### **Implementation**

If Council adopts this recommendation, the CEO will write to the Glenelg Shire and LGPro confirming Colac Otway Shire's support for their efforts in seeking legal advice and a waiving of the superannuation contributions tax.

**Conclusion**

Council does not have the financial resources available to meet these unanticipated superannuation calls into the future. It would be financially irresponsible of this Council if it did not attempt to mitigate the risk of further superannuation calls. Therefore Council should express its support for the efforts of Glenelg Shire and LGPro in reducing the financial impact of this and future calls.

**Attachments**

1. Letter from Vision Super
2. Vision Super Information Pack 2012

**Recommendation(s)*****That Council:***

1. ***Receives this report on Defined Benefits Superannuation Liability.***
2. ***Notes the actions by other Councils and instructs the CEO to take whatever measures are reasonable to minimise the impost of this call on Council's Defined Benefit Superannuation liability.***

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## SC121909-2

## CERTIFICATION OF 2011/2012 FINANCIAL STATEMENTS

|             |                                |           |              |
|-------------|--------------------------------|-----------|--------------|
| AUTHOR:     | Brett Exelby                   | ENDORSED: | Colin Hayman |
| DEPARTMENT: | Corporate & Community Services | FILE REF: | 11/96311     |

**Purpose**

To propose that Council gives in-principle approval to the Financial Statements, Standard Statements and Performance Statement for the year ended 30 June 2012 and authorise two Councillors to certify them.

**Declaration of Interests**

No officer declared an interest under the *Local Government Act 1989* in the preparation of this report.

**Background**Annual Report

Section 131(7) and (8) of the *Local Government Act 1989*;

“(7) *The Council must not submit the standard statements or the financial statements to its auditor or the Minister unless it has passed a resolution giving its approval in principle to the standard statements and the financial statements.*

(8) *The Council must authorise 2 Councillors to certify the standard statements and the financial statements in their final form after any changes recommended or agreed to by the auditor have been made.”*

Performance Statement

Section 132(6) of the *Local Government Act 1989*;

“(6) *The Council must not submit the statement to its auditor or the Minister unless the Council has passed a resolution giving its approval in-principle to the statement.*

(7) *The Council must authorise 2 Councillors to approve the statement in its final form after any changes recommended or agreed to by the auditor have been made.”*

Council’s Audit Committee considered the Draft 2011/2012 Financial Statements, 2011/2012 Standard Statements and 2011/2012 Performance Statements for review and feedback at their meeting held on 4 September 2012.

The recommendation from the Audit Committee was to recommend to Council that the amended 2011/2012 Financial Statements, the Standard Statements and the Performance Statement be adopted.

The recommendation to the Audit Committee also included that Councillors Stephen Hart and Stuart Hart sign the statements on Council’s behalf.

**Council Plan / Other Strategies / Policy****Leadership and Governance**

Council will fulfil its leadership, statutory and legal obligations to its community and staff in a way that is: fair, ethical, inclusive, sustainable, financially responsible and meets the needs and practical aspirations of current and future generations.

**Issues / Options**

As the Statements are still subject to review and amendment by the Auditor-General's office, any amendments will be incorporated into the final statements.

**Proposal**

The Statements were reviewed by Council's Auditors during their visit in the week ending 17 August 2012 and subsequent visit on 24 August 2012 and were reviewed by the Audit Committee on 4 September 2012.

A copy of the Statements has been provided to Councillors.

It is recommended that Council certify the Statements 'In-Principle'.

**Financial and Other Resource Implications**

The Statements need to be certified by Council to ensure the Financial Statements are forwarded to the Minister by the statutory deadline of 30 September 2012 as part of Council's Annual Report.

**Risk Management & Compliance Issues**

Details of the relevant sections of the *Local Government Act* are included under the background to this report.

**Environmental and Climate Change Considerations**

Not applicable

**Community Engagement**

Not applicable

**Implementation**

Prior to the 30 September 2012 deadline for completion and signing of the Statements.

**Conclusion**

It is recommended that Council certify the Statements 'In-Principle'.

**Attachments**

Nil

**Recommendation(s)*****That Council:***

- 1. Adopts the 2011/2012 Financial Statements 'In-Principle' in accordance with Section 131(7) Local Government Act 1989.***
- 2. Adopts the 2011/2012 Standard Statements 'In-Principle' in accordance with Section 131(7) Local Government Act 1989.***
- 3. Adopts the 2011/2012 Performance Statement 'In-Principle' in accordance with Section 132(6) Local Government Act 1989.***
- 4. Pursuant to Section 131(8) and Section 132(7) of the Local Government Act 1989, Council authorises Councillors Stephen Hart and Stuart Hart to certify the 2011/2012 Statements in their final form after any changes recommended or agreed to, by the auditors, have been made.***

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**SC121909-3****WYE RIVER AND SEPARATION CREEK WASTE SERVICES**

|             |                           |           |            |
|-------------|---------------------------|-----------|------------|
| AUTHOR:     | Ranjani Jha               | ENDORSED: | Neil Allen |
| DEPARTMENT: | Infrastructure & Services | FILE REF: | 11/96300   |

**Purpose**

The purpose of this report is to advise Council of the Wye River and Separation Creek Waste Collection issues including the risks involved, risk mitigation measures and seek approval on a way forward.

**Declaration of Interests**

No officer declared an interest under the *Local Government Act 1989* in the preparation of this report.

**Background**

Following complaints about bins left out in Wye River and Separation Creek, Council undertook a detailed investigation, to address the ongoing problems associated with the kerbside waste collection services at Wye River and Separation Creek.

A study was undertaken utilising the services of Gilbert Consulting Pty Ltd in June 2012. The initial purpose of this study was to focus on problems faced due to bins being left out for prolonged periods after the kerbside collection. However, the investigation carried out by Gilbert Consulting in conjunction with the Council officers and local members of the Progress Association revealed further problems. These were associated with route safety, condition of roads, lack of turning circles at the end of streets, and problems posed by parking of vehicles on garbage collection routes.

As a part of Council's Community Engagement Policy, Council wrote to all residents of Wye River and Separation Creek on 4 June 2012 advising them of the problems being faced and seeking feedback towards rectification measures by 20 June 2012. At that time our thinking was that we may need to move to a corral system with a skip. Council staff also carried out on-site inspections and identified the roads with extreme risk and high risk levels. The matter was discussed by Council's senior management and a Council Briefing Session was held on 27 June 2012 advising Council of the potential risks and potential solutions. All the responses received from Wye River and Separation Creek community were compiled and comments analysed. From the responses received it became evident that the majority of the community did not support the skip proposal outlined in the letter. Some of the key responses received by the Council from the residents are as mentioned below:

- Concern with location of skips and likely visual impact.
- Need to explore the possibility of using a smaller truck for waste collection.
- Health issues associated with the skip option.
- Problem of illegal dumping associated with the skip option.
- Any restriction could only be imposed on the roads with extreme risk.
- Difficulties likely to be faced by elderly/people with disability in the event of implementation of the skip option.
- Need for better parking arrangements and control.
- Separation Creek has limited problems and should continue as usual.
- Need for implementation of green waste collection services.

Considering the extensive nature of responses received, Council considered it appropriate to undertake further risk assessment of the waste collection routes utilising an independent consultant. Accordingly GHD Consultants were appointed in July 2012 to undertake an independent study for determining the level and type of risks associated with each waste collection route and to provide a report to Council by 31 July 2012.

The GHD review was undertaken in a timely manner and a report provided to the Council on 31 July 2012. The GHD route assessment has comprised of an inspection of each section of road used for garbage collection services by two (2) qualified auditors with experience in road auditing and asset management roles. GHD classified the risks identified in four (4) categories being:

- Intolerable
- High
- Medium
- Low

The following approach was suggested by GHD in their report in regards to treatment of hazards:

- Intolerable Risk – must be corrected before garbage collection services can continue. Alternative waste collection options should be explored.
- High Risk - should be corrected or the risk significantly reduced, even if the treatment cost is high, before garbage collection services can continue.
- Medium Risk – should be corrected or the risk significantly reduced if the treatment cost is moderate but not high. Garbage collection services can continue.
- Low Risk – garbage collection services can continue without alteration to current arrangements.

At the same time, Council organised a public meeting at Wye River on Sunday 19 August to gain a better understanding of the community's views and to outline the problem.

Following that meeting, Council sought nominations from the community of Wye River and Separation Creek for the formation of a Consultative Group with the primary responsibility of providing comments and feedback to the Council throughout the review process. After seeking nominations from interested people, the following members of the community were appointed as members of the Consultative Group:

- Rex Brown
- Sherryl Smith
- Dr Mark Stokes
- John Harris
- Andrew Pattison
- Peter Jacobs
- Yvonne Sheppard
- Jany McPhee
- Peter Mitchell

Council representatives

- Cr Stephen Hart
- Cr Frank Buchanan
- Rob Small, Chief Executive Officer
- Neil Allen, General Manager Infrastructure & Services
- Ranjani Jha, Manager Major Contracts



Copies of GHD *“Wye River & Separation Creek Garbage Collection Safety Review”* were provided to each member of the Consultative Group and comments sought by Wednesday 15 August 2012.

The GHD report was analysed in great detail by the Waste Consultative Group and in response to the GHD report the Consultative Group committee provided their own report reflecting their viewpoint. The report utilised the expertise of a resident with extensive experience in the area of road safety and risk assessments. In general the Consultative Group disagreed with the risk assessment rating of many of the roads as indicated in the GHD report. Many of the roads identified as “high risk” in the GHD report were considered as “medium risk” by the Consultative Group members.

Considering the roads as medium risk as opposed to high risk as proposed by GHD was based on the fact that there was minimal accident/crash history and a high risk rating could not be justified. Further discussion was held between the Consultative Group members and GHD regarding the review of some of the high risk rated roads.

The Council officers have also discussed this matter with GHD and have been advised that for the “high risk” rated roads, Council should decide if they should continue with the kerbside collection services. In the case of “intolerable risk” rated roads the recommendation is that the kerbside collection must cease with immediate effect and alternative collection options put in place. In the “high risk” rated roads the recommendation is that the risk mitigation measures “should be” put in place. Options that are adopted, including risk mitigation measures, will depend on the level of risk that Council assesses as acceptable in order to provide the community with continued kerbside collection services.

In their response to the GHD report the Consultative Group have also indicated that they do not support the extent of the installation of safety barriers on of “high risk” rated roads. The Consultative Group feels that an “hybrid option” comprising of the use of a smaller truck with better turning movements, provision of turning circles at the end of certain roads where feasible and provision of temporary corrals in some of the streets where reversing of trucks is not possible, is the best possible solution for continuation of kerbside collection services in the two towns.

A workshop with the Consultative Group held on 19 August 2012 at the Wye River Surf Club revealed that the community representatives are in support of the hybrid option as compared to the other options recommended earlier.

A subsequent community meeting was held on Sunday 26 August to check these outcomes and to receive the consultative committee’s report.

### **Council Plan / Other Strategies / Policy Leadership and Governance**

Council will fulfil its leadership, statutory and legal obligations to its community and staff in a way that is: fair, ethical, inclusive, sustainable, and financially responsible and meets the needs and practical aspirations of current and future generations.

Council has an obligation to ensure a safe work environment in accordance to Occupational Health and Safety Act 2004 and safe work guidelines. Due to the identification of the safety hazards, Council must put in place alternative arrangements without further delay ensuring the safety of waste contractors, Council staff and the general public safety.

### **Issues / Options**

In the Consultative Group meeting held on Sunday 19 August 2012, the following feasible options were proposed:

- **No service by Council** – this option would mean that the annual waste charge would not be charged and the residents will arrange for their own waste collection using the private waste contractors located in Apollo Bay and Lorne. There was not much response received in support of this option due to lack of contractors, remoteness and uncertainties involved.
- **Cease kerbside collection and provide permanent corrals with Council bins for waste drop-off** – it was strongly indicated that the community is not in support of permanent corrals. The request is for the continuation of kerbside collection services and any corrals that are provided should be on an interim basis to overcome the immediate problems with the aim to remove all corrals in the future and revert back to normal kerbside collection services.
- **Drop Off facility similar to Gellibrand, Beech Forest, Lavers Hill** – this option is based on the provision of a waste collection truck coming to a given location at a set time that can be used by the community for the disposal of waste by paying a set fee. The benefit of this option would be that if less waste is generated by certain members of the community, then they will have to pay less fee than those who generate more waste. Not much support was shown for this option as this will result in residents carrying their waste to the location where the truck will be parked.
- **Hybrid system** – this option will rely on ceasing the kerbside collection services in the intolerable risk routes and carrying out of risk mitigation works on certain high risk routes which have been identified by the waste management department such as provision of a turning facility at the end of certain routes, provision of temporary corrals where a turning circle is not possible, use of small truck in order to minimise the turning difficulties and issues faced with parked vehicles and reversing problems. Earlier discussions with Wheelie Waste, Council's waste collection contractor, have indicated that use of a specially manufactured truck with shortened length and better turning ability will alleviate most of the risks identified in the risk assessment study. It is expected that with the provision of turning circles, temporary corrals and use of a smaller truck most of the risks will be alleviated excepting for a couple of streets, such as Sturt Court where the problem will still be faced in reversing the truck as there is no room at the end of the road for construction of a turning area.

After a detailed analysis, brainstorming and discussion with the Consultative Group and the community, it appeared that the hybrid option is the best outcome in the given circumstances and Council should pursue the implementation of the hybrid option.

It was also resolved at the final public meeting that a series of local street meetings should be held where difficult situations existed.

### **Proposal**

The following actions are proposed for continuation of kerbside collection services in Wye River and Separation Creek taking into account the various studies, reports, risk assessment analyses and community feedback:

- Council investigate options for the use of a smaller custom built kerbside waste collection truck to minimise risk by allowing the truck to turn safely and eliminate long reversing routes.
  - a. *Action – Council negotiate with the current Waste Collection Contractor to supply a custom built waste collection vehicle capable of executing turning capabilities similar to a large passenger vehicle.*

- Council immediately cease the kerbside collection services in Morley Avenue/ Slashers Bypass section which has been rated as intolerable risk due to hilly terrain, unstable ground conditions and poor condition of the road, as advised in the GHD report after consultation with residents regarding their alternative options. The road that is being used currently by the garbage truck movement is not a public road and is located on private land. Prior to ceasing the kerbside collection in this section of road, it will be important to provide alternative waste disposal and advise the residents. An inspection held on 29 August 2012 by the waste management staff indicated that the following solution exists:
  - a. *Action – immediately cease the kerbside collection services in Morley Avenue/ Slashers Bypass section after consultation with residents to inform them of alternatives.*
  - b. *Action - Morley Avenue upper end – a corral of a temporary nature can be constructed next to the signage indicating McRae Road towards the seaside of the road. While options are explored. This will allow the waste collection truck to reverse at this location and collect the bins from this corral.*
  - c. *Action - Morley Avenue Lower end – corral of a permanent nature constructed on the vacant land at the start of Morley Avenue just off the Great Ocean Road. This will allow the waste collection truck to collect the bins from this corral.*
  - d. *Action - McRae Road top end – in consultation with the members of the Consultative Group, it has been ascertained that a potential turnaround area exists near to 15 McRae Road.*
    - *Ascertained from the waste contractor, that the location next to or near 15 McRae Road may be suitable for turning of the waste truck in a safe manner.*
    - *Construct a temporary corral midway on McRae Road to allow waste to be brought this corral facility.*
    - *Undertake resheeting works under the Maintenance Program to rectify the deep erosion problem that exists in the unsealed section of this road, being a public road.*
  - e. *Action - McRae Road bottom end (Service Road) – cease reversing truck (95m and 5 properties) and require residents to take bins to intersection of McRae and Morley Rd.*

All of the above actions are subject to local street meetings or some form of information to the individual land owners.

The advantage of having two (2) temporary corrals for Slashers Bypass (one at the top end and one at the bottom end) will be that residents will have a choice to carry their waste to any of these two corrals depending on their convenience.

The other high risk issues that were identified by the Waste Management Department from an operational point of view are:

- Sturt Court – Due to lack of turnaround area at the end of street no easy solution exists. There is a strong request from the Consultative Group for consideration for a manual collection of waste in hard plastic bags using a utility vehicle. The decision of

manual collection is not the preferred option. Discussions held with the contractor indicate that the contractor will not be supportive of manual collection due to hygiene and the manual handling safety issues. In the case of Sturt Court the problem is magnified due to the fact that there is no place at the top or bottom end of the street for the construction of a temporary corral.

- a. *Action - Collection in Sturt Court cease and a corral at the top of Sturt Court should be trialled, while the matter is further investigated.*
- Dunoon Road – an onsite inspection has revealed that a T-shaped concrete apron was constructed in the past, however, it is too narrow for safe reversing of the garbage truck. The turning problem will be eased with widening of this concrete area by approximately 1-2m. About four residents joined the on-site inspection with the Council officers and were supportive of the idea of widening of concrete apron as a temporary measure thereby alleviating the safety risks of Dunoon Road.
  - a. *Action – The turnaround be widened and the matter be further investigated with respect to suitability of a smaller truck and widening of a private driveway.*
- Sarsfield Street – The gate at the end of Sarsfield Street which opens on to a public reserve has been closed, restricting access to the waste truck. The resident has been assured that Council is happy to provide an improved turning area by spreading crushed rock and necessary stormwater drainage works and that this will be maintained by Council in the future.
  - a. *Action – A turnaround area in the reserve be constructed at the end of Sarsfield St subject to DSE approval and the gates remain open or be removed.*
- Bass Avenue – currently the waste truck does not go to Bass Avenue but it has been suggested that we explore the possibility of provision of a small corral at the base of Bass Avenue for the storage of waste bins. The Waste Management department intends to hold further discussions with the residents of Bass Avenue in this regard.
  - a. *Action – Make a corral at the location where the existing kerbside bins are brought.*

Therefore the proposal is that Council cease the kerbside collection services in Morley Avenue Slashers Bypass section, immediately following local street community consultation, due to its classification as an intolerable risk route and undertake other actions as identified as a matter of priority. As a second priority Council should focus on routes where operational problems are being faced due to long distance reversing of the waste truck as mentioned above.

The Consultative Group has also raised the view that better quality road building material should be used together with necessary stormwater drainage works to increase the life-span of the roads.

Once the immediate priorities are implemented, Council can focus on the medium and long term risk mitigation works which are highlighted in the GHD report and mentioned below:

**Table 9 – Cost estimates (Table 9 of GHD Report 5 September 2012)**

| Location   | Treatment                  | Cost             |
|--|----------------------------|------------------|
| <b>Separation Creek</b>                              |                            |                  |
| Sarsfield Street                                     | Turning area               | \$6,200          |
| Mitchell Grove                                       | Turning area               | \$3,500          |
|  | Safety barrier (W-beam)    | \$11,125         |
| Olive Street   | Safety barrier (W-beam)    | \$27,000         |
|  | Parking signs              | \$4,125          |
| <b>Wye River</b>                                     |                            |                  |
| McLellan Court                                       | Parking signs              | \$1,800          |
| The Bluff  | Parking signs              | \$2,250          |
| Riverside Drive                                      | Seal road (bitumen)        | \$94,000         |
|  | Safety barrier (W-beam)    | \$26,450         |
|  | Seal road (gravel)         | \$63,400         |
| Karringal Drive                                      | Safety barrier (W-beam)    | \$45,375         |
| Dunoon Road  | Turning area               | \$4,375          |
| Wallace Avenue                                       | Turning area               | \$4,375          |
| Sturt Court  | Turning area (if possible) | Unknown          |
| Morley Avenue (unsealed section)                     | Seal road (bitumen)        | \$134,500        |
|  | Safety barrier (W-beam)    | \$34,500         |
|  | Seal road (gravel)         | \$93,150         |
| <b>Total using bitumen pavements where specified</b> |                            | <b>\$399,575</b> |
| <b>Total using gravel pavements where specified</b>  |                            | <b>\$327,625</b> |

**Table 10 – Prioritization of treatments (Table 10 of GHD Report 5 September 2012)**

| Priority | Location                                     | Treatment                         | Initial Risk | Residual Risk | Cost      |
|----------|--|-----------------------------------|--------------|---------------|-----------|
| 1        | Morley Avenue (unsealed section – Wye River) | Bitumen surface<br>Safety Barrier | Intolerable  | Medium        | \$169,000 |
| 2        | Mitchell Grove – Separation Creek            | Turning area<br>Safety barrier    | High         | Medium        | \$14,625  |
| 3        | Dunoon Road – Wye River                      | Turning area<br>Safety barrier    | High         | Medium        | \$4,375   |
| 4        | Olive Street – Separation Creek              | Safety barrier<br>Parking signs   | High         | Medium        | \$31,125  |
| 5        | Karringal Drive – Wye River                  | Safety barrier                    | High         | Medium        | \$45,375  |
| 6        | Riverside Drive – Wye River                  | Bitumen surface<br>Safety barrier | High         | Medium        | \$120,450 |
| 7        | McLellan Court – Wye River                   | Parking signs                     | Low          | Low           | \$1,800   |
| 8        | The Bluff – Wye River                        | Parking signs                     | Low          | Low           | \$2,250   |
| 9        | Wallace Avenue – Wye River                   | Turning area                      | Low          | Low           | \$4,375   |
| 10       | Sarsfield Street – Separation Street         | Turning area                      | Low          | Low           | \$6,200   |

- a. *Action – The GHD recommended actions be referred to the Council's Capital Works Program for prioritisation.*

### **Financial and Other Resource Implications**

Due to various types of works to be carried out and ongoing discussion with the community it is not possible to provide an accurate cost estimate at this stage, or undertake all the works identified at this point in time.

The short term risk mitigation works incorporating works such as construction of corrals, turning circles and road re-sheeting works may require an amount of up to \$100,000. The expenditure incurred on implementing the short term actions will need to be managed through the current Infrastructure and Asset Management operational budgets (2012/13) and monitored in future Budget Reviews. This may require that some works be deferred to ensure that the overall budget is managed within the approved levels of expenditure. Where possible, identified savings within the Infrastructure and Asset Management operational budgets will be used to balance the expenditure.

The long term works will need to be integrated into Council's Asset Management Plan and considered in future budget discussions. The long term works will therefore need to be referred to Council's long term Capital Works Budget for prioritisation in accordance with the Council's available budget.

Any variation of the current waste contract to supply a custom built truck can be funded from the operating budget.

### **Risk Management & Compliance Issues**

Council has undertaken extensive works for analysing the safety risk associated with Wye River & Separation Creek waste collection services. In addition to the preliminary report provided by Gilbert Consulting Pty Ltd, an independent route safety analysis/review was undertaken by GHD Pty Ltd and wide consultation undertaken with the local community.

The GHD report was analysed in greater detail by the Wye River & Separation Creek Consultative Group members. Some of the group members are highly qualified with expertise in risk mitigation and safety aspects and their feedback has been very valuable to the Council. Council has to work in the best interest of the community taking into account factors such as continuity of the waste collection services to the community whilst at the same time working within the resources available to the Council for carrying out of the risk mitigation works. Therefore, it is suggested that Council acts promptly to address the intolerable risk issues associated with Morley Avenue/Slashers Bypass to start with. This should be followed with addressing of the operational difficulties being faced due to lack of a turning facility at the end of certain roads.

Whilst in most of these roads, a turning facility can be constructed there are couple of roads where there is no space for construction of a turning facility and/or provision of a corral. In such instances the Consultative Group has asked for Council's consideration for provision of manual collection services as utilised in Mt Hotham using a hard plastic bag for waste disposal and collection by a small utility. Officers are not supportive of manual collection and perceive this as a backward step with increased risk to staff involved and the public. Given that Council has some liability under the contract if unsafe work practices are directed, this option should not be pursued.

Once the immediate and short term actions are undertaken, Council should consider the medium and long term risk mitigation works by integrating the works proposed in the GHD report (partly reproduced above) into Council's Asset Management Program and future Capital Works Program. These projects should be prioritised in conjunction with other priorities throughout the Council area and referred to future budget discussions in the order of priority.

A parking review is also currently underway through the Infrastructure Department for fulfilling communities parking needs and minimising disruptions to the waste collection truck due to illegal and undesirable parking.

Council has an obligation to ensure a safe work environment in accordance with *Occupational Health and Safety Act 2004* and safe work guidelines for Council and contractor staff and the general public.

### **Environmental and Climate Change Considerations**

Environmentally it is important to maintain a viable waste collection service in Wye River and Separation Creek. The two (2) areas face peak tourist flows during the summer months and it is important that the waste collection service is streamlined for the benefit of the tourists and local residents taking into account the associated issues such as parking control, off-street parking, provision of corrals and parking control measures.

A good waste collection service for Wye River and Separation Creek will be vital for the increased recycling of waste, to improve the landfill diversion rate and prevent illegal dumping in the very sensitive natural environment.

### **Community Engagement**

The community engagement strategy follows the recommendations of the Colac Otway Shire Council Community Engagement Policy of January 2010, which details five levels of engagement – inform, consult, involve, collaborate and empower.

Current methodology has been to consult and inform. Council looks forward to working with the community to ensure that most the identified risks are dealt with and that a safe kerbside collection service can be provided for the benefit of the local residents.

As explained above Council has acted promptly in addressing the identified risks associated with waste collection services and the following process was followed:

- Provision of risk assessment report by GHD to the Consultative Group.
- Allowing two (2) weeks for seeking comments to the risk assessment report.
- Meeting with Consultative Group on 19 August 2012.
- Council Briefing Session on 22 August 2012.
- Public meeting on 8 July and 26 August 2012.
- On-site inspection of risk issues and exploring practical options.

### **Implementation**

The implementation of risk mitigation measures should be based on the philosophy that the “intolerable risks” are dealt with as the immediate priority followed with addressing the operational risks posed due to the lack of turning facilities in certain roads. This should be followed with addressing the high risk issues identified in the GHD report by integrating them into Council’s Capital Works Program in the order of overall Council priority from a risk perspective.

From the discussions held with local community, management staff, operational staff and the waste collection contractor, it appears that the introduction of hybrid option utilising a smaller truck, provision of turning circles where possible, provision of a small corrals on the problematic roads where turning circles cannot be constructed and ongoing community education will achieve the desired outcome and reduce Council’s risk liability to a manageable level.

It is also important that prior to ceasing the kerbside collection services in “intolerable risk rated roads”, alternative arrangements be put in place by provision of temporary corrals at acceptable locations as discussed above and residents be notified.

Another request made by the Consultative Group is for Council's consideration towards manual pickup (instead of temporary corrals) in those streets where the waste pickup will be ceased, such as Slashers Bypass, Sturt Court and McRae Road service lane.

The manual collection is not recommended by management due to hygiene issues and risks associated with manual handling of waste.

### **Conclusion**

The initial study undertaken by Gilbert Consulting Pty Ltd identifying the issues associated with bin retrieval problem led to identification of a number of risks associated with waste collection Services in Wye River and Separation Creek.

The initial proposal by management for ceasing the kerbside collection and its replacement with provision of skips/drop off facility at central locations was not supported by the community in general. The community is united and determined to continue with the normal kerbside collection services and wants Council to undertake necessary work for this to continue. Council has been proactive in appointing an independent road safety auditor, being GHD Pty Ltd for undertaking a waste collection route assessment.

The risk assessment was undertaken promptly by GHD and a report provided on 31 July 2012. The GHD report categorised the risks in four (4) broad classifications, being Intolerable Risk, High Risk, Medium Risk and Low Risk. It was indicated by GHD that in the intolerable risk rated routes the kerbside collection should be immediately ceased to reduce Council's risk liability whereas in the high risk rated routes, Council needs to make a decision as to if the collection could continue under caution and with certain risk mitigation works.

The GHD report was provided to the Wye River and Separation Creek Consultative Group members who analysed the report in great detail and provided their own response to the various issues. Whereas the Consultative Group appreciated the GHD risk assessment report, they did not support the risk rating outcomes, in particular many of the roads that were rated as high risk were considered as medium risk by the Consultative Group based on the argument that there has been limited crash, injury history. Although Council needs to take on board the Wye River and Separation Creek Consultative Group report, Council needs to adopt the GHD report in determining risk measures as this report has a higher level of risk management.

The various workshops and consultative group meetings held with the Consultative Group and the general community led to the conclusion that the hybrid option is best suited to address the safety issues relying on use of a smaller truck with a better turning facility, creation of turning areas in those roads where possible and ceasing the waste collection services from those roads which have been rated as intolerable risk.

The community is supportive of the provision of small temporary corrals at the end of problematic roads and does not support to the same extent, the provision of large corrals at a central location.

It is recommended from an operational and safety point of view, that the waste collection truck does not go to those streets where the turnaround area is not present and there is a need for long reversing of the truck, unless further investigations demonstrate that this can be safely accommodated. These roads are Sturt Court, McRae Road service lane and Slashers Bypass. These recommendations are largely supported by the opinions expressed at the final public meeting.



**Attachments**

1. Gilbert Consulting Report
2. Landowners Report 15 August 2012
3. GHD Garbage Collection Safety Review 5 Sept 2012

**Recommendation(s)*****That Council:***

1. ***Adopts the GHD Report "Colac Otway Shire Council – Garbage Collection Safety Review for Wye River and Separation Creek – 5 September 2012" and undertake the following;***
  - a. ***Develop an implementation plan in conjunction with short term, medium term and long term priorities to undertake works identified in the report.***
  - b. ***Refers the works recommended in the GHD report to Councils Capital Works Program for consideration on a priority basis.***
  - c. ***Continue to review, kerbside collection in high risk areas, as identified in the GHD report.***
2. ***Negotiates with the current Waste Contractor to introduce a smaller custom built collection truck as soon as practicable to minimise risks.***
3. ***Ceases immediately the kerbside collection in Morley Avenue Slashers Bypass section, being rated as "Intolerable Risk" and undertake the following;***
  - a. ***At Morley Avenue Top end - adjoining the entrance to Bird Track construct a corral to allow the waste collection truck to reverse at this location to collect the bins.***
  - b. ***At the junction of McRae Road and Slashers Bypass construct a turnaround area.***
  - c. ***At Morley Avenue lower end – construct a corral on the road reserve (vacant land) just off the Great Ocean Road. This will allow the waste collection truck to collect the bins from this corral.***
4. ***Commences resheeting works under the Maintenance Program at McRae Road top end to rectify the deep erosion problem that exists in the unsealed section of this road, being a public road. In addition Council will need to;***
  - a. ***Ascertain from the waste contractor, that the location next to or near 15 McRae Road will be suitable for turning of the waste truck in a safe manner.***
  - b. ***Construct a corral midway on McRae Road allowing bringing of waste to this corral facility.***
5. ***Trials a corral at McRae Road bottom end (Service Road), at the junction of Morley Avenue and McRae Road in the median strip, in order for the residents of the McRae Service Lane to bring their bins to the pickup area. After the provision of this corral, the truck ceases to enter into the McRae Service Lane***

*in order to avoid the long reversing that is currently required.*

6. *Ceases kerbside waste collection in Sturt Court immediately due to safety concerns and the lack of a turning facility at the end of Sturt Court and undertakes the following;*
  - a. *Not agree to the request for manual collection due to OH&S and hygiene issues and the risks associated with manual handling.*
  - b. *Construction of a small corral at the top of Sturt Court and advise residents that they can also use the corral at the start of Morley Avenue.*
  - c. *Continue to pursue options with residents in relation to construction of safe turning facilities at the end of the street.*
7. *Widens an existing concrete turnaround area at the end of Dunoon Road.*
8. *Constructs a turnaround area at the end of Sarsfield Street (Crown Reserve) to enable safe turning of the waste collection truck. Council to ensure the gates are to remain open or be removed. Council to facilitate discussions with DSE and accept the responsibility for the construction and future maintenance costs of the turnaround area.*
9. *Constructs a defined bin placement area/small corral at the base of Bass Avenue in Separation Creek in order to organise bins which are deposited in this area for collection by the waste collection truck.*
10. *Continues to work with members of the Community Consultative Group, Council officers and waste collection contractor for ongoing implementation of the preferred hybrid option. This will include focussing on localised solutions, and proposing alternative arrangements where short term solutions are not feasible.*
11. *Advises residents in writing where kerbside collection will no longer occur that they need to take their waste/recycling to a corral, prior to removing the service.*
12. *Reverts to normal kerbside collections on those roads where it is being temporarily ceased after the risk implementations measures are satisfactory resolved.*

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**SC121909-4                      ADOPTION OF PLANNING SCHEME AMENDMENT C65  
(PART 1)**

|             |                                    |           |            |
|-------------|------------------------------------|-----------|------------|
| AUTHOR:     | Don Lewis                          | ENDORSED: | Jack Green |
| DEPARTMENT: | Sustainable Planning & Development | FILE REF: | F11/3115   |

**Purpose**

Amendment C65 (Part 1) removes the Design and Development Overlay 7 (DDO7) from land bound by Cawood Street, Great Ocean Road, Murray Street and McLachlan Street in Apollo Bay and replaces it with Schedule 6 to the Design and Development Overlay (DDO6). The purpose of this report is for Council to consider recommendations from the independent Panel appointed to hear submissions, and an officer recommendation for adoption of the amendment.

**Declaration of Interests**

No officer declared an interest under the *Local Government Act 1989* in the preparation of this report.

**Background**

Council resolved to seek Ministerial Authorisation to prepare and exhibit Amendment C65 on 26 October 2011. Ministerial authorisation (AO2154) was granted on 17 January 2012 which was later amended by the Minister on 20 February 2012 to apply a new control to 494-498 Princes Highway Colac. Amendment C65 was exhibited for 6 weeks between 22 February 2012 and 4 April 2012 and received 6 submissions.

Two of the submissions objected to the Design and Development Overlay (DDO) changes proposed for Apollo Bay in the precinct bounded by Cawood Street, Great Ocean Road, Murray Street and McLachlan Street. The submitters raised concerns regarding the density of future developments.

The balance of the amendment did not receive submissions, and officers recommended to Council that the amendment be split to allow that part of the amendment which was uncontested to be adopted (known as C65 Part 2) and forwarded to the Minister without it being held back for consideration of the submissions relating to the DDO (Part 1).

In relation to the DDO changes, Council officers considered that the precinct proposed to be included in the DDO6 instead of the DDO7 currently displays patterns of medium density development and that there was no purpose served by further constraining infill development as achieved in the DDO7 given the significant change in character that has already occurred. There was therefore no change recommended to the amendment arising from the submissions process.

On 23 May 2012 Council resolved to:

- Split Amendment C65 into two parts as follows:
  - Part 1 - land bound by Cawood Street, MacLachlan Street, Murray Street and the Great Ocean Road, Apollo Bay; and
  - Part 2 – balance of the amendment.

- Request the Minister for Planning to appoint an independent planning panel to hear submissions in regard to Amendment C65 (Part 1).
  - Adopt Amendment C65 (Part 2) and request the Minister for Planning to approve Part 2.
- Amendment C65 (Part 2) was approved by the Minister for Planning and came into effect when it was published in the Victorian Government Gazette on 9 August 2012.

### **Council Plan / Other Strategies / Policy**

#### **Land Use and Development**

Council will engage, plan and make decisions about land use and development that takes into account the regulatory role of Council, its diverse geography, social, community, economic and environmental impacts for current and future generations.

In making the proposed changes the amendment supports the action in this section to: *“Regularly update and improve the Colac Otway Planning Scheme through Planning Scheme amendments”*.

The proposed amendment also implements items for review identified in the *Colac Otway Planning Scheme Review Report* (October 2010).

#### **Issues / Options**

An independent panel was appointed by the Minister for Planning to consider the two submissions to Amendment C65 (Part 1). The panel considered submissions to the amendment through an ‘on the papers’ process as the two objectors did not wish to be heard at a public hearing. The subsequent Panel Report, attached to this report, was released on 14 August 2012.

The Panel Report recommends that Amendment C65 (Part 1) be adopted as exhibited. The Panel accepts the Council’s conclusion that much of subject area is already developed with medium density housing and that the DDO6 is a more appropriate control for the area.

In relation to submitter concerns for properties fronting the Great Ocean Road, the Panel concluded that the design requirements of the DD06, along with the neighbourhood character, setback and other requirements of Clauses 54 and 55 of the Planning Scheme (ResCode), provide a satisfactory level of control for these lots.

#### **Proposal**

It is proposed that Council, having considered the recommendations of the Planning Panel, adopts Amendment C65 (Part 1) as exhibited and requests its approval from the Minister for Planning.

#### **Financial and Other Resource Implications**

The assessment of Amendment C65 including the independent panel process has been undertaken in accordance with the operational budget for Strategic Planning.

#### **Risk Management & Compliance Issues**

There are no risk management issues arising from Amendment C65 (Part 1).

#### **Environmental and Climate Change Considerations**

There are no environmental or climate change considerations associated with this amendment.

**Community Engagement**

The community engagement strategy followed the recommendations of the Colac Otway Shire Council Community Engagement Policy of January 2010, which details five levels of engagement – inform, consult, involve, collaborate and empower.

The method selected for Amendment C65 has been consult. The amendment has been placed on exhibition and submissions sought from the community. The two objectors were given the further opportunity to have their issues heard and considered by an independent planning panel.

**Implementation**

Following approval of Amendment C65 (Part 1) by the Minister it will be formally integrated into the Colac Otway Planning Scheme.

**Conclusion**

An independent panel, appointed by the Minister for Planning to consider the two submissions has recommended that Amendment C65 (Part 1) be adopted as exhibited. It is now proposed that Council, having considered the recommendations of the Planning Panel, adopts Amendment C65 (Part 1) as exhibited and requests approval from the Minister for Planning.

**Attachments**

1. C65 Panel Report
2. C65 Part 1 Amendment Documentation

**Recommendation(s)**

***That Council adopts Amendment C65 (Part 1) as exhibited and forwards the amendment to the Planning Minister for approval.***

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**SC121909-5****COLAC OTWAY FIRE MANAGEMENT PLAN**

|             |                                    |           |            |
|-------------|------------------------------------|-----------|------------|
| AUTHOR:     | Mark Gunning                       | ENDORSED: | Jack Green |
| DEPARTMENT: | Sustainable Planning & Development | FILE REF: | F11/2382   |

**Purpose**

The purpose of this report is to request that Council adopt the Colac Otway Fire Management Plan.

**Declaration of Interests**

No officer declared an interest under the *Local Government Act 1989* in the preparation of this report.

**Background**

Council has previously received briefings on Integrated Fire Management Planning and the Colac Otway Fire Management Plan. The introduction of Integrated Fire Management Planning has advanced, and superseded, the previous Municipal Fire Prevention function of Council. With the change, Municipal Fire Management Plans are now required to be adopted by Councils and endorsed prior to the end of October 2012.

The attached Colac Otway Fire Management Plan (the Plan) will ensure Council meets its statutory obligations under Section 20 of the Emergency Management Act 1986 (Vic) and Section 55A of the Country Fire Authority Act 1958 (Vic). The Plan was submitted to Council on 13 June 2012 requesting that it be released for a six week public comment period. Council approved the request and accordingly the Plan was released for Public Comment on 5 July 2012. The public comment period closed on 16 August 2012. A number of comments were received and discussed by the Municipal Fire Management Planning Committee (MFMP) and as a result the plan has been improved and enhanced from that feedback, those comments and recommendations adopted by Council's Emergency Management Planning Committee are also attached to this report.

**Council Plan / Other Strategies / Policy****Leadership and Governance**

Council will fulfill its leadership, statutory and legal obligations to its community and staff in a way that is: fair, ethical, inclusive, sustainable, financially responsible and meets the needs and practical aspirations of current and future generations.

The development of the Plan is consistent with priorities set out in the Council Plan including the Council Plan Strategy: "Meet our statutory obligations for community safety and emergency situations".

**Issues / Options**

Council is required to have a Municipal Fire Management Plan to meet our statutory obligations, and the deadline set by the Fire Services Commissioner is to have an adopted plan by October 2012.

The Plan has been subject to review by the Barwon South West Regional Strategic Fire Management Planning Committee, their comments and endorsement appear as attachments to this report.

There are only two options open to Council because of the need to fulfil its statutory responsibilities:

1. Send the Plan back to the MFMPD in order for further substantial work to be undertaken before it is re-submitted to Council for further consideration, resulting in the timelines not being met and exposure to Council;
2. Adoption of the Plan.

Although it is the responsibility of Council to adopt the Colac Otway Fire Management Plan, this is not a Plan that is owned by Council. The Plan is a shared plan with partner agencies as identified by the Emergency Management Act 1986 (Vic) and Emergency Management Manual Victoria. These agencies have endorsed the Plan at the Municipal Fire Management Planning Committee and the Municipal Emergency Management Planning Committee and recognised the considerable technical expertise involved in developing and refining the Plan.

### **Proposal**

That Council adopts the Colac Otway Fire Management Plan.

### **Financial and Other Resource Implications**

There are no significant financial impacts associated with implementing the proposal. The officer time required to implement the proposal can be catered for within existing resource allocations. Economic and social effects of emergencies potentially include loss of life, destruction of property, and dislocation of communities. The Plan is one component of a broader framework that enables us to strengthen our capacity to identify hazards, determine risks, undertake works and prepare for emergencies and disasters.

### **Risk Management & Compliance Issues**

Fire management contributes to community safety by reducing the impact of fire related events that can cause death, injury, loss of property and community disruption. The planning for, and the management of fires, is a shared responsibility involving many people and organisations in the community. It is not something done by one organisation or sector of the community, although some organisations have specialist roles in dealing with fires.

The Plan is a record of the commitment of all the participating organisations and groups to undertake and complete the tasks assigned to them under the plan, and to cooperate in the delivery of the Plan's objectives.

### **Environmental and Climate Change Considerations**

There are no significant environmental impacts associated with implementing the proposal. Electronic copies of the Plan will be circulated to staff unless hard copies are specifically requested in order to minimise the amount of paper used for the policy. Recycled paper will be used for all hard copies of the policy that are printed/published.

### **Community Engagement**

The community engagement strategy followed the recommendations of the Colac Otway Shire Council Community Engagement Policy of January 2010, which details five levels of engagement – inform, consult, involve, collaborate and empower.

The community engagement method selected was to collaborate with key stakeholders in the development of the Plan and then to inform and consult the general public. As previously stated the Plan was released for Public Comment in July and August 2012 closing on 16 August 2012. A number of comments were received and discussed by the Municipal Fire Management Planning Committee (MFMPD) and as a result the plan has been improved and enhanced from that feedback, those comments and recommendations



adopted by Council's Emergency Management Planning Committee are also attached to this report.

**Implementation**

If this proposal is supported the document will be signed by representatives from all the key agencies listed on page six of the Plan and a media release will be issued advising the public of the existence of and adoption of the Plan. Hard copies of the signed Plan will be made available to the general public via Council's customer service counters at Colac and Apollo Bay. A copy of the signed Plan will also be placed on Council's website for viewing by the general public.

The Plan will be implemented by all partner agencies, and Council once adopted in accordance with direction contained within the Plan and associated Works Plan. The Fire Services Commissioner has directed that Municipalities prepare implementation plans for treatments identified in the Plan once it is adopted and agencies will be required to provide progress reports to the MFMP. The Plan has a lifespan of three years but it will be reviewed annually and updated as required. At the end of three years a new Plan will be submitted to Council for adoption.

**Conclusion**

Council should adopt the Plan to meet its obligations under State law and its community obligations in accordance with the Council Plan 2009-2013. Once adopted Council will continue to work with partner agencies to implement and review the plan as required.

**Attachments**

1. MFMP Comments Received in Public Comment Period
2. RSFMPC Letter to Council re MFMP
3. Colac Otway Fire Management Plan - Copy for Council endorsement

**Recommendation(s)**

***That Council adopts the Colac Otway Fire Management Plan.***

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SC121909-6

## NEIGHBOURHOOD SAFER PLACES - TASKFORCE 23 - RECOMMENDATION REPORTS

|             |                                       |           |            |
|-------------|---------------------------------------|-----------|------------|
| AUTHOR:     | Wendie Fox                            | ENDORSED: | Jack Green |
| DEPARTMENT: | Sustainable Planning<br>& Development | FILE REF: | F11/2382   |

### Purpose

The purpose of this report is to seek Council's endorsement of the Recommendation Reports developed for the three potential Neighbourhood Safer Places (NSP) assessed as part of the Whole of Government review undertaken by Taskforce 23.

### Declaration of Interests

No officer declared an interest under the *Local Government Act 1989* in the preparation of this report.

### Background

NSPs are not community fire refuges or emergency relief centres. NSPs are **places of last resort** for people to go to during a bushfire when their primary bushfire plans have failed. NSPs are places of relative safety only. They do not guarantee the survival of those who assemble there. Furthermore, there may be serious risks to safety encountered in travelling and seeking access to NSPs during bushfire events.

Project Taskforce 23 was commissioned in August 2010 to inspect and evaluate potential sites for NSPs in 23 of the 52 high bushfire risk locations throughout Victoria where no NSP sites had been found that achieved compliance with CFA and municipal criteria.

Taskforce 23's brief was to understand the reasons for non-compliance and investigate potential options that may enable designation or provide appropriate alternative bushfire safety solutions for the communities involved. It was hoped that with the potential for additional funding to undertake modifications, NSP's could be established within more of the high risk towns. The initiative was a "Whole of Government" review, to support the review with legislative powers. CFA led the review for Government.

Upon completion of their work Taskforce 23 made recommendations to the State Government, supported by an Action Plan and indicative costing for establishing NSPs in some of the high risk towns. The sites within the Colac Otway Shire that were identified by Taskforce 23 as potential NSPs requiring further investigation were:

- Barwon Downs Common, Barwon Downs;
- Carlisle River Recreation Reserve, Carlisle River; and
- Old Mill Site at 35 Station Street, Forrest.

To assist Councils the Municipal Association Victoria (MAV) developed a staged process to guide the development of these potential NSPs. The four key steps in the MAV process are outlined below:

**Step 1: Conduct a Desktop Assessment** of the sites against the criteria in the Municipal Neighbourhood Safer Place Plan (MNSPP) and determine if the sites generally comply.

Step 1 has been completed for the identified sites at Barwon Downs, Forrest and Carlisle River. The assessment was undertaken by the members of the Municipal Fire Management Planning Committee. The assessments found that the sites at Barwon Downs, Forrest and Carlisle River generally complied with the criteria in the MNSPP based on the assumption that State Government funding would be made available to carry out the significant and costly activities that are necessary. This information was presented to Council and the Fire Services Commissioner.

In May 2011 a report was submitted to Council (OM112505-12) in relation to the work undertaken to complete Step 1 as outlined above. After consideration of the report Council resolved that it:

1. ***“Accepts the recommendation of the Municipal Fire Management Planning Committee as a sub-committee of the Municipal Emergency Management Planning Committee that the potential Neighbourhood Safer Places (NSP) sites at Barwon Downs, Forrest and Carlisle River generally complied with the criteria in the Municipal Neighbourhood Safer Places Plan.***
2. ***Accepts the recommendation of the Municipal Fire Management Planning Committee as a sub-committee of the Municipal Emergency Management Planning Committee that the potential NSP site at Wye River did not generally comply with the criteria in the Municipal Neighbourhood Safer Places Plan.***
3. ***Approves the drafting of a letter to the Fire Services Commissioner advising of the results of the desktop assessment as outlined in the above recommendations”***

**Step 2: Prepare an Implementation Plan** for the sites that generally comply. This plan identifies the costs involved in developing detailed works plans. Step 2 has been completed. Implementation Plans were developed for Carlisle River, Forrest and Barwon Downs and forwarded to the Fire Services Commissioner in 2011. The Implementation Plans were approved by the Fire Services Commissioner in October 2011, allowing Council to progress to Step 3.

**Step 3: Develop a Recommendation Report** for the sites that have approved Implementation Plans. Step 3 will be completed on endorsement of the attached reports. This step has involved developing Recommendation Reports which identify all activities including assessments, reports, permits, approvals, works and associated costs that will be required to establish each NSP and an indication of whether the NSP should be implemented. The Recommendation Reports for the three sites listed above are now being presented to Council for endorsement prior to being forwarded to the Fire Services Commissioner.

**Step 4: The Works Plan would be Implemented** if the Recommendation Reports had indicated that the NSP should be implemented and they were endorsed by Council and the Fire Services Commissioner. The individual work plans for each site have now been completed and indicate that the NSP's for the sites at Barwon Downs, Carlisle River and Forrest cannot be established within the capacity of the funds being offered by the State Government to undertake the works required.

### **Council Plan / Other Strategies / Policy Leadership and Governance**

Council will fulfill its leadership, statutory and legal obligations to its community and staff in a way that is: fair, ethical, inclusive, sustainable, financially responsible and meets the needs and practical aspirations of current and future generations.

These actions are consistent with priorities set out in the Council Plan including the Council Plan Strategy: "Meet our statutory obligations for community safety and emergency situations". This Council Plan Strategy is being partly addressed through the implementation of the Municipal Neighbourhood Safer Places Plan which was endorsed by Council in June 2010.

### **Issues / Options**

Council has undertaken extensive investigations in order to gain the information required to develop the attached Recommendation Reports for each potential Taskforce 23 NSP site. This work has involved engaging consultants to conduct research, carry out field assessments, and develop plans, reports and accurate costs for all identified works. To assist Council in achieving this, grant funding was made available by the State Government to undertake the work summarised below.

#### Vegetation Management Assessment and Works Report – All three NSP Sites

The Action Plan developed by Taskforce 23 identified a number of roadsides as access routes to NSPs that required vegetation modification works to be undertaken. To assist Council in identifying accurate costs and developing works plans for the three Recommendation Reports, Ecology Consultants Pty Ltd were engaged through Council's Tender process to prepare a Vegetation Management Assessment and Works Report, the objectives were as follows:

- Identify all hazardous trees on identified roadsides and adjoining private property and potential NSP sites that require removal or lopping;
- Provide clear instructional plans for the removal or lopping of identified hazardous trees and excess surface and elevated fuels;
- Provide clear and concise cost estimates (quotes) for the removal or lopping of hazardous trees and the removal of excess surface and elevated fuels;
- Provide all required detailed reports relating to flora and fauna assessments;
- Provide advice on recommended maintenance regimes for all vegetation modification works;
- Identify all permits and statutory approvals from relevant authorities required to be obtained to undertake identified vegetation modification works; and
- Provide clear and concise cost estimates (quotes) for the development of net gain/offsets, geotechnical and cultural heritage assessments as required.

Overall across the three study areas 158 trees were identified as requiring removal and 140 trees requiring lopping, 298 trees in total. The table below provides a general overview of each study area.

| Study Area     | Lopping    | Removal    | Total No. Trees |
|----------------|------------|------------|-----------------|
| Barwon Downs   | 19         | 12         | 31              |
| Forrest        | 24         | 31         | 55              |
| Carlisle River | 97         | 115        | 212             |
| <b>Totals</b>  | <b>140</b> | <b>158</b> | <b>298</b>      |

A comprehensive summary of the work undertaken and the results are provided in each of the attached Recommendation Reports. Additionally a complete copy of the Vegetation Management Assessment and Works Report prepared by Ecology Consultants Pty Ltd is available for viewing upon request.

#### Car Park Design and Layout Plans – All Study Areas

The Action Plan developed by Taskforce 23 and Councils MNSPP identifies a number of factors relating to car parking that must be assessed in relation to potential NSP sites. To assist Council in identifying accurate costs and work plans for the Recommendation Reports Hyder Consulting Pty Ltd were engaged through the Tenderlink process to prepare Car Park Design and Layout Plans for each potential NSP site. The objectives were as follows:

- Develop car park design and layout plans for each potential NSP site that considers community amenity, existing and future development and use of each site;
- Provide clear instructional plans for the construction of car parking at each of the three identified potential NSP sites;
- Provide clear and concise cost estimates (quotes) for the construction of each car park;
- Identify all permits and statutory approvals from relevant authorities required to be obtained to undertake the development and construction of each car park; and
- Identify recommended maintenance regime and associated indicative costs for each car park.

A comprehensive summary of the work undertaken and the results are provided in each of the attached Recommendation Reports, additionally a complete copy of the Car Park Design and Layout Plans prepared by Hyder Consulting Pty Ltd is available for viewing upon request.

#### Demolition and Land Reclamation – 35 Station Street Forrest

The Action Plan developed by Taskforce 23 identified that the existing building structures at the potential NSP site in Forrest would be required to be removed and landscaping undertaken. To assist Council in identifying accurate costs for the Recommendation Reports, Geelong Environmental Occupational Hygiene and Digga Excavations and Demolition Pty Ltd were engaged to provide a Division 6 Asbestos Audit and demolition and landscaping plan and cost estimate for the Recommendation Report. A comprehensive summary of the work undertaken and the results are provided in the attached Recommendation Report for Forrest.

#### Potential Soil Contamination Investigation – 35 Station Street Forrest

Potential soil contamination at the Forrest site was not considered in the Action Plan developed by Taskforce 23, however as the site has been previously used to store

hazardous chemicals and the treatment of timber, further investigation was identified as required by Council. To assist Council in identifying accurate costs in relation to potential soil contamination for the Recommendation Report GHD Pty Ltd were contracted to conduct an Independent third party review of existing soil contamination information for the site and to provide advice on what other steps may be required.

#### Land purchase/acquisition and valuation – 35 Station Street Forrest

Opteon Pty Ltd has been engaged to provide a valuation report to assist in determining land purchase costs for the Recommendation Report for 35 Station Street Forrest.

Research has also been undertaken to determine the process and costs involved in acquiring this land through compulsory acquisition legislation.

#### **Proposal**

That Council approves the attached Recommendation Reports for the three Taskforce 23 NSP sites and recommends that they be sent to the Fire Services Commissioner.

#### **Financial and Other Resource Implications**

There are significant financial implications associated with implementing NSPs at the three sites in Barwon Downs, Forrest and Carlisle River. These costs are largely associated with the works required to suitably modify the vegetation along the adjoining roads that provide access to each NSP.

At all of the proposed sites there would also be significant ongoing maintenance costs associated with managing them to a suitable standard if and when they were formally designated. The State Government has not given any indication of supporting Council with funds for the ongoing maintenance costs.

The tables below show indicative costs for each of the three sites based on the findings of the various reports commissioned by Council and other associated cost estimates (e.g. land purchase costs). The table also shows the indicative funding that the State Government has offered to assist in implementing each of the sites and the ongoing maintenance costs that would be associated with each site if an NSP were implemented. It should be noted that a more detailed breakdown for the costs for each site is shown in the attached Recommendation Reports.

#### **Barwon Downs**

| Item                                                            | Confirmed<br>Establishment Costs<br>(Ex GST) |
|-----------------------------------------------------------------|----------------------------------------------|
| Achieving Offsets – DSE BushBroker                              | \$67,830                                     |
| Vegetation Modification                                         | \$47,507                                     |
| Cultural Heritage                                               | \$36,770                                     |
| Flora and Fauna                                                 | \$9,181                                      |
| Signage                                                         | \$2,000                                      |
| Project Officer                                                 | \$9,517                                      |
| Car Park Construction                                           | \$155,953                                    |
| Permits                                                         | \$1,000                                      |
| <b>Total Cost :</b>                                             | <b>\$329,758</b>                             |
| <b><u>Establishment Funding Offered by State Government</u></b> | <b>\$94,701</b>                              |
| <b>Cost Gap</b>                                                 | <b>\$235,057</b>                             |

**Forrest**

| Item                                                            | Confirmed Establishment Costs (Ex GST) |
|-----------------------------------------------------------------|----------------------------------------|
| Achieving Offsets – DSE BushBrokerer                            | \$458,032                              |
| Vegetation Modification                                         | \$127,416                              |
| Cultural Heritage                                               | \$49,770                               |
| Flora and Fauna                                                 | \$9,909                                |
| Signage                                                         | \$2,000                                |
| Project Officer                                                 | \$40,484                               |
| Deconstruction & Landscaping                                    | \$99,000                               |
| Land Acquisition                                                | \$260,000                              |
| Soil Remediation – Contamination                                |                                        |
| Car Park Construction                                           | \$235,296                              |
| Permits                                                         | \$2,000                                |
| <b>Total Cost :</b>                                             | <b>\$1,283,908</b>                     |
| <b><u>Establishment Funding Offered by State Government</u></b> | <b>\$600,534</b>                       |
| <b>Cost Gap</b>                                                 | <b>\$683,374</b>                       |

**Carlisle River**

| Item                                                            | Confirmed Establishment Costs (Ex GST) |
|-----------------------------------------------------------------|----------------------------------------|
| Achieving Offsets – DSE BushBrokerer                            | \$1,790,909                            |
| Vegetation Modification                                         | \$527,416                              |
| Cultural Heritage                                               | \$51,400                               |
| Flora and Fauna                                                 | \$67,322                               |
| Signage                                                         | \$2,000                                |
| Project Officer                                                 | \$16,568                               |
| Car Park Construction                                           | \$186,497                              |
| Permits                                                         | \$2000                                 |
| <b>Total Cost :</b>                                             | <b>\$2,644,112</b>                     |
| <b><u>Establishment Funding Offered by State Government</u></b> | <b>\$718,668</b>                       |
| <b>Cost Gap</b>                                                 | <b>\$1,925,444</b>                     |

The three Recommendation Reports conclude that the potential NSP sites at Barwon Downs, Forrest and Carlisle River cannot proceed due to the significant disparity between the identified establishment costs and the funding available.

**Risk Management & Compliance Issues**

The Colac Otway region has a beautiful natural environment that attracts many people to the area. The same natural environment that attracts people also has a very high propensity for bushfire occurring, that endangers both life and property. Council has statutory responsibilities that it carries out in relation to fire prevention and emergency management that are aimed at helping the community manage the risk of bushfire in our municipality.

Council has worked hard to further strengthen relationships with the CFA and DSE in order to enable the recommendations from the Bushfire Royal Commission to be carried out as soon as possible. The inability to provide any NSPs which meet the assessment criteria in the extreme risk townships without substantial vegetation works clearly demonstrates the fire danger associated with the beautiful Colac Otway environment. While our community enjoys the amenity of this area there are downsides which people are exposed to as a result of living in close proximity to the Otway National Park and the grasslands that abound in this municipality.



Council is committed to its responsibilities in relation to fire prevention and emergency management within the Shire, but at the end of the day each member of the community is responsible for the safety and preservation of the lives of themselves and their families.

Council has introduced and implemented an extensive fire prevention program throughout the municipality, has worked closely with all agencies and increased its funding allocation and management capability in relation to emergency management and is working hard to meet responsibilities with regard to the recommendations of the Bushfire Royal Commission.

The major risk that Council cannot control is the response by members of the community to their responsibility to prepare a personal fire plan for themselves and their families. Council has undertaken an extensive and constant media program to ensure that the community is well aware of the dangers of fire and has been consistent in its messages in relation to the need for preparation of personal fire plans and that in high risk areas, particularly on Code Red days, residents should leave and leave early.

Council will continue to work with the community and all relevant responsible agencies in accordance with the processes set out by MAV and in accordance with the Municipal NSP Plan to ensure that all elements of Council's Risk and Compliance responsibilities continue to be fully addressed. By following these steps Council is indemnified with respect to the death or injury of persons in areas where no NSP is designated and conversely also in areas where a NSP may be designated in the future.

### **Environmental and Climate Change Considerations**

There are no significant environmental impacts associated with implementing the proposal. There would be significant environmental impacts if Council was to resolve to establish these NSPs at Barwon Downs, Forrest and Carlisle River as this would require modification of a significant amount of vegetation in surrounding areas. The full extent of these works is outlined in detail in the Vegetation Management Assessment and Works Report prepared by Ecology Consultants Pty Ltd which can be viewed as provided separate to this report.

### **Community Engagement**

The community engagement strategy followed the recommendations of the Colac Otway Shire Council Community Engagement Policy of January 2010, which details five levels of engagement – inform, consult, involve, collaborate and empower.

The community engagement method selected was to inform the general public and to empower key stakeholders in the decision making process.

In May 2012 community information sessions were held for the residents of Barwon Downs, Forrest and Carlisle River. The focus of these meetings was to provide residents with an overview of the background behind NSPs in general and the three Taskforce 23 NSPs that are currently the main focus for council. Residents were provided with information on the activities being undertaken at the time, in particular the Vegetation Management Assessment and Works Report contract. An aspect of this work, involved the physical marking of trees with spray paint and metal tags that were identified by an arborist as hazardous, requiring removal or lopping.

A key aim of the community information sessions and media releases was to assure residents that no trees would be removed without first consulting with the community and that the work being undertaken was investigative in nature and required in order for council to develop accurate costs for the Recommendation Reports.

At each of the meetings Council Officers committed to return to the communities once the Vegetation Management and Assessment Works Report was completed, so that residents could fully appreciate which trees and roadside vegetation would be removed/modified if the potential NSPs were to be established. In each community there were a number of residents that felt passionately about retaining all trees and vegetation and were not supportive of any change to their environment while others were more concerned about the fire safety risks.

Council returned to all three communities in late August 2012 and presented on the progress to date in developing the Recommendation Reports. A strong focus of the presentations was the work undertaken by Ecology Consultants through the Vegetation Management Assessment and Works Report Contract. Specific aspects of the report included an extensive series of maps that show:

- trees that have been identified as hazardous requiring removal;
- trees identified as requiring lopping;
- areas for broad scale surface and elevated vegetation modification required to meet the 10 kW/m<sup>2</sup> radiant heat as identified by Taskforce 23; and
- habitat zone and vegetation type within identified study areas.

Attendance at these meetings was good with an overall positive response to the rigour of the work undertaken and an appreciation that the costs associated with implementation were very substantial.

A media release specifically related to the information in this Council Report will be released immediately following Council resolving on this matter, advising that there are currently no NSPs in the extreme risk townships within the Colac Otway Shire but work is continuing on potential sites at Gellibrand and Apollo Bay.

The members of the Municipal Fire Management Planning Committee and the Municipal Emergency Management Planning Committee were empowered to make decisions as part of the process.

It is anticipated that there will be more community engagement carried out prior to the 2012-2013 fire season associated with ongoing investigations into NSPs.

### **Implementation**

If Council supports the recommendations in this Council report the attached recommendation reports will be sent to the Fire Services Commissioner.

A media release specifically related to the information in this Council Report will be released immediately following Council resolving on this matter, advising that there are currently no NSPs in the extreme risk townships within the Colac Otway Shire. Consideration will also be given to the development of a Community Newsletter for the communities of Barwon Downs, Forrest and Carlisle River to ensure that all residents are informed of the outcome and encouraged to begin planning for the up-coming Fire Danger Period.

### **Conclusion**

Although not currently having a NSP in any of the eight extreme risk townships may be seen as cause for concern by members of the community it is a reflection of the fact that these townships although beautiful are also highly prone to wildfire.

The three Recommendation Reports conclude that the potential NSP sites at Barwon Downs, Forrest and Carlisle River cannot proceed due to the significant disparity between the identified establishment costs and the amount of funding available.

Council will seek to have further conversations with the Fire Services Commissioner about whether additional resources are able to be sought and what alternative bushfire safety

solutions may be able to be explored in the extreme risk towns to assist in mitigating the bushfire risk.

It is worth highlighting that if any NSPs are designated in the future they are not community fire refuges or emergency relief centres. NSPs are places of last resort during the passage of a bushfire, and are intended to be used by persons whose primary bushfire plans have failed. NSPs are places of relative safety only. They do not guarantee the survival of those who assemble there. Furthermore, there may be serious risks to safety encountered in travelling and seeking access to NSPs during bushfire events. Depending on the direction of a particular fire, it may not be 'a safer place' to assemble than other places within the municipal district.

#### **Attachments**

1. Taskforce 23 Neighbourhood Safer Place - Recommendation Report - Forrest - September 2012
2. Taskforce 23 Neighbourhood Safer Place - Recommendation Report - Barwon Downs - September 2012
3. Taskforce 23 Neighbourhood Safer Place - Recommendation Report - Carlisle River - September 2012

#### **Recommendation(s)**

##### ***That Council:***

1. ***Endorses the Barwon Downs Neighbourhood Safer Place Recommendation Report that recommends not establishing a Neighbourhood Safer Place due to the large disparity between the actual identified costs and the indicative funding offered by State Government to establish this Neighbourhood Safer Place.***
2. ***Endorses the Forrest Neighbourhood Safer Place Recommendation Report that recommends not establishing a Neighbourhood Safer Place due to the large disparity between the actual identified costs and the indicative funding offered by State Government to establish this Neighbourhood Safer Place.***
3. ***Endorses the Carlisle River Neighbourhood Safer Place Recommendation Report that recommends not establishing a Neighbourhood Safer Place due to the large disparity between the actual identified costs and the indicative funding offered by State Government to establish this Neighbourhood Safer Place.***
4. ***Approves the drafting of a letter to the Fire Services Commissioner advising of Council's decision and attaching the three Recommendation Reports.***
5. ***Requests in the above letter an opportunity to seek further conversations with the Fire Services Commissioner as to what additional resources and/or alternative bushfire safety solutions may be able to be explored in these three towns to assist in mitigating the bushfire risk.***

~~~~~\~~~~~



## IN COMMITTEE

### Recommendation

***That pursuant to the provisions of Section 89(2) of the Local Government Act, the meeting be closed to the public and Council move "In-Committee" in order to deal with:***

| <b>SUBJECT</b>   | <b>REASON</b>                              | <b>SECTION OF ACT</b> |
|--|--|-----------------------|
| Waste Management Services Contract 0912 - Variation To Contract For Kerbside Collection                  | this matter deals with contractual matters | Section 89 (2) (d)    |
| Contract 1208 - Architectural Services - Bluewater Fitness Centre Redevelopment                          | this matter deals with contractual matters | Section 89 (2) (d)    |
| Contract Approval - Contract 1231 - Apollo Bay Library Extension   | this matter deals with contractual matters | Section 89 (2) (d)    |
| Contract Approval - Contract 1232 - Central Reserve Oval Redevelopment                                   | this matter deals with contractual matters | Section 89 (2) (d)    |
| Contract Approval - Contract 1235 - Design & Construct - Barham River Rd and Upper Gellibrand Rd Bridges | this matter deals with contractual matters | Section 89 (2) (d)    |
| Contract Approval - Contract 1236 - Design & Construct - Carlisle Vale Rd and Ganes Access Bridges       | this matter deals with contractual matters | Section 89 (2) (d)    |
| Contract Approval Contract 1237 - Bituminous Sealing Works   | this matter deals with contractual matters | Section 89 (2) (d)    |





# MEETING OF SPECIAL COUNCIL

## WEDNESDAY, 19 SEPTEMBER 2012

### ATTACHMENTS

PAGE NO.

#### CHIEF EXECUTIVE OFFICER

##### SC121909-1 Defined Benefit Superannuation Liability

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#### INFRASTRUCTURE AND SERVICES

##### SC121909-3 Wye River and Separation Creek Waste Services

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**SC121909-6      Neighbourhood Safer Places - Taskforce 23 -  
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Invoice #INV000192

\$3,181,869.09

AMT/RAB

31 July 2012

Mr Rob Small  
Chief Executive Officer  
Colac-Otway Shire Council  
PO Box 283  
COLAC VIC 3250

**VISION SUPER**  
YOUR INDUSTRY SUPER FUND

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Dear Rob

**LASF Defined Benefit Plan – 31 December 2011 Actuarial Investigation**

It was announced at the beginning of July 2012 that the latest actuarial investigation has resulted in an unfunded liability of \$453 million net of contributions tax. We are now writing to provide you with a comprehensive package of information, including details about your Authority's individual liability.

Your Authority's share of the \$453 million shortfall is \$2,704,588.73 plus contributions tax. The contributions tax is applied at the time the Fund receives payment. If your Authority's contribution is received in full on the due date (1 July 2013) the tax payable will be \$477,280.36.

Enclosed with this correspondence is:

- Your Authority's Unfunded Liability Account Tax Invoice (with explanatory notes);
- Your Authority's Contribution and Repayment Plan;
- LASF Defined Benefit Information Pack, incorporating:
  - Background Briefing Paper;
  - Investment Briefing Paper;
  - LASF Apportionment Methodology; and
  - Report from PricewaterhouseCoopers.

**31 December 2011 Actuarial Investigation**

The Local Authorities Superannuation Fund is a "regulated fund" under the provisions of the Superannuation Industry (Supervision) Act 1993 ("SIS"). In accordance with the SIS Act, actuarial investigations are required at intervals of not more than three years. The following is a summary of the 31 December 2011 investigation.

**Defined Benefit Membership**

Over the three years to 31 December 2011 the number of active members reduced from 6,212 to 4,971, with an average age of 54.1 years. The number of lifetime pensioners reduced from 5,556 to 5,132, with an average age of 79.1 years. (The Defined Benefit Plan has been closed to new members since 31 December 1993.)



Vision Super Pty Ltd ABN 50 082 924 561  
Australian Financial Services Licence 225054  
is the Trustee of Vision Super Fund ABN 79 327 289 195  
and the Local Authorities Superannuation Fund ABN 24 496 637 884

Mr Rob Small  
Colac-Otway Shire Council  
31 July 2012  
Page 2

#### **Financial Experience**

- The rate of return (net of tax and investment expenses) earned by the Defined Benefit Plan for the three year period covered by the actuarial investigation was 3.0% p.a. which was lower than the expected return of 8.5% p.a. in the 2008 actuarial investigation.
- The full time equivalent salary of Defined Benefit Plan members who remained members as at 31 December 2011 grew by 5.1% p.a. over the three year period. This was higher than the assumed salary growth of 4.25% p.a.
- Pension increases averaged 2.7% p.a. over the three years which was broadly in line with the assumed inflation rate of 2.75%.

Overall, the financial experience over the three years was unfavourable which has led to a deterioration of the plan's position.

#### **Adequacy of Funding**

The projected value of the actuarial shortfall at 1 July 2013 is \$453 million, net of tax.

As at 31 December 2011 the actuarial shortfall was \$406 million (excluding contributions tax). This means that the current value of assets plus expected future contributions is less than the value of expected future benefits and expenses by \$406 million, assuming that Authorities continue to contribute at 9.25% of salaries.

The major contributing factors to the increase in the actuarial shortfall were:

- Lower actual investment return over the period of the review (\$239 million);
- Lower expected future investment return over the life of the current membership from 8.5% p.a. to 7.5% p.a. (\$117 million); and
- Higher actual salary increases over the period of the review (\$36 million).

#### **Trustee's 2011 Funding Plan**

The Trustee has agreed the following funding plan to bring the LASF Defined Benefit Plan to a favourable financial position by the end of the 15 year period covered by the plan. Under the plan:

Active members will continue to pay 6% of salary;

Employers will continue to pay 9.25% of members' salaries; and,

- Make additional contributions to cover the excess of the benefits paid as a consequence of retrenchment above the funded resignation or retirement benefit (the funded resignation or retirement benefit is calculated as the VBI multiplied by the benefit), plus contributions tax (effective from 1 October 2012 – further details to be provided); and
- Make a top-up contribution of \$453 million (plus contributions tax) payable on 1 July 2013.

The Trustee recognises that future experience may be better or worse than expected. If experience is worse than expected then the Trustee is likely to require additional top-up contributions.

Mr Rob Small  
Colac-Otway Shire Council  
31 July 2012  
Page 3

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**Joint Vision Super/MAV representations**

The outcome of the joint Vision Super/MAV representations to APRA was very successful. Firstly APRA did not exercise its authority to insist on a five year funding plan. Secondly, APRA accepted our case that requiring the Trustee to call the higher Vested Benefit shortfall of \$579 million (plus contributions tax) would have had an even greater financial impact on Authorities.

**Additional Information**

A copy of the 31 December 2011 Actuarial Investigation, letters of advice regarding the treatment of the call for Workers Compensation and Payroll Tax purposes and the Product Guide to the LASF Defined Benefit Plan are available on our website.

You can access the webpage by typing in the following internet address:  
[www.visionsuper.com.au/login](http://www.visionsuper.com.au/login)

Username: DB Plan

Password: DBinfo

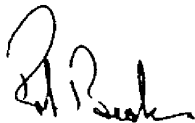
**Conclusion**

The global financial crisis and the on-going turmoil in the world's sovereign debt markets has negatively impacted defined benefit plans throughout the world. For mature, closed defined benefit plans such as the LASF plan, the impact is more pronounced because merely increasing the employer contribution rate on salaries is not a meaningful solution.

Finalisation of the actuarial review was a complex and protracted process and will undoubtedly have a significant financial impact on employers. The Trustee regrets having been put in this position but it must fully uphold its fiduciary duties and comply with all relevant laws. We believe that we have obtained a realistic and sensible outcome for Authorities in difficult circumstances.

Should you have any questions, please do not hesitate to contact me on (03) 9911 3188.

Yours sincerely



Rob Brooks  
Chief Executive Officer

Encls

### Frequently Asked Questions

#### What are the repayment options?

The unfunded liability may either be paid:

- By equal annual instalments over a 15-year period from 1 July 2013, or
- As a lump sum, or
- By any combination of the two.

Each Authority will determine how to pay the Unfunded Liability Account according to their particular circumstances.

#### Can payments be made before 1 July 2013?

Yes, total payment or partial payments can be made before 1 July 2013. If you wish to do this please email your request to [dbemployer@visionsuper.com.au](mailto:dbemployer@visionsuper.com.au) or contact Jim Repanis on (03) 9911 3111.

#### What interest rate is applicable to contributions?

An Authority may choose to pay the Account off periodically over (up to) 15 years. In this case interest will accrue at the rate of 7.5% per annum; the long-term target earning rate recommended by the Actuary.

If an Authority pays its account in full on 1 July 2013, no interest will be payable.

#### Will the interest rate vary?

No. The interest rate applicable to the 2013 Unfunded Liability Account is fixed at 7.5% p.a.

#### Is there any disadvantage in paying the Unfunded Liability Account early?

No. Once employers are invoiced by Vision Super, the Actuary is able to treat any outstanding amount of an Unfunded Liability Account as an asset. Employers that pay their account earlier are not subsidising those that pay later in any way.

#### How is the tax on contributions applied?

The Federal Government charges a tax on contributions made to a superannuation fund. The current tax rate is 15%. As with all taxes, there is the possibility that this rate could change in the future.

The 15% tax rate is applied to every contribution that an employer makes; so for every \$100 you pay to Vision Super \$15 is paid as contribution tax and the balance of \$85 is applied to your Unfunded Liability Account.

#### Are contributions assessable for Workers Compensation or Payroll Tax?

All authorities pay workers compensation premiums and some pay Payroll Tax. The Actuary has provided letters that advise what proportion of employer contributions are assessable. Copies of these letters are available on the dedicated defined benefit webpage (see details below).

#### Is the MAV making arrangements for employers to borrow to pay off their UFA?

Any questions on this should be directed to the MAV on 03 9667 5555.

#### Is any standard wording available for inclusion in financial statements?

Yes. Wording will be provided by the Victorian Auditor-General's Office (VAGO). This will either be provided to you directly by VAGO or through Vision Super.

#### Is additional information about the Defined Benefit Plan available?

Yes. There is comprehensive information about the Plan available on the dedicated defined benefit webpage. You can access the webpage by typing in the following internet address:

[www.visionsuper.com.au/login](http://www.visionsuper.com.au/login)

Username: DB Plan

Password: DBInfo

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**LOCAL AUTHORITIES SUPERANNUATION FUND  
DEFINED BENEFIT PLAN  
Information Pack 2012**

**Contents:**

1. Background Briefing
2. Investment Briefing
3. Apportionment Methodology
4. Report from PricewaterhouseCoopers

**Vision Super Pty Ltd**  
Trustee of the Local Authorities Superannuation Fund  
ABN: 50 082 924 561  
Australian Financial Services Licence No: 225054  
RSE Licence No: L0000239

Audit Committee 4 September 2012

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**LOCAL AUTHORITIES SUPERANNUATION FUND**

**DEFINED BENEFIT PLAN**

**Background Briefing**

**June 2012**

**Vision Super Pty Ltd**  
Trustee of the Local Authorities Superannuation Fund  
ABN: 50 082 924 561  
Australian Financial Services Licence No: 225054  
RSE Licence No: L0000239

Audit Committee 4 September 2012

### Introduction

This is a background briefing for Authorities who employ members of the LASF defined benefit plan and/or, previously employed any person who currently receives, (or their spouse currently receives), a lifetime pension under the LASF pension plan.

LASF was established by, and operated under Victorian legislation until 1998 when the Local Authorities Superannuation Act was repealed. At the time of its repeal, special legislation was enacted requiring all Authorities to maintain their contributory obligations to the Fund.

This Background Briefing outlines:

- The differences between accumulation, pension and defined benefit plans;
- The funding of the pension and defined benefit plans; and
- The methodology for apportioning any unfunded liability.

### The differences between accumulation, defined benefit and plans

The majority of Australian super schemes are accumulation plans. In accumulation plans the member's retirement benefit is based on the amount of contributions made to their account, plus investment earnings, less fees and tax. Unless an industrial or contractual agreement provides otherwise, employers generally only pay compulsory Superannuation Guarantee contributions for their employees (currently 9% of salary). The member receives no undertaking or guarantee as to the level of retirement benefit he or she will receive. The member bears all of the investment risk.

Unlike accumulation plans, the lump sum retirement benefit for a defined benefit member is based on a formula that takes into account years of membership, a benefit multiple and salary at retirement. The application of this formula results in a defined benefit member's retirement benefit being defined in advance. In defined benefit plans, the sponsoring employers bear all of the investment risk.

LASF Defined benefit members who commenced prior to 25 May 1988 have an on-going right to choose to take up to half of their lump sum benefit as a pension. The pension is payable for life, indexed to CPI. On death of a pensioner, their surviving spouse is generally entitled to a reduced (two-thirds) pension.

### Funding of LASF pension and defined benefit plan

Prior to the closure of the plan in 1993 the plan was funded as follows:

|                       |                  |
|-----------------------|------------------|
| Member Contribution   | 6% of salary     |
| Employer Contribution | 13.25% of salary |

The first actuarial investigation carried out after the legislated benefit improvements in 1989 showed an unfunded liability of \$410 million. The trustee at the time (LASB) developed and

implemented a plan to achieve full funding by 2007. This required an employer contribution rate equal to 13.25% of employees' salaries comprising 9.25% to meet ongoing liabilities plus a 4% surcharge to eliminate the unfunded liability. The 1992 actuarial review showed that the plan was working well as the unfunded liability had reduced to \$314 million.

In 1993 the State Government, concerned about growing unfunded liabilities in the State scheme for public servants, conducted a review of all public sector schemes, including LASF. As a result, all public sector funds other than two notable exceptions were closed to new members on 31 December 1993. The LASB defined benefit plan was closed even though it was not funded directly by the State and its unfunded liability was reducing.

From 1 January 1994 all new employees of local authorities joined a standard accumulation plan, LASPLAN (now known as Super Saver). As previously explained, accumulation plans do not provide members with the promise of future benefits based on years of service, so no issue of surplus or unfunded liability arises with Super Saver accounts.

The 1995 actuarial review showed that the unfunded liability had further decreased to \$217 million but, with the reduced salary base and no new members, the target for fully funding the liabilities had to be moved from 2007 to 2012. The alternative would have been to increase the employer contribution rate.

At the same time, the State Government was reforming local government by amalgamations and requiring external compulsory competitive tendering of traditional council services. These reforms lead to widespread redundancies in local government and had a major impact on LASF. By the time of the next actuarial review the unfunded liability had increased from \$217 million to \$321 million. The previous funding plan was no longer relevant and a new strategy for funding future benefits had become necessary.

In 1997 a special Working Party comprising local government and water industry representatives was convened to formulate an equitable basis for funding the defined benefit liabilities. The Working Party's recommendations were adopted by LASB and subsequently endorsed by the State government.

The new funding arrangements included:

- A lump sum contribution to pay the (then) \$321 million unfunded liability, apportioned between Authorities and payable over a maximum 10-year period. This replaced the 4% surcharge.
- The ongoing employer contribution rate to fund the benefits of existing members was reduced from 13.25% to 9.25%.
- A retrenchment increment to meet the costs of retrenchments. This was payable by each Authority depending upon their individual experience.

On 30 June 1998 the State Government repealed the LAS Act. From 1 July 1998 LASF became a "regulated fund" under Commonwealth legislation; the Superannuation Industry (Supervision) Act 1993. Under the Act, actuarial investigations are required at least every 3 years. Since 1998 the following factors contributed to fluctuations in the financial position of the Plan:

- Closed, defined benefit plans become more volatile over time. No new members join



the plan and the salary base on which contributions are based declines as working members progressively retire.

- As membership drops, so plans become more susceptible to changes in salary growth, inflation, investment returns and membership demographics.
- The lack of surplus from the years prior to becoming a regulated fund means there were no reserves to draw upon when the Plan suffered adverse experience.

Fluctuations in the financial condition of closed defined benefit plans are common. They explain the volatility in the condition of the LASF Defined Benefit Plan that has occurred.

- In 2002 there was an unfunded liability of \$127 million; largely caused by a downturn in share markets following the collapse of internet companies (the "dot.com bubble") and the terrorist attacks in the USA.
- By 2005 the Plan had a (small) \$23 million surplus.
- In December 2008, the Plan was again adequately funded. However, a downturn in the markets during the global financial crisis (between 31 December and the completion of the actuarial review) resulted in an "actuarial shortfall" of \$71 million.

The Trustee obtained regulator (APRA) approval to establish a 5-year funding plan, designed to bring the Plan back to a satisfactory financial position by 2013. The underlying intention of the 5-year funding plan was to buy time for authorities; in the expectation that markets would recover from the global financial crisis and that a call could be avoided. Unfortunately, more difficulties surfaced in the world's global markets and the expected recovery did not eventuate. As a result of this:

- In June 2010 the Actuary recommended that the \$71 million outstanding in 2008 be called.
- In December 2011 there was an unfunded liability of \$453 million. The size of the shortfall was largely attributable to two factors; depressed investment performance relative to salary growth coupled with changed assumptions about the expected future experience of the Plan.

Mindful of the potential financial impact on authorities, Vision Super was able to convince the regulator of the need for a longer term 15 year funding plan, rather than the normal regulatory requirement of a 5-year funding plan.

Vision Super is a complying, regulated, superannuation fund within the meaning of the Superannuation Industry (Supervision) Act 1993. One of the requirements of a complying superannuation fund with defined benefits is that the Trustee must carry out an actuarial investigation at least once every 3 years. The purpose of an actuarial investigation is to assess the financial position of the fund and to determine whether current funding arrangements are adequate.

Assessing the financial position of a defined benefit plan involves the actuary making a comparison between the assets of the fund and the estimate of the total liabilities for present and past members, including pensioners. Establishing the appropriate funding level involves the actuary making assumptions about various economic, financial and demographic factors over the life of the current membership. The assumptions include:

- The rate of inflation,
- The rate of salary increases amongst defined benefit members,
- The return on investments,
- Pensioner mortality rates,
- The incidence of:
  - Resignations
  - Retirements, and
  - Death and Disability claims.

The financial performance of the plan is thus dependent upon the performance of, and interrelationship between a complex set of financial, economic and demographic factors. Depending upon the actual experience of the plans relative to assumptions over each three-year period, the actuarial review will show the pension and defined benefit plans to be in either surplus or deficit.

Many of the factors impacting a defined benefit plan's performance are beyond a trustee's control. It is also important to understand that whether a plan is in surplus or deficit can depend upon whether the plan has been in surplus during a sustained period of growth in investment markets. Where this has occurred, plans have generally been able to build an investment surplus that allows the solvency of the plan to be maintained during periods of adverse performance. Given its past funding history, this luxury has not been available to Vision Super.

Furthermore, as a closed defined benefit plan in which the total membership salary base is decreasing, increasing the employer contribution rate during periods of adverse financial or demographic experience, does not normally provide the Trustee with an adequate funding solution. Recognising this problem in 1997, the State Government amended the LASF Act to give the Trustee the power to make lump sum funding calls. This power is included in the current Authority Agreement.

#### **Methodology for apportioning Unfunded Liabilities**

The methodology for apportioning pension and active member lump sum funding calls has been consistently applied since its origination in 1997 when LASF was under State legislation.

In summary, the methodology provides for two components:

##### *Pre-30 June 1993 Component:*

- Unfunded lifetime pension liabilities are apportioned to each Authority on the basis of their individual share of the Plan's total defined benefit salaries as at 30 June 1993;
- The unfunded liabilities for active members' pre-30 June 1993 membership is apportioned in the same way; and,

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*Post-30 June 1993 Component:*

- The unfunded liabilities for active members' post-30 June 1993 service is apportioned to each Authority on the basis of their individual share of the Plan's total defined benefit salaries at 31 December 2011 (the date of the actuarial investigation).

**Example:**

At 31 December 2011 there were 4,971 active members of the LASF Defined Benefit Plan. Their combined service period was split 25.15% prior to 30 June 1993 and 74.85% thereafter.

At 31 December 2011, the Plan's pension liability was \$359.9m, while the plan's active member liability was \$1,516.4m. Pension and active member liabilities totalled \$1,879.3m

Organisation A's share of the Plan's total defined benefit salaries at 30 June 1993 was 1%. By 31 December 2011, their share had fallen to 0.75%. Therefore:

|   | \$                     | Calculation description                                |
|---|------------------------|--|
| Organisation A's share of the pension unfunded liability  | \$ 868,809.72          | \$ 359.9m / \$1,876.3m * \$453.0m * 1.00%              |
| Organisation A's share of the active members' pre 30 June 1993 service                                | \$ 920,799.00          | \$1,516.4m / \$1,876.3m * \$453.0m * 1.00% * 25.15%    |
| Organisation A's share of the active members post 30 June 1993 service)                               | \$ 2,055,293.46        | \$1,516.4m / \$1,876.3m * \$453.0m * 0.75% * 74.85%    |
| <b>Organisation A's share of the plan's unfunded liability (excl cont tax) payable on 1 July 2013</b> | <b>\$ 3,844,902.18</b> |  |
| Contribution tax payable on 1 July 2013   | \$ 678,512.15          | 15% of total amount paid on 1 July 2013 being \$4,523m |
| <b>Organisation A's share of the plan's unfunded liability (incl cont tax) payable on 1 July 2013</b> | <b>\$ 4,523,414.33</b> |  |

**Conclusion**

The defined benefits plan and lifetime pensions are benefits that were afforded to staff of local authorities at a time when such benefits were common for Commonwealth, State and local government employees. While this is no longer the case, authorities are required to maintain their contributory obligations which existed when LASF was governed by the Local Authorities Superannuation Act.

This paper has hopefully given you an understanding of the complex history and issues involved.



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**DEFINED BENEFIT PLAN**

**Investment Briefing**

**June 2012**

**Vision Super Pty Ltd**

**Trustee of the Local Authorities Superannuation Fund**

ABN: 50 082 924 561

Australian Financial Services Licence No: 225054

RSE Licence No: L0000239

Audit Committee 4 September 2012

Local Authorities Superannuation Fund  
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## Introduction

As the Trustee of the Local Authorities Superannuation Fund (LASF) Defined Benefit Plan, one of Vision Super's roles is to invest the assets of the Plan. When an unfunded liability arises, it is appropriate for people to ask how the investments have been managed. This paper describes:

- our investment structure
- our investment objectives
- how we construct a portfolio
- how we have performed in relative terms
- how we have performed in absolute terms.

## Investment structure

As Trustee, the Vision Super Board is responsible for investment decisions and has a formal governance structure for managing investments. It has established an Investment Committee that makes recommendations to the Board.

Specialist consultants provide independent expert advice on legal, taxation, audit and compliance and investment issues. Frontier Investment Consulting provides advice on investment strategy, portfolio construction, selecting and monitoring investment managers. Sovereign Investment Research and JG Service provide specialist advice about private equity and property investment respectively.

The Vision Super investment team is responsible for implementing the Board's investment strategy, monitoring fund manager performance and reporting through to the Trustee on all investment matters.

All assets are held in the name of a custodian, NAB Asset Servicing, on behalf of the Trustee. The Custodian is responsible for settling trades instructed by investment managers, collecting investment income, accounting, taxation and compliance reporting. This provides security for the safekeeping of assets.

All money held in respect of Vision Super members, including Defined Benefit money, is invested in the Vision Pooled Superannuation Trust. While Defined Benefit assets were \$1.69 billion at 31 December 2011, they were invested in a pool of assets totalling \$5 billion. This provides greater economies of scale than would be available if the assets were managed independently.

Vision Super invests in a range of different asset classes; Australian and international equities, property, infrastructure, absolute return strategies, private equity, opportunistic property, fixed interest and cash. Separate investment pools are maintained for each asset class.

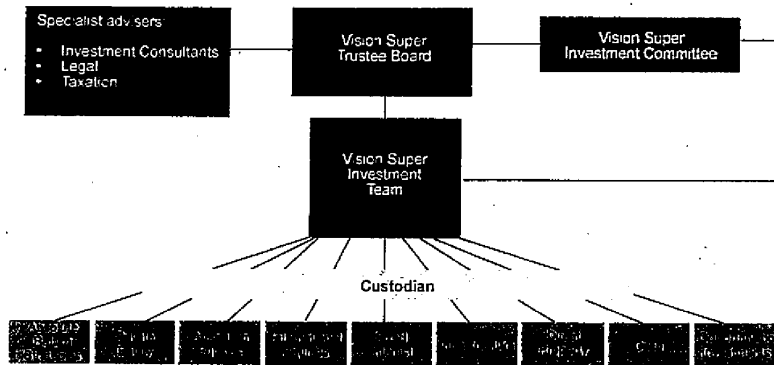
Specialist investment management companies are appointed to invest a proportion of assets in each pool. All assets are managed externally, with the exception of cash.

Both the Actuary and Frontier consult with the Board about the expected returns and liability profile of the Defined Benefit Plan. The assets of the Defined Benefit Plan are managed as a separate portfolio.

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 Defined Benefit Plan  
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**Vision Super Investment Structure**

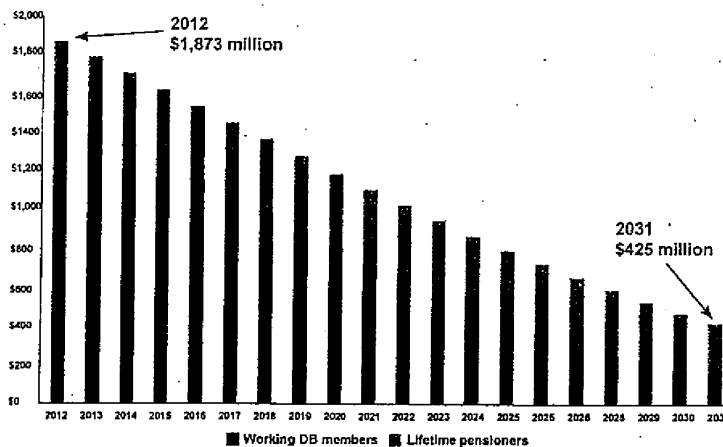


It is important to understand that Vision Super has a robust process for managing the assets of the Defined Benefit Plan.

**Investment objectives**

In a Defined Benefit fund, the assets are invested in a way that will provide the greatest likelihood that monies will be available to pay benefits to members and pensioners as they fall due. The following chart shows the amount expected to be required to pay benefits to members (in red) and pensioners (in green) in the years ahead.

Projection of Vested Benefits at 1 January (in today's dollars)



Source: Russell Investments

It is expected that \$1.87 billion is required now, and that this amount will progressively decrease as members retire and lifetime pensioners pass away. However, it is expected that in 20 years time \$425 million will still be needed.

The long-term liabilities of the Defined Benefits portfolio require Vision Super to adopt a longer-term investment strategy, while maintaining sufficient liquidity to pay benefits as they fall due.

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 Defined Benefit Plan  
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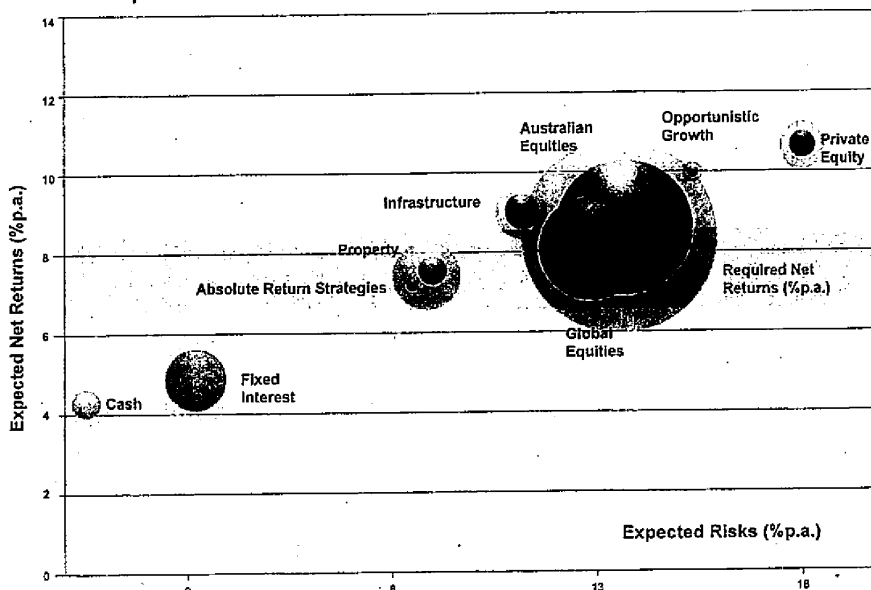
### How we construct the portfolio

Constructing the portfolio involves investing in a mix of asset classes that is expected to meet the long-term investment objectives of the Defined Benefit Plan. Investments are also spread across a range of asset classes for diversification. We do not 'put all our eggs in one basket'.

How we construct a portfolio is explained in the picture on the next page, where:

- The orange horizontal bar shows the required long-term return from the portfolio, in this case a return of between 6.5% and 8.5% a year. The required investment return from the portfolio is currently 7.5% p.a.
- Each ball represents a different asset class, the size of each ball represents how much is typically invested in that asset class.
- The colouring outside of each circle reflects its liquidity.
- The scale on the left of the chart shows the expected long-term return from each asset class.
- The scale on the bottom of the chart shows the expected volatility of the asset class i.e. how risky it is. The further to the right, the more volatile the asset class it is likely to be.

### Vision Super Defined Benefit Portfolio Mix



Source: Frontier Investment Consulting

This picture demonstrates that to achieve the required long-term return, it is:

- Not possible to invest only in cash or fixed interest; they do not return enough.
- Necessary to invest in both Australian and international equities (shares), even though they are more volatile, and
- Possible to reduce the risk of shares by investing in a range of other asset classes such as property, infrastructure and private equity.

**A long-term investment strategy requires investment in asset classes other than cash and fixed interest.**

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 Defined Benefit Plan  
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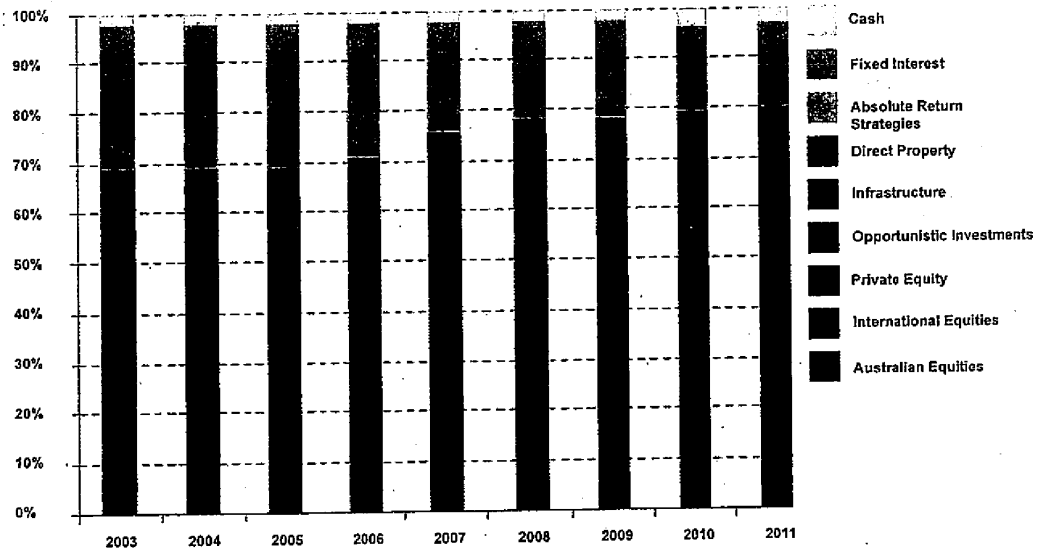
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Putting this long-term investment strategy into practice, the table below shows the current strategic asset allocation for the Defined Benefit portfolio.

| Vision Super 2012 Defined Benefit Portfolio Strategic Asset Allocation |                      |
|--|----------------------|
| Asset Class  | Asset Allocation (%) |
| Cash   | 5.5                  |
| Fixed Interest   | 10                   |
| Absolute Return Strategies   | 2                    |
| Direct Property  | 9                    |
| Infrastructure   | 13                   |
| International Equities   | 21                   |
| Australian Equities  | 26.5                 |
| Opportunistic Investments  | 5                    |
| Private Equity   | 8                    |
| <b>Total</b>   | <b>100</b>           |

The following picture shows how the mix of asset classes in the Defined Benefit portfolio has changed over time.

Vision Super Defined Benefit Portfolio Mix Over Time



Source: Frontier Investment Consulting

In 2005 it was decided to invest less in listed Australian and international equities and more in unlisted growth assets such as infrastructure, property and private equity. While the allocation to listed equities was lowered, they still make up a significant part of the portfolio because they are liquid; they can easily be traded on the stock market. This was expected to result in lower risk over time, while still achieving the required return.



Local Authorities Superannuation Fund  
 Defined Benefit Plan  
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### How we have performed in absolute terms

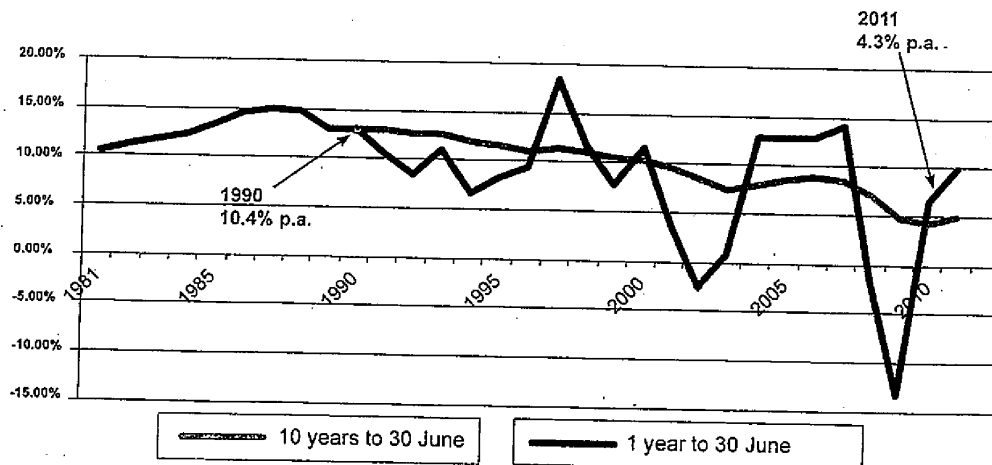
No individual investor can control either the world economy or global investment markets. When these go down every long-term investor is caught in the downturn. Vision Super has likewise been affected. The table below shows the returns of the Defined Benefit portfolio since 1981.

The green line represents rolling 10-year returns i.e. what the return of the portfolio has been over the previous 10 years at any particular point in time. The red line shows rolling 1-year returns i.e. the return of the portfolio over the previous 12 months at any point in time.

In June 1990 the Defined Benefit portfolio had returned 10.4% p.a. net of fees and tax over the previous 10 years (the green line). By June 2011 this had reduced to 4.3% p.a.

While this looks like a steady decline over 20 years, the red line shows the volatility of returns over that time. This demonstrates that investment returns have not only fallen since the global financial crisis, they have also become significantly more volatile.

Vision Super Defined Benefit portfolio Rolling returns to 30 June 2011



As a prudent long-term investor, Vision Super's Defined Benefit portfolio has been caught up in the global financial crisis and its aftermath.

Local Authorities Superannuation Fund  
 Defined Benefit Plan  
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## How we have performed in relative terms

### Have we done better or worse than other super funds?

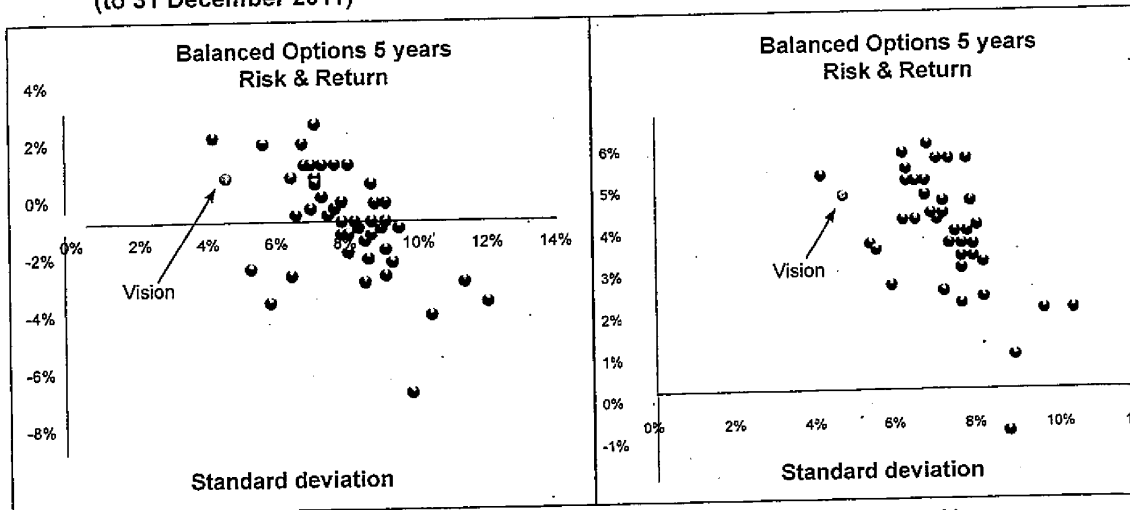
There is no survey of Defined Benefit portfolios. No two funds have the same mix of assets and liabilities, so the mix of assets in their portfolios will vary. Therefore we compare our performance against other super funds with a similar mix of assets.

Since 2005, the Defined Benefit portfolio has returned 4.5% p.a. This would have made it a top quartile performer i.e in the top 25% of super funds with a similar investment option (Source: SuperRatings Fund Crediting Rate Survey December 2011).

Using data from SuperRatings, Frontier has prepared the following "risk and return" charts, where:

- The scale on the left shows the actual return of each super fund's investment portfolio in the survey.
- The scale on the bottom shows the relative volatility of the asset class i.e. how volatile its returns have been. The further you are to the left, the lower your volatility has been.
- The green dot is the Vision Super Defined Benefit portfolio.
- The red dots are other super funds with a similar mix of assets.

### Performance of Vision Defined Benefit portfolio compared to similar balanced options (to 31 December 2011)



Source: SuperRatings Fund Crediting Rate Survey December 2011 & Frontier Investment Consulting

The position of the green dot shows that, over both the previous 5 and 7 years, the Vision Super Defined Benefit portfolio has performed above the average of its competitors with below average volatility.

Relative to competitors, we have performed well and the strategy of investing more in unlisted growth assets has reduced volatility.

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## Conclusion

When there is an unfunded liability it is wholly reasonable and justifiable for stakeholders to ask how the investable assets of the Defined Benefit portfolio have been managed. The purpose of this paper has been to explain both our processes and performance.

The assets of the Defined Benefit portfolio are invested in accordance with a strict governance framework. The Defined Benefit Plan is a separate portfolio, with its assets invested in the larger, Vision Pooled Superannuation Trust; therefore gaining access to greater economies of scale.

The objective of investing a Defined Benefit portfolio is to match assets with liabilities. The liabilities of the Defined Benefit plan will exist long-term; so a longer-term investment strategy is required.

To meet the required longer-term performance necessitates investment in equities and growth assets. Investing solely in cash and fixed interest would not provide the required returns.

To lower volatility, the portfolio has been invested in a range of unlisted growth assets (e.g. property and infrastructure) designed to reduce exposure to Australian and international equities without reducing performance.

With a longer-term investment strategy, the returns of the Defined Benefit portfolio have been depressed by the global financial crisis and the downturn in world economies and markets that have followed it.

While all long-term investors have suffered lower returns, in relative terms the Vision Super Defined Benefit portfolio has produced above average returns with below average volatility.

Since 2005, the performance of the Defined Benefit portfolio would have placed it in the top 25% of funds with a similar asset allocation in the independent SuperRatings survey. As outlined in this investment briefing, Vision Super has managed the assets of the Defined Benefit plan in a prudent and responsible manner and will continue to do so.



**LOCAL AUTHORITIES SUPERANNUATION FUND**  
**DEFINED BENEFIT PLAN**  
**Apportionment Methodology**

**Vision Super Pty Ltd**  
Trustee of the Local Authorities Superannuation Fund  
ABN: 50 082 924 561  
Australian Financial Services Licence No: 225054  
RSE Licence No: L0000239

Audit Committee 4 September 2012

### LASF Defined Benefit Plan Lump Sum Funding Calls - Apportionment Methodology

The methodology for apportioning pension and active member lump sum funding calls has been consistently applied since its origination in 1997 when LASF was under State legislation.

In summary, the methodology provides for two components:

*Pre-30 June 1993 Component:*

- Unfunded lifetime pension liabilities are apportioned to each Authority on the basis of their individual share of the Plan's total defined benefit salaries as at 30 June 1993;
- The unfunded liabilities for active members' pre 30 June 1993 membership is apportioned in the same way; and,

*Post-30 June 1993 Component:*

- The unfunded liabilities for active members' post 30 June 1993 service is apportioned to each Authority on the basis of their individual share of the Plan's total defined benefit salaries at 31 December 2011 (the date of the actuarial investigation).

**Example:**

At 31 December 2011 there were 4,971 active members of the LASF Defined Benefit Plan. Their combined service period was split 25.15% prior to 30 June 1993 and 74.85% thereafter.

At 31 December 2011, the Plan's pension liability was \$359.9m, while the plan's active member liability was \$1,516.4m. Pension and active member liabilities totalled \$1,879.3m

Organisation A's share of the Plan's total defined benefit salaries at 30 June 1993 was 1%. By 31 December 2011, their share had fallen to 0.75%. Therefore:

|   | \$                     | Calculation description                                |
|---|------------------------|--|
| Organisation A's share of the pension unfunded liability  | \$ 868,809.72          | \$ 359.9m / \$1,876.3m * \$453.0m * 1.00%              |
| Organisation A's share of the active members' pre 30 June 1993 service                                    | \$ 920,799.00          | \$1,516.4m / \$1,876.3m * \$453.0m * 1.00% * 25.15%    |
| Organisation A's share of the active members post 30 June 1993 service)                                   | \$ 2,055,293.46        | \$1,516.4m / \$1,876.3m * \$453.0m * 0.75% * 74.85%    |
| <b>Organisation A's share of the plan's unfunded liability (excl cont tax)<br/>payable on 1 July 2013</b> | <b>\$ 3,844,902.18</b> |  |
| Contribution tax payable on 1 July 2013   | \$ 678,512.15          | 15% of total amount paid on 1 July 2013 being \$4.523m |
| <b>Organisation A's share of the plan's unfunded liability (incl cont tax)<br/>payable on 1 July 2013</b> | <b>\$ 4,523,414.33</b> |  |

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**LOCAL AUTHORITIES SUPERANNUATION FUND**

**DEFINED BENEFIT PLAN**

**Report from PricewaterhouseCoopers**

**Vision Super Pty Ltd**

**Trustee of the Local Authorities Superannuation Fund**

ABN: 50 082 924 561

Australian Financial Services Licence No: 225054

RSE Licence No: L0000239

Audit Committee 4 September 2012



Mr Rob Brooks  
Chief Executive Officer  
Vision Super  
Level 5, 1 Spring Street  
Melbourne VIC 3000

31 July 2012

Dear Rob

## Unfunded liability apportionment methodology review

This report outlines our scope, approach and findings in respect of the review of the application of the unfunded liability apportionment methodology for the Local Authorities Superannuation Fund Defined Benefit Plan.

### 1. Introduction

#### *Background*

- 1.1 The Local Authorities Superannuation Fund ("the Fund") has defined benefit liabilities in respect of some current and former members. The Defined Benefit Plan was closed to new entrants in 1993.
- 1.2 The recent actuarial review, completed 25 June 2012, revealed a shortfall in the Fund of \$406 million (excluding contributions tax) as at 31 December 2011. The projected value of the actuarial shortfall at 1 July 2013 is \$453 million excluding contributions tax and \$533 million including contributions tax.
- 1.3 The method for allocating this shortfall among the Authorities with current or former defined benefit members was derived in 1997 and is outlined in Appendix A.

#### *Scope of review*

- 1.4 The purpose of this review is to assess whether the apportionment of the unfunded liability as at 31 December 2011 is consistent with the methodology derived in 1997, which is outlined in the attachment in Appendix A.
- 1.5 A review of the methodology itself is outside of the scope of this review.

---

*PricewaterhouseCoopers Securities Limited ACN 003 311 617 ABN 54 003 311 617, Holder of  
Australian Financial Services Licence No244572  
Freshwater Place, 2 Southbank Boulevard, SOUTHBANK VIC 3006, GPO BOX 1331, MELBOURNE VIC 3001  
T +61 3 8603 1000, F +61 3 8603 1999, www.pwc.com.au*

Audit Committee 4 September 2012

## 2. Approach

- 2.1 For the purpose of confirming that the apportionment of the unfunded liability as at 31 December 2011 is consistent with the methodology derived in 1997, we have undertaken the following steps:
- a. Confirmed our understanding of the methodology as outlined in Appendix A
  - b. Confirmed the inputs to these calculations as follows:  
Unfunded position by reference to the Report on the Actuarial Investigation as at 31 December 2011  
30 June 1993 salaries by undertaking a series of spot checks on Authorities and how subsequent amalgamations have been treated. For this purpose we selected a sample of representative Authorities based on their 30 June 1993 salary roll, 31 December 2011 salary roll and the movement of the salary roll and amalgamations between 1993 and 2011.  
31 December 2011 salaries by reference to the data provided for the actuarial investigation from the administration system.
  - c. Confirmed the calculations undertaken by Vision Super as provided.

## 3. Findings

- 3.1 Based on our checks of the inputs and of the calculations provided by Vision Super, we believe that the apportionment of the unfunded liability as at 31 December 2011 is consistent with the methodology derived in 1997, as outlined in Appendix A.

## 4. Statement of compliance

- 4.1 Our advice to you constitutes a Professional Service as defined in the Code of Professional Conduct (the Code) issued by the Institute of Actuaries of Australia and our advice complies with the Code in this respect.
- 4.2 Please note that this work does not constitute a review or audit in accordance with Australian Auditing Standards.

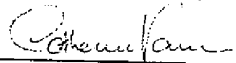
## 5. Reliance and limitations

- 5.1 Our work has been conducted for the sole use and benefit of Vision Super and associated Authorities of the Fund in the review of the unfunded liability apportionment methodology and for no other purpose. No third party may use or rely on our work for any purpose.
- 5.2 Unless required by law, no copy of or extract from this report is to be distributed to third parties without our prior written consent. We may at our discretion, grant or withhold our consent or grant our consent subject to conditions.
- 5.3 No oral or written reference to the content of this report may be made by Vision Super to any third parties without our prior written consent, with the exception of Authorities of the Fund. We may, at our discretion grant or withhold our consent or grant it subject to conditions.
- 5.4 Our responsibilities and liabilities are to Vision Super in the context of the use of our report for the purpose set out above. We do not accept any liability or responsibility in relation to the use of our report for any other purpose.
- 5.5 This report must be read in its entirety. Individual sections of this report could be misleading if considered in isolation from each other.



- 5.6 All reasonable care has been taken to provide performance and investment data that are accurate. However, we have relied on a range of external sources for data. As a result, we are unable to guarantee the accuracy of the data contained in this report.
- 5.7 The advice contained in this report is based on the circumstances of *Vision Super* as a whole. It does not take into account the specific circumstances of any individual.
- 5.8 Past performance is no guarantee of future performance and investment markets are volatile. PricewaterhouseCoopers does not guarantee that any specific level of returns will be achieved.

Yours sincerely,



Catherine Nance FIAA  
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## Appendix A: Apportionment methodology

### Background

- A.1 The method for apportioning liabilities between Authorities was initially agreed by a working party comprising representatives of Local Government, the water industry and the Local Authorities Superannuation Fund in 1997.
- A.2 The objective was to derive a methodology that would equitably apportion any shortfall liability between Authorities arising in the funding of benefits for prior and current members of the Local Authorities Superannuation Fund.
- A.3 An independent review of this methodology carried out in 2003 by PricewaterhouseCoopers found that, given the historical records available, the methodology "would produce an equitable methodology for fairly and reasonably apportioning the shortfall liability between the individual Authorities".

### Apportionment methodology

- A.4 The method for apportioning the unfunded liabilities can be summarised as follows (where pre-1993 and post-1993 are referring to 30 June 1993).

#### Step 1: Calculate proportion of pre-1993 and post-1993 service

- A.5 The years of service for all active members is calculated as at 31 December 2011. This service is split into pre-1993 and post-1993 service.

#### Step 2: Calculate proportion of pre-1993 and post-1993 liabilities

- A.6 The active liabilities are then proportioned for pre-1993 and post-1993 components (in percentage terms) based upon this split. The pensioner (including fixed term pension) liabilities are fully apportioned to the pre-1993 period.
- A.7 Deferred liabilities receive an effective allocation based on the total pre-1993 and post-1993 proportion calculated as above.

#### Step 3: Apportion liabilities between pre-1993 and post-1993

- A.8 The proportion of pre-1993 and post-1993 liabilities are then applied to the projected actuarial shortfall value at 1 July 2013.

#### Step 4: Apportion liabilities between individual Authorities

- A.9 The total value of the pre-1993 component of the projected actuarial shortfall is apportioned to the Authorities based on each Authority's share of the total 1993 salary roll.
- A.10 The total value of the post-1993 component of the projected actuarial shortfall is apportioned to the Authorities based on each Authority's share of the total salary roll as at 31 December 2011.



# Wye River and Separation Creek

## Waste Management Services Review

Prepared by

Max Gilbert  
gilbert consulting pty ltd

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## Wye River and Separation Creek – Waste Management Service Review

### 1 Introduction

The community is expressing concerns about the negative impact on the aesthetics of the area and the nuisance caused by waste bins being left out on the narrow road reserves for long periods after collection day in Wye River and Separation Creek.

A general letter sent to all residents noted that it is an offence against a local law to leave waste bins out for more than 24 hours after collection day and may attract a fine for the offence.

The letter generated further responses from the community, some questioning the need for the 'three bin' waste service and highlighting the historic opposition to it in the planning stage.

Community consultation of the coastal area prior to the new three bin service being introduced generally supported its introduction. Based on providing equitable and equally accessible services to the Colac Otway community without discrimination, the 'three bin' service was introduced to all areas previously serviced by the 'divided bin' service.

### 2 Joint Inspection and Review

In response to the concerns of the Wye River and Separation Creek communities, representatives of the Colac Otway Shire, the Waste Collection Contractor and the Wye River and Separation Creek Progress Association carried out a joint inspection of the sites.

Although initially concentrating on the issue of bins being left out for prolonged periods, the inspection revealed greater concerns regarding the risk of providing the bin based service, particularly in relation to the safety of the vehicle drivers, vehicles parked on the roads and pedestrians (including children) walking along the roads.

A fresh assessment of the risk is timely in light of insurers and Worksafe requiring more stringent approaches to identifying exposure to potential losses in the provision of Council services.

### 3 Current Service

Wye River and Separation Creek are provided with the three bin service of a:

- 120litre Garbage Bin - collected weekly
- 240 litre Recycling Bin – collected fortnightly
- 240 litre Organics Bin – collected fortnightly

### 4 Occupancy

There are approximately a total of 361 properties provided with the three bin service:

- Wye River currently has 261 houses with approximately 15% permanently occupied, and
- Separation Creek has 100 houses with approximately 15% permanently occupied.

## 5 Issues

There are issues related to the provision of the kerbside waste collection service that are unique to the Wye River and Separation Creek areas. Although not new, there is a heightened awareness of the impact these issues have in the safe delivery of the service in its current form, especially as the number of houses increase.

### 5.1 Accessibility

Accessibility by the waste collection vehicle to service the properties is adversely affected by:

- Narrow roads – some are unsealed, in poor condition, very steep and have poor sight distance for turning around;
- Need to reverse in some streets; and
- Some streets are not serviced as a collection vehicle is unable to negotiate the road. Instead the bins are brought to a corral area, usually at end of street.

### 5.2 Holiday Homes Occupancy

A high percentage of homes are used as holiday units only – high weekend & holiday use, larger numbers per household at peak times, different people staying at properties (renting, different family members).

The Current service is not convenient with the timing of collection not aligning with occupancy patterns (i.e. some house occupied only on weekends, some change occupants during the week.)

### 5.3 Bins Left Out

As a consequence of the pattern of occupancy of holiday homes bins are often not returned into the properties and remain on the edge of the road and are:

- Unightly;
- A safety issue if bins fall onto road way (due to narrow – steep roads); and
- Confusing for the collection vehicle operator - driver does not know if the bins presented out on the street on collection day are full of empty.

### 5.4 Cars Parking on Roads

Cars parked on the narrow roads (particularly during summer period) block access and heighten the risk of a safety incident occurring:

- Collection vehicle has to negotiate narrow gaps between vehicles or between parked vehicles and steep drop off of the roads;
- Cars blocking roads; and
- Cars parked in front of bins.

### 5.5 Bin Abuse

Bins are not being properly used:

- often garbage is placed in recycling and organics bins; and
- bags of rubbish left out on kerbside when the bins are full.

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## 6 Overriding Issue is Safety

Like many services, personal and property safety can be at risk in providing a kerbside waste collection. To avoid the likelihood of an adverse incident occurring risks are identified and steps taken to remove or mitigate the risk. Safety cannot be ignored and following the inspection it is clear that Council must make changes to the current waste collection service at Wye River and Separation Creek to meet its obligations under Worksafe and its exposure to insurance claims if an incident occurs.

For Wye River and Separation Creek the risks are more acute than the rest of the municipality in three areas:

1. Risk to collection contractor – loss of control of collection vehicle due to steep terrain and/or narrow roads and loose & rough road surface or avoiding parked cars; reversing in some streets; three point turns at intersections with poor sight distance;
2. Risk to residents – especially children being hit by collection vehicle – when avoiding parked cars and having to concentrate on not hitting a car or sliding off the edge of a road; and
3. Risk to property damage – especially damage to vehicles parked on roadside either from the collection vehicle or other vehicles avoiding non returned bins falling onto the roadway.

From a safety perspective the highest exposure to risk is the poor accessibility to the area by collection vehicles. This problem is growing as more homes are built and holiday occupancy spreading over longer periods of the year. A greater volume of waste must be collected requiring the collection vehicles to negotiate the steep narrow roads with heavier weights, more cars are parked on the roadways, and with increased traffic the unsealed sections of road are deteriorating more rapidly.

## 7 Safety Issues Not Easily Resolved

Having identified the issues and risks, finding a solution is not simple. There is a need to balance the delivery of a waste service that is safe for the operator and residents and also best fits the unique needs of a community that is generally made up of holiday houses.

The only solution that will address all the risks and concerns and provide a safe waste service is to change the service.

## 8 Safety Improvement Waste Service Options

The advantages and disadvantages of possible options for improving the safety of delivering a waste collection service to Wye River and Separation Creek are examined. The options are provided with a ranking based on their ability to provide safety improvements.

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**Table 8.1 Service Options and Safety Improvement Ranking**

| No | Service                       | Description  | Advantages  | Disadvantages   | Safety Improvement Ranking |
|----|-------------------------------|--|---|---|----------------------------|
| 1  | <b>No Change</b>              | Three bin system collected from kerbside   | <ul style="list-style-type: none"> <li>■ Provides an equitable service for all residents</li> </ul>   | <ul style="list-style-type: none"> <li>■ Does not address any of the issues</li> <li>■ All identified risks remain</li> </ul>   | POOR                       |
| 2  | <b>Choice</b>                 | Continue with kerbside collection and provide option of drop off (enforce bins left on street)   | <ul style="list-style-type: none"> <li>■ Retains full 3 bin service</li> <li>■ Flexibility for disposal of waste outside of normal collection day</li> </ul>  | <ul style="list-style-type: none"> <li>■ Does not address all the issues</li> <li>■ All identified risks remain</li> <li>■ Extra cost in addition to current waste charge</li> <li>■ Increased cost of enforcement of bins left out on the street</li> </ul>  | POOR                       |
| 3  | <b>Mixture</b>                | Service only specific main streets with kerbside collection and provide drop off facility for balance of residents   | <ul style="list-style-type: none"> <li>■ Addresses some of the risks – such as not collecting from highest risk roads</li> </ul>  | <ul style="list-style-type: none"> <li>■ Will address some of the issues only</li> <li>■ Identified risks only partially addressed for the streets not serviced                             <ul style="list-style-type: none"> <li>■ Inequitable service for residents (only some with kerbside collection)</li> </ul> </li> <li>■ Not address organics collection for those not receiving kerbside collection</li> <li>■ Not able to control which residents will use drop off facility</li> </ul> | BETTER                     |
| 4  | <b>Drop Off Facility Only</b> | No kerbside collection and provide drop off facility (garbage & recycling only for all properties (all bins withdrawn for reuse as spares elsewhere in the municipality) | <ul style="list-style-type: none"> <li>■ Addresses all the issues identified</li> <li>■ Removes all the risks associated with a kerbside collection</li> <li>■ Will reduce wear &amp; tear of roads caused by collection vehicles</li> <li>■ Will make roads safer for all users</li> </ul> | <ul style="list-style-type: none"> <li>■ Not as convenient as a kerbside collection for some residents</li> <li>■ Will be more expensive to provide and may require a separate charge to be applied</li> <li>■ Will require organics to be addressed separately</li> </ul>  | BEST                       |



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## 9 Community Say on Safety Improvement Options

At this stage no decision has been made on a preferred method of delivering a waste service at Wye River and Separation Creek. This will not be made until after the community have had opportunity to have their say.

## 10 Further Matters for Consideration

The following provides additional information to assist in assessing the four options.

### 10.1 Organics Collection

For options 3 and 4 alternative arrangements will be required for an organics collection for some or all the properties, depending on the option. The current organics kerbside collection service is not heavily used with less than 40% of the properties utilising the collection.

Alternatives are to either:

- make all properties without a kerbside collection responsible for disposal of their own organic material; or
- provide a special 'drop off' day or days at each town, particularly prior to the fire season. This could be in the form of a 'rear loading' compacting truck parked at or near the drop off facilities. Such a service will attract additional costs to be paid by the residents as a fee to drop off or as a charge on the whole Wye River and separation Creek communities.
- Introduce a green waste voucher system which would allow residents to drop green waste to transfer station at Apollo Bay at no cost.

### 10.2 Costs

Options 2, 3 and 4 will incur extra costs for delivery of the alternative services. The following provides a brief description the method of delivery of the alternative services and indicative estimated costs. Should the community support a change to the waste service, then such services will be subject to a tendering process to obtain a competitive and accurate cost.

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**Table 10.2.1 Service Options and Indicative Costs**

| No | Service                       | Description  | Method of Delivery  | Indicative Costs Only*  |
|----|-------------------------------|--|---|---|
| 1  | <b>No Change</b>              | Three bin system collected from kerbside   | ■ Kerbside collection   | ■ No Change to Currently <b>\$274 p.a.</b> per property   |
| 2  | <b>Choice</b>                 | Continue with kerbside collection and provide option of drop off (enforce bins left on street)   | ■ Kerbside Collection<br>■ One corral with a skip or mobile bins at Wye River and another at Separation Creek (Daily clearance)<br>■ Enforcement  | ■ \$274 p.a. per property<br>■ PLUS additional cost for skips/bins & enforcement \$40,000 p.a.(= extra \$110 p.a. per property)<br>■ New charge <b>\$384 p.a.</b> per property  |
| 3  | <b>Mixture</b>                | Service only specific main streets with kerbside collection and provide drop off facility for balance of residents   | ■ Kerbside Collection for some properties<br>■ Two corrals with a skip or mobile bins at Wye River and another at Separation Creek to service the remainder of the properties (Daily clearance) | ■ Some saving on kerbside collection costs (approx \$33,000 p.a.)<br>■ PLUS additional cost for skips/bins & enforcement \$87,000 p.a.<br>■ NETT cost increase of \$54,000 p.a. (= extra \$150 per property on top of current charge )<br>■ New charge <b>\$424 p.a.</b> per property |
| 4  | <b>Drop Off Facility Only</b> | No kerbside collection and provide drop off facility (garbage & recycling only for all properties (all bins withdrawn for reuse as spares elsewhere in the municipality) | ■ Two corrals with a skip or mobile bins at Wye River and another at Separation Creek to service all the properties (Daily clearance)   | ■ Total Cost for drop off service \$171,000 p.a.<br>■ New Charge <b>\$474 p.a.</b> per property to replace current charge   |

\*Note: The extra costs do not include provision of any organics collection services for those properties that no longer are provided with a kerbside collection.

### 11 Special Charge

The current waste charge is based on the provision of the same standard three bin waste collection service for the whole of the municipality and covers the cost of providing waste services.

Wye River and Separation Creek have different circumstances and terrain when compared to the rest of the municipality, requiring a special waste collection service. Provision of this special service, if adopted, will be more costly than a standard service and cost recovery will require the setting of a separate charge payable by the residents of Wye River and separation Creek to recover the cost.

### 12 Community Engagement and Consultation

Having expressed concern regarding the problems associated with the current three bin kerbside collection service, the purpose and specific aims of engagement and consultation

Colac Otway Shire  
Wye River and Separation Creek – Waste Management Service Review

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are to establish whether the Wye River and Separation Creek community support changes to the waste collection service to improve safety, convenience and the amenity of the area..

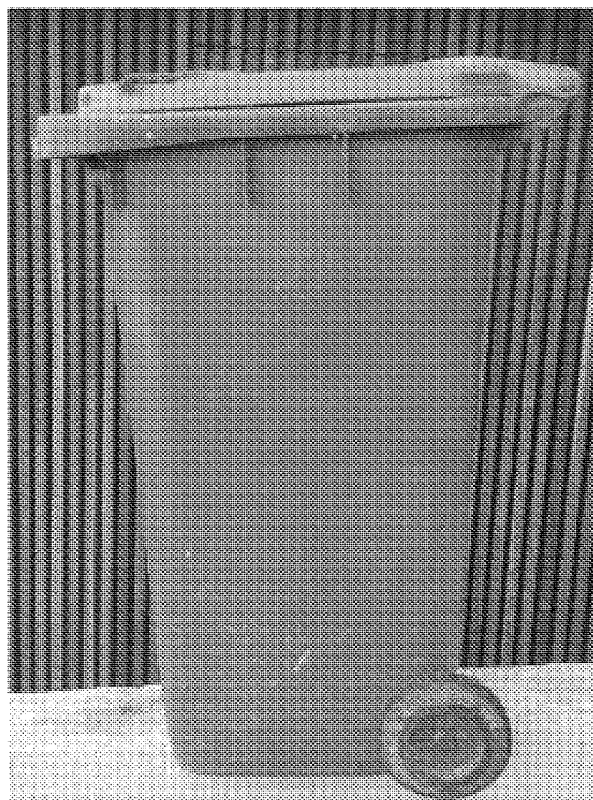
The proposed methods of engaging the community are detailed in the table following:

| <b>Objective</b>  | <b>Engagement Method</b> | <b>Stakeholder</b>   |
|---|--------------------------|--|
| Obtain Councillor feedback from a report on the issues and options for changing the waste services  | ■ Council report         | ■ Councillors  |
| Obtain specific feedback on the current waste service, options for addressing the identified risk areas and requesting further suggestions. | ■ Written Survey         | ■ To all owners of properties in the Wye River and Separation Creek areas. |

# Wye River Separation Creek

## Report by the Landowner Waste Consultative Group

15 August 2012



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# 1 SUMMARY

Wye river and Separation Creek may not have basic utilities like water supply, but the one thing the community is united in is wanting is roadside waste collection.

This report to COS by the Waste Consultative Group (the Group) focuses on how this can be achieved while taking into account the condition of our roads, the steepness of the terrain and safety issues.

Following the deterioration of conditions in the track called Slashers Bypass, in 2012 the bin collection service was discontinued in the worst, middle part. This required two long approach sections of road that have to be reversed along for long distances.

With the extra safety risk, the Contractor Wheelie Waste (WW) chose to move to a subjective 'best practice' reversing limit of 30m. Colac Otway Shire (COS) responded by proposing communal skips.

The community was galvanised into opposition at a public meeting on 9 July and reaffirmed their need for roadside waste collection, recycling and green waste. COS undertook to look at all options, and commissioned a report from engineers GHD on the safety of the roads for waste collection.

This group disagrees with the overall assessment of many roads by GHD as being 'High Risk'. Only Slashers Bypass is assessed by the Group as high risk.

Long reversing is still required at: Slashers Bypass south, McCrae Road, Sturt Ct, Morley extension and Dunoon Rd. These roads are not consistent with reversing 'best practice'.

A new, specially designed small collection truck is being investigated by WW and COS. This will make turning around easier and long unsafe reversing can be potentially reduced at those four locations. Landowners can work with COS to identify safe turning points. However, if turning points cannot be achieved, there is little benefit in adding a small truck to the fleet.

A new parking strategy with enforcement is necessary to ensure roads are kept clear for service vehicles, particularly on bin collection day.

Driver training is also needed for backup drivers. There is also opportunity for better information for landowners and renters about bin collection.

No one solution is likely to solve all the problems and it is likely that the solution will be found in a variety of waste collection responses.

## 2 INTRODUCTION

### 2.1 Background

The Waste Consultative Group was appointed by COS following the 9 July 2012 public meeting about waste collection in the two villages. The group consists of nine property owners with a wide diversity of backgrounds drawn from across the villages, male/ female, resident/non-resident, new and longstanding owners. See Appendix A.

The public meeting was called after the Colac Otway Shire proposed to replace roadside collection with skips following contractor safety concerns. The meeting of over 100 owners overwhelmingly rejected the proposal. A related issue discussed was safety of roads in general.

COS undertook to explore other options and to get landowner feedback before going back to the community with a revised proposal. COS also engaged an independent safety report from engineers GHD covering safety of roads.

**This report by the Consultative Group gives feedback on the GHD report and offers feedback on waste collection options in general. The report does not claim to represent all owners' views nor does it make any decisions on their behalf.**

### 2.2 Group approach

The Group have

- driven all of the streets in the villages as a group, identifying issues and options.
- spoken to the Contractor and the truck driver.
- looked at safety guidelines, particularly those relating to reversing.
- looked at alternative collection arrangements in other challenging locations.
- researched different truck arrangements and expert advice on collection
- researched new turning arrangements
- discussed landowner views in areas of most difficulty eg Slashers Bypass

### 2.3 Shire Rating Revenue from the villages

It came as a surprise to the group that the total COS revenue from the villages of Wye River and Separation Ck is over \$850,000 per year.<sup>1</sup> This a very large amount from a small number of properties. Most properties are little used for most of the year until summer holidays. Also, given the distance from most COS infrastructure around Colac, village landowners derive very few benefits from their rates.

The minimum owners expect is a good roadside bin collection service.

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<sup>1</sup> Email advice from Brett Exelby, COS Mgr Finance 15 June 2012

### 3 ISSUES RELATING TO BIN COLLECTION

Before jumping to solutions the group felt it is important to clearly understand the issues, as follows:

1. Narrow roads on cross slopes, with congestion in peak periods
2. Sections of impassable roads, particularly 'Slashers Bypass' between Morley and McCrae
3. Dead end roads requiring long reversing
4. Driver skill and training
5. Contractor risk responsibility and timing
6. Suitability of truck size
7. Resident presentation of bins and removal when empty
8. Green waste
9. Cost and peak effects
10. Managing change

#### 3.1 Narrow roads on cross slopes, with congestion in peak periods

Landowners and COS have inherited a legacy of narrow roads. In summer cars park wherever they can, often on the road verge. This is sometimes because there is little or no room on the property, sometimes to give family members flexibility when driving out. Sometimes this is from visitors/renters who may be unaware of risks due to road congestion.

The net effect can sometimes be that the waste truck is blocked from passing, and the driver has sometimes had to ask owners to move cars.

Another problem is that landowners have been locked into their own properties. A more serious issue is that emergency vehicles do not have access in a fire or medical emergency.

A safety issue is that the waste truck may have to go closer than reasonable to the road edge.

Landowners recognise the problem and generally want to do the right thing and are searching for a solution.

#### 3.2 Sections of impassable roads, particularly 'Slashers Bypass' between Morley and McCrae

Slashers Bypass is a private track on private land between Morley and McCrae roads. Tight corners and washouts make this track difficult for cars and dangerous for large vehicles. Recent local changes have made access more difficult. The Group agrees it is too dangerous for a truck to pass. What was a one way system now requires extensive reversing to service both ends of Slashers Bypass.

Various other roads are narrow with no turning areas, making access unsuitable for trucks.

#### 3.3 Safety while reversing

As well as Slashers Bypass, several other roads require long reversing particularly Sturt Ct.

The allowable distance that a truck can be safely reversed is somewhat subjective. There are no formal limitations, but 'reasonable' is often referred to. The contractor has chosen to work towards a maximum reversing distance of 30m, a distance used by some in the industry as 'Best Practice.'

Refer to Appendix B for guidelines.

A 30m reversing limit would mean that substantial changes are needed in order to collect bins in several streets in the villages. The Group supports pursuing creative options to limit reversing where possible. Suitable turning points are critical.

#### 3.4 Driver skill and training

One of our group rode the route with the truck driver, who is known and respected by long term residents. We were impressed with the care and skill of the current driver, who faces a number of challenges daily.



Bins are often at the limit of height and reach; the mechanism can damage bins easily; bins are difficult to put down on a slope (most of our villages). Bins are routinely placed wrong way round, wrong side of road or such that they can't be emptied without the driver dismounting. The driver needs to keep track of bins if he can that have been emptied previously and laid down by him. Others are full and knocked into drains by passing traffic. He seems to know which is which. Empty bins left out are a major cause of frustration and inefficiency – as is known. A big positive from the 9 July meeting was general acceptance that bins should be put away after emptying.

The driver has an exceptionally clear driving history without accidents. He also knows to keep clear of the outer verge so wheels do not come close to loose material. Risk from overturning is very low due to driver skill.

The group acknowledged the skill of the driver. It also recognised that sooner or later a replacement would be needed and adequate training is essential.

Another driver will be needed soon when the current driver takes holidays in summer, the most demanding time for the driver.

The Contractor Wheelie Waste understands the importance of training and has stated its commitment to training other drivers.

### **3.5 Contractor risk responsibility and timing**

The contractor is one of the parties liable at law for safety. They have been concerned about safety for some time. The impassability of Slashers bypass and long reversing distances seem to have brought matters to a head. The contractor has chosen to move over time to the 'best practice' of reversing less than 30m.

Given the reality of a new driver in the summer peak, it is important to get to a safer situation before summer.

The Skip proposal has galvanised the community's attention, and will accelerate change. Now that there is attention, the Group feels that there is potential to work together to get to a safer and better outcome.

### **3.6 Suitability of truck size**

Intuitively a large truck will have problems in the villages. The Group found that there is a range of much smaller trucks available. Suitability rests with the contractor and COS.

The contractor is understood to be well advanced on working with COS on a solution to get a more suitable truck. The current truck is about 12-14 cum, fairly long wheel base, relatively high with a limited turning circle. The Group understands the truck under consideration is about 10 cum with a much tighter turning circle. This will open the potential for more turning places.

### **3.7 Resident presentation of bins and removal when empty**

It is clear from discussions with the driver that bin collection is often inefficient because residents do not know the best places to present bins safely. Also leaving bins out for months causes inefficiency and unsightliness. Proposals are presented in a later section to get change while there is owner goodwill to put bins away.

A subtle aspect of hilly roads is that it is possible to wheel loaded bins down a hill, but almost impossible to wheel them uphill. For that reason the Group accepts that arrangements to wheel bins to a collection point is feasible to continue, eg at Bass Av and Coryule Av. For places like Sturt Ct which slope uphill to the main road, it is not feasible to wheel bins uphill. This is taken into account in our recommendations.

A special concern is the frail and elderly in our community. Taking a bin to the roadway may be challenging; taking a bin a long distance to a collection point will be impossible. We hope that there

is some way our frail and elderly will be looked after if bins need to be moved a long way to a collection point.

### **3.8 Green Waste**

Another subtle feature of the villages is that Colac Otway Shire is unique in Victoria in having the longest period for which burning green waste is prohibited, totalling 6 months. The villages are also a long way from the tip at Apollo Bay and trailer hire is unavailable closer than Torquay! For these reasons it is important to provide adequate means of green waste removal and it is desirable for green waste collection to continue. The two free green waste vouchers proposed as part of the Skip proposal fails to recognise the importance of practical green waste removal via bins in the villages.

### **3.9 Cost and peak effects**

A large cost factor for collection is the number of trips to dump waste. The Group understands that for all but a few weeks of the year, the entire collection of one bin colour is handled in one run for both villages combined. Extra trips will be needed in summer, particularly for a smaller truck, but over the year the impact on cost is small. The extra resource needed for summer peak should be programmed into the yearly cycle.

Given the very high rates contributed by the villages, cost should not be a deciding factor in providing roadside collection.

### **3.10 Managing Change**

While the Skip proposal captured the entire villages' attention, it came at the cost of undermining trust between landowners and COS. It is a delicate path to tread now to bring about change.

The Group feels there is residual goodwill and if handled well, landowners can work together with COS and the contractor to introduce better collection arrangements. The key will be openness and good consultation, particularly in the difficult areas of Slashers and Sturt Ct. The Group expects reports to be available to landowners unless there are material confidentiality issues. So far the Group does not understand the need for confidentiality. The Group is confident landowners will react responsibly.

## 4 ROAD SAFETY ASSESSMENT

### 4.1 Summary of observations

The Group has carried out a detailed examination of the risks assessed by GHD. The assessment by Professor Stokes, who has considerable experience in these matters, is detailed in appendix C .

Overall the Group feels the GHD report seriously over-states risk.

Specifically, Professor Stokes finds that:

- there are serious flaws in the assumptions behind the GHD report.
- the frequency of crashes is overstated
- the overall risk is overstated in 11 occasions
- the risk is understated by GHD in 1 location (McCrae with long reversing is Medium)

The only location with a High risk is Slashers Bypass. The Group agrees Slashers Bypass should not be a thoroughfare for the truck.

There are no locations with Intolerable risk.

Table 1 compares the GHD and Group findings.

### 4.2 Summary of hazard streets assessed by the Group

Although the Group's risk analysis only shows High Risk for Slashers Bypass, requiring immediate action, there are still several streets where long reversing is done.

The Group agrees that long reversing is undesirable in the medium term.

Streets with undesirably long reversing are:

- Dunoon
- McCrae
- Slashers South
- Sturt
- Morley extension

Sarsfield St west is another dead end street, but there is a commonly used turning point that minimises reversing.

**Table 1 Comparison of GHD and Group findings.**

| LOCATION                      | Hazards and Consequences | GHD FINDINGS |          |        |            | CONSULTATIVE GROUP FINDINGS |          |      |  |
|-------------------------------|--------------------------|--------------|----------|--------|------------|-----------------------------|----------|------|--|
|                               |                          | Frequency    | Severity | Risk   |            | Frequency                   | Severity | Risk |  |
| Refers to notes in Appendix C |                          |              |          |        |            |                             |          |      |  |
| <b>SEPARATION CREEK</b>       | As per GHD table 5       |              |          |        |            |                             |          |      |  |
| Sarsfield St west             |                          | Improbable   | Serious  | Medium | Improbable | Serious                     | Medium   |      |  |
| Stanway Dv                    |                          | Na           | Na       | Low    | Na         | Na                          | Low      |      |  |
| Harrington St                 |                          | Na           | Na       | Low    | Na         | Na                          | Low      |      |  |
| Mitchell Gr Note 1            |                          | Occasional   | Serious  | High   | Improbable | Serious                     | Medium   |      |  |
| Olive St Note 2               |                          | Occasional   | Serious  | High   | Improbable | Serious                     | Medium   |      |  |
| <b>WYE RIVER</b>              | As per GHD table 6       |              |          |        |            |                             |          |      |  |
| McLellan Ct                   |                          | Occasional   | Limited  | Low    | Occasional | Limited                     | Low      |      |  |
| The Bluff                     |                          | Na           | Na       | Low    | Na         | Na                          | Low      |      |  |
| The Boulevarde                |                          | Na           | Na       | Low    | Na         | Na                          | Low      |      |  |
| Riverside Dv Note 3           |                          | Occasional   | Serious  | High   | Improbable | Serious                     | Medium   |      |  |
| Karingal Dv Note 4            |                          | Occasional   | Serious  | High   | Improbable | Serious                     | Medium   |      |  |
| Dunoon Rd Note 5              |                          | Occasional   | Serious  | High   | Improbable | Serious                     | Medium   |      |  |
| Durrinbil Av Note 6           |                          | Occasional   | Serious  | High   | Improbable | Serious                     | Medium   |      |  |
| Iluka Av Note 7               |                          | Occasional   | Serious  | High   | Improbable | Serious                     | Medium   |      |  |
| Koonya Av                     |                          | Na           | Na       | Low    | Na         | Na                          | Low      |      |  |
| Wallace Av                    |                          | Occasional   | Limited  | Low    | Occasional | Limited                     | Low      |      |  |

| LOCATION                            | Hazards and Consequences | GHD FINDINGS |          |        | CONSULTATIVE GROUP FINDINGS |          |        |  |
|-------------------------------------|--------------------------|--------------|----------|--------|-----------------------------|----------|--------|--|
|                                     |                          | Frequency    | Severity | Risk   | Frequency                   | Severity | Risk   |  |
| Refers to notes in Appendix C       |                          | Occasional   | Serious  | High   | Improbable                  | Serious  | Medium |  |
| Wallace Av (crown land) Note 8      |                          | Improbable   | Serious  | Medium | Improbable                  | Serious  | Medium |  |
| Morley Av (sealed section)          |                          | Occasional   | Serious  | High   | Improbable                  | Serious  | Medium |  |
| Sturt Ct Note 9                     |                          | Probable     | Serious  | High   | Occasional                  | Serious  | High   |  |
| Morley Av (Slashers Bypass) Note 10 |                          | Na           | Na       | Low    | Improbable                  | Serious  | Medium |  |
| McCrae Rd Note 11                   | Long reversing           | Occasional   | Serious  | High   | Improbable                  | Serious  | Medium |  |
| Morley Av Service Rd Note 12        |                          | Occasional   | Serious  | High   | Improbable                  | Serious  | Medium |  |

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## 5 DISCUSSION OF POSSIBLE SOLUTIONS

There is unlikely to be one common solution for safe roadside collection. It may require a mix of solutions.

### 5.1 Structural Solutions- Safety barriers

The GHD report recommends installing extensive safety barriers to mitigate risk from High to Medium. As the Group finds most risks Medium or below, safety barriers are not recommended apart from a few isolated locations at very tight corners.

Some suitable locations for safety barriers would be the few tight corners in Karingal, Iluka and Olive, and the turn at the end of Mitchell.

The Group is also concerned that extensive safety barriers will exacerbate parking congestion in summer. Currently most cars park safely on the outer road edges where there are local wide places, and where other vehicles can safely pass. Extensive barriers will eliminate these parking places and force parking into inappropriate areas, many of which will intrude further onto the roadway.

### 5.2 Structural solutions – improved road surfaces

In the short term, only a small proportion of roads are in poor condition. Some parts of Riverside drive are crumbling with failed sub base, but these are quite local, requiring local treatment, rather than rebuild of the entire road.

The Group has observed that the quality of the crushed rock used to repair roads is often poor, and potholes reappear within weeks or days of repair. COS might consider higher quality crushed rock and cement stabilised rock in local places.

In the longer term it may be desirable to upgrade some roads to bitumen or stabilised crushed rock. This would require getting a view from owners on a street by street basis on whether they would want new bitumen or quality stabilised rock and any associated costs. This is considered outside the scope of waste collection and this report, and would take years to implement.

### 5.3 One way roads

Proposed for Olive St, and while superficially attractive, this is unlikely to reduce congestion. The Group agrees with GHD that the impact of a one way system will make access harder for some houses, will still have partial compliance and is unlikely to change congestion. The risk from two way collision is currently low. One way roads are not supported.

### 5.4 Smaller truck size

The Group agrees that a smaller truck with a tight turning circle would make turning places more achievable and would reduce reversing. The Group welcomes a move to a smaller truck, provided turning places can actually be found and constructed. The Group acknowledges that the width would be similar to the current truck and would have little impact on passing in congested areas.

### 5.5 Turning points

Turning points would be needed to eliminate long reversing at the following roads: Sturt Ct, Dunoon Rd, McCrae Rd, Slashers Bypass southern end. In all of these locations the road reserve is narrow, and it would be hard to find suitable places for turning points to be installed. If landowners understand the benefits of turnarounds and elimination of reversing they may work together to find locations that intrude slightly onto private land by agreement.

The Group had some discussions with several landowners about finding turning points on Slashers Bypass. They felt it impossible for a big truck to turn. It may be more achievable for a small truck

with a tight turning circle. Owners are also more likely to be sympathetic to a turning point if they understand the other alternative is difficult, eg to take their rubbish to and from a collection point a hundred metres away.

There is a history in the villages of other cars making a convenience of a wide driveway, and causing damage, so landowners put up chains to reduce entry. Again with cooperation, a key to a chain could be provided to the truck driver. This is where goodwill between owners and COS is important, as referred to elsewhere.

There is a tight interdependency between a small truck and turning points. The small truck makes it easier to find turning points. However, if turning points cannot be achieved, there is no point in going to the cost of adding a small truck to the fleet for Wye River.

### **5.6 Slashers Bypass**

A made road, such as the private scheme previously prepared would simplify waste collection, however agreement to a road may be years off.

In the short term the waste truck is reversing at both ends of Slashers Bypass. If reversing ceases without turning points, an alternative will be needed. It might be an arrangement like corrals or a collection area. It might be a different kind of collection like ute pickup.

### **5.7 Corrals and collection points**

Corrals and collection points can solve a problem, but are not without limitations. They can be unsightly; can be a dumping place for others; residual rubbish can be left in no man's land. Are they screened? Is it just a temporary location on waste collection day? There are many details to be resolved in each location.

#### **5.7.1 Corral at Bird's Track**

The Group has identified Bird's Track as a good location for a Corral, ie at the end of Morley at the intersection with Slashers Bypass. Bins could be left permanently or, preferably, wheeled down for collection days and returned home afterwards, as has been done for years at Bass Av in Separation Creek. The corner may need to be widened, but there is adequate room to turn. The area is out of sight from most properties so would not have a strong adverse visual impact.

#### **5.7.2 Corral in McCrae**

Few landowners are aware of the far reaching implications if reversing of the truck ceased: there would be no turning point, and no service. Either bins would have to be wheeled several hundred metres to the bottom of the hill, or a location found for bins to be placed permanently at the bottom of the hill in a corral. Unfortunately there is no good place for this.

#### **5.7.3 Corral in Sturt**

There is no logical place for a corral at the top of Sturt. It may be one of the hardest places to service with a truck if reversing ceased. Alternative methods may be needed.

#### **5.7.4 Corral in Stanway**

If corrals are used widely in Wye, landowners would favour a screened corral in Stanway about 50 metres from the GOR. It would solve the need for long treks with a bin from the far end of the road.

#### **5.7.5 Bass Avenue Collection Point.**



Bass avenue is one of a few streets that are unsuitable for the truck – narrow, with a blind corner and no room to turn. As it is above Harrington, the main access road, bins can be wheeled down the hill to a common collection point in Harrington Street on Collection days. Coryule is another similar street.

## 5.8 Alternative manual methods

### 5.8.1 Manual methods

In dead end streets which are ultimately unable to achieve a turning point to avoid reversing, manual methods need to be seriously considered. For instance Sturt Ct is a particularly difficult place to find a turning point, and corral and collection points are impractical.

The Group suggests turning points and collection points be explored first, then manual methods. The flexibility of manual methods also allow them to cater for our forgotten landowners such as the frail and elderly.

Worksafe recommends that manual methods be minimised, however they recognise places where they are necessary, eg "In a small number of municipalities, such as those with narrow streets where cars are parked down both sides, implementing a wholly mechanical system may not be practical."<sup>2</sup>

### 5.8.2 Other community practices

There are a number of other communities where manual handling is routinely used to service difficult locations.

In some alpine areas like Mt Hotham with similar challenges to our villages, rubbish is placed in tough plastic bags inside bins. Collection involves taking the bags out of bins to a trailer and dumping from the trailer to the recycle centre. (Discussions with Nicole Epema, Operations Manager, Mt Hotham Resort Management Board).

In parts of Lorne a contractor (M Causon) uses a tipping utility to pick up rubbish in tough black bags placed in bins, similar to the alpine scheme. The ute is taken to the Lorne tip and dumped in one action. The contractor puts bins back in the landowner's property. The contractor is looking to reduce business and unlikely to want to service Wye River. If he did service Wye, presumably costs would be higher.

Also in Lorne, under the Cleanaway contract, Allie Reynolds (5289 1554) uses truck & trailer to pick up rubbish bins on Sunday night and take them to a central location ready for collection on Monday morning. He then returns later in the day to put the bins back on the properties. This presents the opportunity for this person to be contracted to put bins away at other properties as well. The same collection day in Lorne/ Wye could be a problem or an opportunity.

### 5.8.3 Manual options

Contractors from Lorne or elsewhere might provide manual collection.

It may also be feasible for a COSWorks ute to pick up plastic bags of rubbish from bins weekly in the same way as the Lorne contractor, and dump in Apollo Bay.

There are thus a number of options for manual collection that could be explored by COS and WW, using internal or external contractors.

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<sup>2</sup> Worksafe Notes, 26 June 2003 "Community & Councils to benefit from waste collection reform"

### 5.9 Spotters

The Victorian Transport Association advises “.. Avoiding the need for vehicles to reverse, where reasonably practicable. Ensure that warning devices and trained ‘spotters’ are used where vehicles must reverse or manoeuvre in a confined area or in the vicinity of pedestrians.”<sup>3</sup>

A spotter for reversing could be an emergency solution at times of high risk, however the emphasis should be on achieving a permanent solution that eliminates reversing.

### 5.10 Weekend collection

The Group explored the pros and cons of Sunday collection. Pros would be that Melbourne resident landowners could put their Wye bins out Sunday morning and take them back before returning to Melbourne later on Sunday.

Cons would be cost of penalty rates, and increased congestion on days when there are more people in the villages. On balance, the Group did not favour Sunday collection.

### 5.11 Parking restrictions

The Group felt that the community wants to keep roads free from cars parking on the roadway so that service trucks like the waste truck and local cars can get past. The community also want to allow fire vehicles and ambulances to get past in an emergency. As a first step, information would be needed to tell the community what was acceptable and what was not when parking, and special limitations on bin collection day. Once clearly informed with good reinforcement, most landowners would ‘do the right thing’. The group felt that if parking signs were clear, then enforcement with fines would be effective, and would be supported by the community. Landowners would need to clearly warn renters that parking restrictions are enforced.

The Group struggled with what kind of signage would be appropriate. What is legally required? The Group also felt that dozens of ugly signs would spoil the streetscape. Would it be sufficient to put up a sign at one for the four entry points to the villages, explaining that the roadway is to be kept clear for service vehicles at all times?

While a yellow line on bitumen banning parking was supported in certain places, what is the equivalent on a dirt road?

Turning areas would need to be kept clear at all times and are a prime place for parking signs.

There is much work to be done on fine tuning parking signs. A later workshop with landowners and COS together to refine a parking strategy for the villages, is a high priority.

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<sup>3</sup> Victorian Transport Association, "A Guide to Occupational Health and Safety" – Transport Industry – Safety Priorities – Traffic Management

Table 2 Summary of Solutions

| Item  | Description   | Priority | Remarks                          |
|---|---|----------|----------------------------------|
| Steel W Barriers  | Required only at a few tight corners eg in Karingal Olive and end Mitchell  | Medium   |                                  |
| Roads in poor condition                                 | Target the few failures and use good quality crushed rock locally as needed   | Medium   | Parts of Riverside Dv.           |
| One way systems   | Not required  | Na       |                                  |
| Smaller truck   | Important for new turning points, thereby limiting reversing to a minimum. Ensure turning points are achievable before investing!             | High     | Being investigated by WW and COS |
| Turning points  | Critical to reduce long reversing of truck. Joint cooperation of landowners and COS on locations.   | High     |                                  |
| Slashers Bypass   | Stop truck going through the middle part. Reverse close to the area in the short term. Find a turning point suitable for the new small truck. | High     |                                  |
| Corral or collection point at Bird's Track (end Morley) | Fullback for Slashers if no turning point is found at south end.  | Tba      |                                  |
| Corral in McCrae  | Fullback if no turning point in Mc Crae   | Tba      |                                  |
| Corral in Sturt   | Not possible  | Na       |                                  |
| Corral in Stanway                                       | Favoured by some landowners   | Low      | More info needed                 |
| Bass Av collection point                                | Continue current arrangement of bringing bins down road to a collection point.  | na       |                                  |
| Alternative manual methods                              | May be needed for Sturt after reversing ceases.   | Low      | Can COSWorks do this?            |
| Spotters  | Use in a short term high risk situation   | Low      |                                  |
| Weekend collection                                      | Not favoured  | Low      |                                  |
| Parking restrictions                                    | Workshop a parking strategy with COS. Get buy-in at public meeting.   | High     |                                  |

## 6 COMMUNITY INVOLVEMENT AND SUPPORT

### 6.1 Getting support

It is important to take landowners on a journey where they understand the problems with bin collection and how they can be part of the solution. There is residual goodwill and a desire to have the villages looking good, with efficient collection and bins off the streets.

Getting landowners help to find turning locations suitable for a small truck is the most urgent task. This can be raised at the public meeting of 26 Aug, and followed up with the few landowners affected. Our Group can help explain why turning points are needed.

### 6.2 Putting bins away

At the 9 July meeting there was growing acceptance that landowners need to put their bins away. It is clear to the Group that following that meeting, many bins that have been on the street for months have quietly vanished. Some periodic enforcement when guidelines are clear should do the rest.

There are a few local individuals and businesses who are interested in putting bins away for a fee. The Lorne contractor who puts bins away in Lorne would need a critical mass of customers to make a business proposition. Some services cost \$5 per bin to put bins away.

### 6.3 Information to owners and renters on bin placement

Landowners might be surprised to learn how a few small things would make bin collection simpler. The truck driver has evolved some simple points that many landowners would help with if they knew.

Some points are:

- Simple self-adhesive notes could go on bin lids telling residents and particularly renters what side of the road the bin should go and what to do with it, on what day
- When placed at the gutter edge of an embankment, there should be some kind of platform like half a pallet so the bin stands vertical, and the bin can be placed back by the truck. It would also ensure the bin is off the roadway. [It is not clear whether this would cause maintenance problems with the drains, but as long as the pallet could be removed for periodic drain clearing this shouldn't be a problem.]
- When placed on the outer road shoulder above a drop, there should be some kind of flat base and a retainer such as a post to stop the empty bin falling down the embankment before and after collection.
- Where possible, the bin run should be done so most bins are on the inner gutter side. This is safer for the truck and allows car flexibility to park on the outer shoulder as they do already. It is also more protected from wind. It is common for bins on the outer verge to be blown over the side. Eg in Dunoon Rd

## **7 CONCLUSIONS**

In talking with landowners, it is clear to the Group that there is a lot of goodwill to come to a better arrangement that will improve the town.

New turning points will result in less reversing and a safer place for residents.

Putting bins away will improve the streetscape and make waste collection more efficient.

Reducing road congestion caused by a few individuals can be achieved by sensitive signage and enforcement. Then critical service vehicles like the waste truck and the fire tanker can do their job to the benefit of the community. Owners will be able to move freely on summer roads.

Information to owners about appropriate bin placement will make collection and putting away easier.

Finally, by landowners and COS working together, solutions can be found that benefit everyone.

Rex Brown, Sherryl Smith, Prof Mark Stokes, John Harris, Dr Andrew Pattison,  
Peter Jacobs, Yvonne Sheppard, Peter Mitchell, Jany McPhee

### **The Waste Consultative Group**

## Appendix A

### Waste Consultative Group Members

- Rex Brown (Sep, Resident)
- Sherryl Smith (Wye, Resident)
- Prof Mark Stokes (Sep)
- John Harris (Wye)
- Dr Andrew Pattison (Sep)
- Peter Jacobs (Sep, Resident)
- Yvonne Sheppard (Wye, Resident)
- Peter Mitchell (Wye, Resident)
- Jany McPhee (Wye, Resident)

## Appendix B

### Safety guidelines on vehicle reversing

#### 1. Vehicle reversing distance limit

- 1.1. Investigation reveals that, neither the Occupation Health and Safety Act 2004 or the Road Safety Rules 2009, defines the actual limit on how far a vehicle can reverse.
- 1.2. The relevant clauses from both Acts were included in the Council Information Sheet provided at the 8 July public meeting. They say:
  - 1.2.1. **Occupational Health and Safety Act 2004, Part 3 – General Duties Relating to Health and Safety, Section 26 – Duties of persons who manage or control workplaces.**
    - (1) A person who (whether as an owner or otherwise) has, to any extent, the management or control of a workplace must ensure so far as is reasonably practicable that the workplace and the means of entering and leaving it are safe and without risks to health.
    - (2) The duties of a person under subsection (1) apply only in relation to matters over which the person has management or control.
    - (3) An offence against subsection (1) is an indictable offence.
  - 1.2.2. **Road Safety Rules 2009, Part 18 – Miscellaneous Road Rules, Section 296 – Driving a vehicle in reverse.**
    - (1) The driver of a vehicle must not reverse the vehicle unless the driver can do so safely.
    - (2) The driver of a vehicle must not reverse the vehicle further than is reasonable in the circumstances.
- 1.3. This was confirmed by telephone enquiry with the authorities, any such action being based on safety and common sense.

#### 2. Best Practice in relation to reversing vehicles:

- 2.1. Information sought from the Operations Manager of JJ Richards & Sons, a large waste disposal contractor based in Dandenong, operating for 75 years and with extensive experience in local government garbage pick-up including rural areas, revealed -
  - 2.1.1. Limitations on reversing distances are an industry-wide accepted 'best practice', despite no 'safe' distance actually being specified in any regulations.
  - 2.1.2. An industry view of the necessity for a truck to reverse more than 30 metres would be that either the road or pick-up system needs to be re-assessed.
  - 2.1.3. Garbage trucks in reverse are always considered dangerous, always looked at in a negative light and would almost certainly not be looked upon

favourably in any court action.

- 2.2. Another enquiry to another waste disposal company revealed that company was unaware of the 30 m 'best practice' guideline. It seems the 'best practice' guideline is not universal across the industry.
- 2.3. Victorian Transport Association

In its publication, A Guide to Occupational Health and Safety – Transport Industry –

- 2.3.4. the 'Safety Priorities – Traffic Management' section states:

"A management plan should be developed for all traffic movement in the workplace, in consultation with employees. Employee knowledge of problem areas and 'near miss' incidents should be used to comprehensively manage risks."

and goes on to recommend that (amongst others) the following points should apply:

- \* "Basing speed limits on reaction times and stopping distances. For example, blind corners give very little opportunity to react and stop, so speed limits should be set very low in these areas.
- \* Avoiding the need for vehicles to reverse, where reasonably practicable. Ensure that warning devices and trained 'spotters' are used where vehicles *must* reverse or manoeuvre in a confined area or in the vicinity of pedestrians."

3. Safety and warning devices should include -

- 3.1. Camera(s) on the rear of the truck providing the driver with optimal vision of the road behind.
- 3.2. The usual audible reversing warning signal.
- 3.3. A trained 'spotter' (as above) for any reversing distances considered, in any way, an unreasonable risk to the driver and the public.



## Appendix C

### Evaluation of the Garbage Collection Safety Review prepared by GHD for Colac Otway Shire Council.

**Prof. Mark A. Stokes PhD**

As a member of the Wye River and Separation Creek consultation group appointed by the Colac Otway Shire, in consultation with my fellow members I have undertaken an evaluation of the Colac Otway Shire Council Garbage Collection Safety Review prepared by GHD for the Colac Otway Shire (COS) by GHD. My qualifications to undertake this evaluation are:

1. I hold a PhD in Psychology
2. I am a Professor (Associate) of Psychology in a leading School within a leading University (Deakin University).
3. I am the author of more than 100 international peer reviewed publications, book chapters, reports, and conference presentations, many specialising in various aspects of safety, including road safety.
4. I have 15 years experience in injury prevention and road safety research.
5. I have more than 25 years experience as a researcher at various leading national and international universities
6. I am a past President of Kidsafe Victoria, and President of Kidsafe Australia, an internationally renowned child and road safety organisation.
7. For three years I was Head of the Injury Prevention Unit at Monash University's Accident Research Centre, leading much research into questions of road safety. For the three years prior to this I was a senior research fellow in this unit.
8. For ten years I have been the head of mathematical statistics in Deakin University's School of Psychology (Australia's second largest Psychology School).

This report's conclusions are based upon a number of assumptions which when examined, are not reasonable to make, and do not remain able to support their conclusions.

*Assumptions:*

- Assumption 1.
  - Section 2.1 "The roads are generally narrow (less than 4.0 m wide)"
  - This assumption appears untested. Nowhere in the report are details of this assessment reported.
  - If it was tested, which roads and locations were measured for width, and what was the starting and end width defined as?
  
- Assumption 2.
  - Section 2.1 "many are very steep"
  - This assumption appears untested. Nowhere in the report are details of this assessment reported.
  - If it was tested, which roads and locations were measured for slope, and what was the starting and end point of slope defined as?
  
- Assumption 3.
  - Section 2.1 "during the tourist season ... it is understood that traffic volumes on the roads can be disproportionately high for these types of road."
  - Section 2.3 "that during the summer, the roads can be disproportionately busy"
  - This traffic volume data is assumed and not tested in these two related assumptions.
  
- Assumption 4.
  - Section 2.1 "that vehicles parking on the side of the road can be a problem, as they often do not leave enough room for the garbage truck to pass"
  - This parking and traffic data is assumed and not tested.
  
- Assumption 5.
  - Section 2.3 "the garbage truck is often blocked by parked cars"
  - This empirical data is assumed and not tested
  
- Assumption 6.
  - Section 2.3 "A GHD traffic engineer (who is also a VicRoads-accredited senior road safety auditor) rode in the garbage truck ..."
  - "Many issues were ... raised by the driver"
  - Was the driver sufficiently experienced to be able to raise concerns fairly?
  - What steps were taken to not introduce demand bias characteristics in the driver's responses to questions?

- Conclusion 1.
  - Section 2.3: “The observations made are therefore likely to be a ‘best case scenario’ as very few other vehicles were encountered.”

This conclusion is based upon assumptions 1 to 6, and therefore is likely to be unreasonable. However, this conclusion was qualified with the following:

“the safety assessment has been undertaken without conditions during the tourist season being observed, the hazards and recommendations do consider the potential impacts on road safety of parked cars restricting garbage collection services, although it is pointed out that these potential impacts are anecdotal.” (Section 2.3)

*Premises from reliable data:*

Three statements are made in the report that when taken together contradict the conclusions of the report.

1. Though the Colac Otway Shire Planning Scheme (Clause 56.06, Table C1) requires roadways be 5.5 metres wide excluding verges and parking areas, it is pointed out that this not applicable retrospectively.

“While many of the standards outlined above cannot be applied retrospectively it should be noted that these standards give an indication of what is currently accepted and being adopted for new developments in Victoria...” (Section 2.4)
2. The conditions preclude drivers reaching speeds of 50 km/h.

“the default speed limit of 50 km/h generally applies, although it is sign posted lower in places. However, due to the condition of the road surfaces in many locations, it would be very difficult to achieve this speed.” (Section 2.1)
3. There have been no recorded casualty crashes within the townships of Wye River and Separation Creek in the last five years; as evidence by the report “that during the five-year study period, no casualty crashes were reported to the police” (Section 2.2)

Taken together, these three statements point out that the assessment needed to be made with regard to the planning scheme in place when roadways were set out and gazetted. That high speeds are extremely unlikely. Last, that to date, no casualty crashes have been reported within the townships suggesting the future likelihood of these occurring as very low. These conclusions should bear upon the risk assessment undertaken, and yet, surprisingly, they are not considered

The report relies upon a widely accepted risk assessment model, the Austroads Guide to Road Safety: Part 6 – Road Safety Audit (2009). This requires a number of judgements be made by the user. Among these judgements are those of crash frequency. Examination of Table 1 (& Table 1 of the Colac Otway Shire Council Garbage Collection Safety Review) reveals on the basis of available crash data (“that during the five-year study period, no casualty crashes were reported” Section 2.2), there is no evidence to conclude any crash frequency greater than “Improbable”, with a possible exception in the instance of excessive caution of “Occasional”, whereby it would be concluded that

**Table 1: Crash frequency. After Table 1 of Colac Otway Shire Council Garbage Collection Safety.**

| Crash frequency | Description  |
|-----------------|--|
| Frequent {F}    | Once or more per week                              |
| Probable {P}    | Once or more per year, but less than once per week |
| Occasional {O}  | Once every 5 to 10 years                           |
| Improbable {I}  | Less than once every 10 years                      |

events not previously recorded may at some time in the future yet occur.

A second table assess severity of incidents, and requires substantially more judgment by the user than does Table 1 (see Table 2). In order for an event to be classified as “Catastrophic” multiple deaths must be likely; in order for an event to be classified as “Serious” death or serious injury must be likely; and so on through “Minor” and “Limited”. The proper use of this table directly relies upon the notion of likelihood.

**Table 2: Crash severity. After Table 2 of Colac Otway Shire Council Garbage Collection Safety.**

| Severity         | Description                                   | Examples  |
|------------------|---|---|
| Catastrophic {C} | Likely multiple deaths                        | <ul style="list-style-type: none"> <li>• High-speed multi-vehicle crash on a freeway</li> <li>• Car runs into crowded bus stop</li> <li>• Bus and petrol tanker collide</li> <li>• Collapse of a bridge or tunnel</li> </ul>                            |
| Serious {S}      | Likely death or serious injury                | <ul style="list-style-type: none"> <li>• High or medium-speed vehicle/vehicle collision</li> <li>• High or medium-speed collision with a fixed roadside object</li> <li>• Pedestrian struck at high speed</li> <li>• Cyclist is hit by a car</li> </ul> |
| Minor {M}        | Likely minor injury                           | <ul style="list-style-type: none"> <li>• Some low-speed vehicle collisions</li> <li>• Cyclist falls from bicycle at low speed</li> <li>• Left-turn rear-end crash in a slip lane</li> </ul>   |
| Limited {L}      | Likely trivial injury or property damage only | <ul style="list-style-type: none"> <li>• Some low speed collisions</li> <li>• Pedestrian walks into object (no head injury)</li> <li>• Car reverses into post</li> </ul>  |

Likelihood is formally defined in the scientific and engineering literatures as the formal probability ( $p$ ) of the event ( $e$ ) for the truth of a given state ( $\theta$ ):  $P(e|\theta)$  (cf. Howson & Urbach, 2006; Field, 2009; Tabachnick & Fidell, 2007). In turn, criteria for this is formally defined as being an event that rarely occurs, set by convention as being a 1 in 20 or 0.05 probability of occurring; and by definition, something is likely if it will occur at 19 in 20 events ( $p \geq 0.95$ ). However, this is a restrictive definition, and consequently, a more usually accepted definition of likely is an 8 in 10 chance of the event occurring  $P(e|\theta) \geq 0.8$  (cf. Howson & Urbach, 2006; Field, 2009; Tabachnick & Fidell, 2007). Scientific literature therefore defines likely events as those that occur at some specific frequency greater than chance, and in the absence of a fair estimate of chance (cf. Howson & Urbach, 2006), a default value of 0.80 (8 in 10 events) or greater is generally relied upon. However, in more common parlance, it is generally meant that something is likely if it happens more often than not, which would be something that was likely to happen half or more of the time (5 in 10 incidents or  $p \geq 0.50$ ). This liberal criterion for the meaning of likely will be adopted herein.

As no considered event in the present report exceeds "Serious", only the likelihood of events at or below this level will be considered. For an event to be "Serious", it must be likely that death or serious injury will result from an event. This means that 0.50 or in 5 in 10 incidents a serious injury or death will result. For instance, this means that in 5 of every 10 vehicle collisions with pedestrians, the energy involved will result in death or serious injury. For this to be likely, vehicle must be able to attain speed sufficient to cause serious injury or death. This will occur at low speeds; speeds greater than 40km/h are generally considered likely to result in serious injury or death, yet speeds at or below this are generally considered unlikely to result in serious injury or death on the basis of crash evidence.

The Victorian State Government (Cameras Save Lives, accessed 13<sup>th</sup> August, 2012) publishes the data

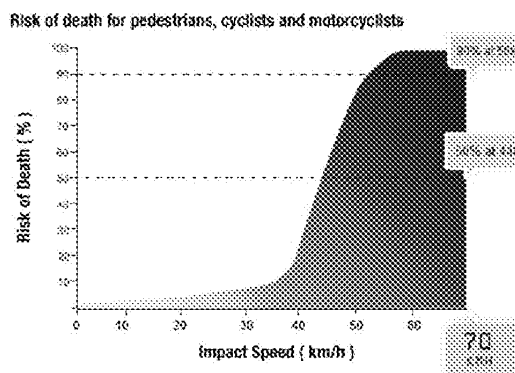


Figure 1: Risk of death for an unprotected pedestrian as a function of vehicle speed at time of impact (from Cameras Save Lives (2012), after Corben et al. (2004)).

in associated in Figure 1, indicating the likelihood of fatal injuries for an unprotected pedestrian struck at various crash speeds; this data is originally derived from Corben et al. (2004). This data gives the following logistic relation:  $P = \frac{1}{1 + e^{-b_1(v - b_0)}}$ <sup>4</sup>. This in turn reveals that at a terminal speed (after braking and before impact) of 40km/h the risk of death is 26%. Rarely do vehicles terminate at speeds they were travelling at, as drivers brake to avoid collision, and thus, on the roads in Wye and Separation Creek, where it has been recognised by GHD it is unlikely that vehicles

<sup>4</sup> Where the value of  $b_0$  is set to 20610.33 and  $b_1$  is set to 0.223 in order to fit the function.

will attain speeds of 50km/h, it is likely vehicles will have terminal velocities well below 40km/h. At terminal velocities of 30km/h, the risk of death is below 4%. Thus, it may be concluded that there is a low likelihood of death or serious injury resulting from vehicle impacts is very low in Wye and Separation Creek. Therefore, other than on the Great Ocean Road, the most likely outcome of vehicle collisions in the streets of Wye River and Separation Creek will be at very low speeds, and as such will have a minor or limited severity (cf. Table 2).

Despite the risk from vehicle impacts of death and serious injury being low in Wye River and Separation Creek, another cause, vehicle rollover from roadway edges, is a potential risk. A recent report prepared for the RACV by Monash University Accident Research Centre addresses this question in part (RACV, 2006). It is revealed that over the five years 1999 to 2003, there were 13406 rollover crashes in VIC, NSW, QLD, WA, and NZ from all rollover causes. Of these, 1679 resulted in serious injury, and 203 resulted in fatalities. Annualised, this reduces to 2681.2 rollover crashes, with 335.8 serious injury crashes, and 40.6 fatal crashes each year across these five jurisdictions. When these figures are then corrected to represent the Victorian proportion of this population (VIC: 3,282,000; NSW: 4,468,377; QLD: 2,528,609; WA: 1,335,412; and NZ: 3,850,000), Victoria constitutes 21.2%, rendering there to have been approximately 568.4 rollover crashes averaged over the state for the years 1999 to 2003, with on average 71.2 (12.5%) resulting serious injury, and 8.6 (1.5%) resulting in death each year for all classes of vehicle for all causes of rollover. Rollover events for larger vehicles are so infrequent, that they are not separated in the data. Thus, it must be concluded that the likely outcome of a rollover events from roadway edges in Wye River and Separation Creek will be severe with a 1.5% risk of death and a 12.5% risk of serious injury, in the unlikely event it should occur.

Nonetheless, given the crash results reported by GHD reveal there “that during the five-year study period, [there have been] no casualty crashes” (Section 2.2 GHD), it is unlikely that such events will occur in the future. Consequently, the likelihood of such an event must be considered when apportioning severity and frequency. While such an event may be a severe event, should it occur, it is shown here to be an extremely unlikely event. The risk of such events can be further mitigated by adequate training of drivers, and ensuring speeds are appropriate for road conditions.

The report by GHD then presents a matrix of the level of risk as a function of Frequency by Severity (cf. Table 3). Value judgements are made with respect to each combination of frequency and severity.

Using the matrix in Table 3, and the guidelines in Tables 1 and 2, with the evaluation of risk modelled upon likelihood of an event occurring as per Table 1, and its severity as per Table 2, we set out in Table 4, below, GHD’s original risk assessment, together with the Committee’s risk assessment. In eleven instances, we disagree with GHD’s overall risk assessment. These are detailed in notes following.

Table 3: Level of risk. After Table 2 of Colac Otway Shire Council Garbage

| Frequency    | Low       | Medium    | High      | Very High    |
|--------------|-----------|-----------|-----------|--------------|
| Occasional   | Low       | Medium    | High      | Very High    |
| Intermittent | Medium    | High      | Very High | Severe       |
| Minor        | High      | Very High | Severe    | Critical     |
| Major        | Very High | Critical  | Severe    | Catastrophic |

Note 1: Mitchell Grove. GHD have assessed the frequency of edge run-offs as occasional, meaning they will occur once in 5 to 10 years with serious consequences likely. While such consequences may be serious in about 14% of instances, we assess these to be improbable on the basis of current crash data. Thus we assess this to be a Medium Risk location.

Note 2: Olive Street. GHD have assessed the frequency of edge run-offs and collisions with pedestrians as occasional, meaning they will occur once in 5 to 10 years with serious consequences likely. While edge run-offs may be serious in about 14% of instances, and pedestrian collisions serious above 40km/h, we assess these to be improbable on the basis of current crash data. And advise this location be restricted to speeds below 40 km/h. Thus we assess this to be a Medium Risk location.

Note 3: Riverside Drive. GHD have assessed the frequency of edge run-offs as occasional, meaning they will occur once in 5 to 10 years with serious consequences likely. While such consequences may be serious in about 14% of instances, we assess these to be improbable on the basis of current crash data. Thus we assess this to be a Medium Risk location.

Note 4: Karringal Drive. GHD have assessed the frequency of edge run-offs as occasional, meaning they will occur once in 5 to 10 years with serious consequences likely. While such consequences may be serious in about 14% of instances, we assess these to be improbable on the basis of current crash data. Thus we assess this to be a Medium Risk location.

Note 5: Dunoon Road. GHD have assessed the frequency of edge run-offs and collisions with pedestrians as occasional, meaning they will occur once in 5 to 10 years with serious consequences likely. While edge run-offs may be serious in about 14% of instances, and pedestrian collisions serious above 40km/h, we assess these to be improbable on the basis of current crash data. And advise this location be restricted to speeds below 40 km/h. Further, we advise the length of reversing, combined with the apparent narrowness and apparent slope at Dunoon Road necessitates some measure to ameliorate this in particular. Thus we assess this to be a Medium Risk location.

Note 6: Durimbil Avenue. GHD have assessed the frequency of edge run-offs as occasional, meaning they will occur once in 5 to 10 years with serious consequences likely. While such consequences may be serious in about 14% of instances, we assess these to be improbable on the basis of current crash data. Thus we assess this to be a Medium Risk location.

Note 7: Iluka Avenue. GHD have assessed the frequency of edge run-offs as occasional, meaning they will occur once in 5 to 10 years with serious consequences likely. While such consequences may be serious in about 14% of instances, we assess these to be improbable on the basis of current crash data. Thus we assess this to be a Medium Risk location.

Note 8: Wallace Avenue – Crown Land. GHD have assessed the frequency of crashes at intersection with Great Ocean Road as occasional, meaning they will occur once in 5 to 10 years with serious consequences likely. We assess this risk to be improbable on the basis of current crash data. Thus we assess this to be a Medium Risk location.

Note 9: Sturt Court. GHD have assessed there to be occasional serious incidents involving reversing into vehicles or pedestrians. We recognise the difficulty of addressing Sturt Court. However, while the severity of a reversing incident is serious, the frequency of these is improbable on the basis of current crash data. Thus we assess this to be a Medium Risk location.

Note 10: Morley Avenue, Slasher's Bypass. GHD have assessed this location as having incidents that are probable and serious. A single incident is anecdotally reported to have occurred in this location, where there were no consequences. However, should an event occur, the consequences would, on the balance of probabilities, be serious. Nonetheless, the frequency of these events would be likely to occur only once in every 5 to 10 years on the basis of anecdotal evidence, and to never occur on the basis of available crash statistics. Thus, the most appropriate categorisation is to assess this locality as likely to have an occasional incident. Taken together, an occasional frequency together with a serious outcome means that by Table 3, this site should be regarded as being of High Risk. However, one caveat remains. Morley Avenue, Slasher's Bypass is perhaps only just trafficable at present, and may deteriorate over time. Given its current state, it may superficially appear this road should be rated as intolerable. This would be an assessment that considered the psychological state of the judge. As our assessments are made only with respect to the objective evidence, it would be erroneous to include subjective assessments, which may change with the subjective state of the assessor at the time of assessment. Consequently, our assessment remains that Morley Avenue, Slasher's Bypass be rated as likely to have an *Occasional* incident on the basis of current evidence,

and as those incidents are likely to be *Serious*, it should be rated as being *High Risk* with the caveat that it is in all probability an impassable road for large vehicles, and with any further deterioration in surface quality, edging structure, or other conditions, it should be gazetted as impassable by large vehicles.

Note 11: McRae Road. GHD have assessed this as having no risk at present. However, we note that at present the truck is forced to reverse considerable distances up McRae Road, which renders a risk to both property, and to be consistent with other evaluations, means that a risk of pedestrian injury (a serious level of event) is increased to improbable. Therefore, we assess the risk to be Medium Risk at this location.

Note 12: Morley Avenue Service Road. GHD have assessed there to be occasional serious incidents involving reversing into vehicles or pedestrians. We recognise the difficulty of addressing Morley Avenue Service Road. However, while the severity of a reversing incident is serious, the frequency of these is improbable on the basis of current crash data. Thus we assess this to be a Medium Risk location.



Table 4: GHD's risk assessment as per report, together with the Committee's risk assessment.

| Location                        | Hazard   | Consequence   | GHD Assessment |          |        | Committee Assessment |          |        | Notes   |
|---------------------------------|--|---|----------------|----------|--------|----------------------|----------|--------|---------|
|                                 |  |   | Frequency      | Severity | Risk   | Frequency            | Severity | Risk   |         |
| Sarsfield Street                | <ul style="list-style-type: none"> <li>Open drains on both sides</li> <li>No turning area – must reverse out (at least 100 m)</li> </ul>   | <ul style="list-style-type: none"> <li>Running off edge of road when reversing, likely to cause property damage only</li> <li>Reversing into pedestrians</li> </ul>               | Improbable     | Serious  | Medium | Improbable           | Serious  | Medium |         |
| Starway Drive                   | No major hazards identified  | n/a   | n/a            | n/a      | Low    |                      |          | Low    |         |
| Harrington Street               | No major hazards identified  | n/a   | n/a            | n/a      | Low    |                      |          | Low    |         |
| Mitchell Grove                  | <ul style="list-style-type: none"> <li>No formal turning area – can make multiple point turn</li> <li>End of road on cliff top</li> </ul>  | Running off edge of road and falling off cliff  | Occasional     | Serious  | High   | Improbable           | Serious  | Medium | Note 1  |
| Olive Street                    | <ul style="list-style-type: none"> <li>Steep and narrow</li> <li>Open drains on both sides</li> <li>Steep embankments</li> </ul>   | <ul style="list-style-type: none"> <li>Collisions with cars/pedestrians</li> <li>Running off edge of road and slipping down embankment</li> </ul>                                 | Occasional     | Serious  | High   | Improbable           | Serious  | Medium | Note 2  |
| Mclellan Court                  | Narrow and steep   | Potential for property damage only  | Occasional     | Limited  | Low    |                      |          | Low    |         |
| The Bluff                       | No major hazards identified  | n/a   | n/a            | n/a      | Low    |                      |          | Low    |         |
| The Boulevard                   | No major hazards identified  | n/a   | n/a            | n/a      | Low    |                      |          | Low    |         |
| Riverside Drive                 | <ul style="list-style-type: none"> <li>Narrow and steep in places</li> <li>Truck can slip on long grades</li> <li>Steep embankments</li> </ul>   | Running off edge of road and slipping down embankment   | Occasional     | Serious  | High   | Improbable           | Serious  | Medium | Note 3  |
| Karingal Drive                  | <ul style="list-style-type: none"> <li>Narrow and steep in places</li> <li>Steep embankments</li> </ul>  | Running off edge of road and slipping down embankment   | Occasional     | Serious  | High   | Improbable           | Serious  | Medium | Note 4  |
| Dunoon Road                     | <ul style="list-style-type: none"> <li>Narrow and steep</li> <li>No turning area – must reverse out uphill, at least 100 m</li> <li>Concrete surface can be slippery</li> <li>Steep embankments</li> </ul>   | <ul style="list-style-type: none"> <li>Running off edge of road and slipping down embankment</li> <li>Reversing into pedestrians</li> </ul>                                       | Occasional     | Serious  | High   | Improbable           | Serious  | Medium | Note 5  |
| Durimbil Avenue                 | <ul style="list-style-type: none"> <li>Narrow</li> <li>Steep embankments</li> </ul>  | Running off edge of road and slipping down embankment   | Occasional     | Serious  | High   | Improbable           | Serious  | Medium | Note 6  |
| Iluka Avenue                    | <ul style="list-style-type: none"> <li>No turning area – must use Cassidy Track to turn around</li> <li>Very steep at transition to Cassidy Track</li> <li>Lots of tree litter on road</li> <li>Narrow</li> <li>Steep embankments (but protected)</li> </ul> | Running off edge of road and slipping down embankment   | Occasional     | Serious  | High   | Improbable           | Serious  | Medium | Note 7  |
| Koonya Avenue                   | No major hazards identified  | n/a   | n/a            | n/a      | Low    |                      |          | Low    |         |
| Wallace Avenue                  | <ul style="list-style-type: none"> <li>No turn around area – must use Crown land to exit</li> </ul>  | Potential for property damage only  | Occasional     | Limited  | Low    |                      |          | Low    |         |
| Wallace Avenue (Crown land)     | <ul style="list-style-type: none"> <li>Steep on descent to Gt Ocean Rd</li> <li>Narrow</li> <li>Poor visibility onto GOR</li> <li>Overhanging trees can block truck</li> </ul>   | <ul style="list-style-type: none"> <li>Risk of crashes at intersection with GOR</li> <li>Potential for property damage</li> </ul>   | Occasional     | Serious  | High   | Improbable           | Serious  | Medium | Note 8  |
| Morley Avenue (sealed section)  | <ul style="list-style-type: none"> <li>Steep embankments</li> </ul>  | <ul style="list-style-type: none"> <li>Running off edge of road and slipping down embankment</li> </ul>   | Improbable     | Serious  | Medium |                      |          | Medium |         |
| Sturt Court                     | <ul style="list-style-type: none"> <li>Steep and narrow</li> <li>Must reverse downhill</li> <li>No turning area</li> </ul>   | <ul style="list-style-type: none"> <li>Potential for property damage</li> <li>Reversing into vehicles or pedestrians when reversing</li> </ul>                                    | Occasional     | Serious  | High   | Improbable           | Serious  | Medium | Note 9  |
| Morley Avenue (Slashers Bypass) | <ul style="list-style-type: none"> <li>Steep, narrow and winding</li> <li>Unconstructed road</li> <li>Heavily rutted</li> <li>Unsealed and poor quality pavement</li> <li>Steep embankments</li> <li>No opportunity to pass or turn around</li> </ul>        | <ul style="list-style-type: none"> <li>Running off edge of road and slipping down embankment</li> <li>Getting stuck</li> <li>Cannot turn around or pass other vehicles</li> </ul> | Probable       | Serious  | High   | Occasional           | Serious  | High   | Note 10 |
| McRae Road                      | No major hazards identified  | n/a   | n/a            | n/a      | Low    | Improbable           | Serious  | Medium | Note 11 |
| Morley Avenue service road      | <ul style="list-style-type: none"> <li>Narrow</li> <li>No turning area – must reverse out (at least 50 m)</li> </ul>   | <ul style="list-style-type: none"> <li>Property damage</li> <li>Reversing into pedestrians</li> </ul>   | Occasional     | Serious  | High   | Improbable           | Serious  | Medium | Note 12 |

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**Colac Otway Shire Council**  
Garbage Collection Safety Review  
for Wye River and Separation Creek

5 September 2012



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# 1. Introduction

## 1.1 Background

Colac Otway Shire Council is currently considering alternative options for kerbside garbage collection services in Wye River and Separation Creek over concerns raised by the garbage collection contractor regarding road safety in those towns. The safety concerns relate to the nature of the streets being serviced, including alignment, swept paths of service vehicles, traffic volume, kerbside parking, condition of the road surface, lack of turning areas, and so on. In response to the contractor's concerns, Council is exploring alternative arrangements for garbage collection, including establishing drop-off points to which residents would deliver their bins for emptying. However, initial feedback indicates that the community may not be entirely satisfied with this option and Council is now seeking advice on how to proceed.

Council has engaged GHD to carry out an independent road safety assessment of the streets being serviced in Wye River and Separation Creek for the purposes of determining whether those streets are suitable for kerbside garbage collection.

## 1.2 Purpose of this report

The purpose of this report is to determine by risk assessment whether the streets in Wye River and Separation Creek are suitable for kerbside garbage collection. **The qualification 'kerbside garbage collection' is important, as the report does not attempt to assess the suitability of the streets for other traffic,** although many of the risks may also apply to other types of vehicles.

## 1.3 Scope and limitations

This report has been prepared by GHD for Colac Otway Shire Council and may only be used and relied on by Colac Otway Shire Council for the purpose agreed between GHD and Colac Otway Shire Council as set out in section 1.2 of this report.

GHD otherwise disclaims responsibility to any person other than Colac Otway Shire Council arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD has no responsibility or obligation to update this report to account for events or changes occurring after the date that the report was prepared.

The opinions, conclusions and any recommendations in this report are based on assumptions made by GHD described in Section 6 of this report. GHD disclaims liability arising from any of the assumptions being incorrect.

GHD has prepared the preliminary cost estimates set out in Section 6 of this report ("Cost Estimate") using information reasonably available to the GHD employee(s) who prepared this report; and based on assumptions and judgments made by GHD.

The Cost Estimate has been prepared for the purpose of comparing options and prioritising works and must not be used for any other purpose.

The Cost Estimate is a preliminary estimate only. Actual prices, costs and other variables may be different to those used to prepare the Cost Estimate and may change. Unless as otherwise specified in this report, no detailed quotation has been obtained for actions identified in this report. GHD does not represent, warrant or guarantee that the works can or will be undertaken at a cost which is the same or less than the Cost Estimate.

Where estimates of potential costs are provided with an indicated level of confidence, notwithstanding the conservatism of the level of confidence selected as the planning level, there remains a chance that the cost will be greater than the planning estimate, and any funding would not be adequate. The confidence level considered to be most appropriate for planning purposes will vary depending on the conservatism of the user and the nature of the project. The user should therefore select appropriate confidence levels to suit their particular risk profile.



## 2. Existing conditions

### 2.1 Road network

Wye River and Separation Creek are located on the Great Ocean Road, approximately 17 km south west of Lorne. The towns are both built on a hillside and consequently many of the roads serving them are very steep, as well as narrow and unsealed with surfaces of either gravel or bare earth. The towns are both located in a heavily forested area.

The roads are generally narrow (less than 4 m wide) and many are very steep. Most of the roads do not have formalised kerbs and channels, but have open drains at the edge of the roads. There is no street lighting or provision for pedestrians. As a built-up area, the default speed limit of 50 km/h generally applies, although it is sign posted lower in places. However, due to the condition of the road surfaces in many locations, it would be very difficult to achieve this speed.

Traffic volumes are not available, but on-site observations indicate that volumes outside the tourist period are very low. However, during the tourist season, when many of the houses are rented to holiday makers, it is understood that traffic volumes on the roads can be disproportionately high for these types of road. It is also understood that vehicles parking on the side of the road can be a problem, as they often do not leave enough room for the garbage truck to pass.

Examples of the roads are shown in Appendix A.

### 2.2 Crash history

VicRoads' publicly-accessible crash database, CrashStats, has been interrogated for the period 1 January 2007 to 31 December 2011, which is the most recent complete five-year period available. CrashStats is a database of *casualty crashes*; that is, crashes that result in an injury to at least one person involved and which are reported to the police. The database does not contain crashes which result in property damage only.

The study area was the extent of garbage collection services in Wye River and Separation Creek. The analysis indicates that during the five-year study period, no casualty crashes were reported to the police.

Although there have been no casualty crashes in the five-year study period, it is important to note that crash history is not a reliable indicator of future crash performance. Crashes are, by their very nature, random events in that they cannot be predicted. For example, analysis carried out by VicRoads' road safety team indicates that approximately 40% of crashes occur in locations where a crash has never been reported before. Clearly, it is unreasonable to conclude that a location with no crash history is immune from future crashes. However, an understanding of what can cause crashes does allow road safety practitioners to identify locations that may present a particular crash risk. This approach is at the heart of road safety audit and has been applied in this study.

### 2.3 Site inspection

Representatives of GHD and the garbage collection contractor (Wheelie Waste) met on-site on Monday, 9 July 2012 for a normal garbage collection service. A GHD traffic engineer (who is also a VicRoads-accredited senior road safety auditor) rode in the garbage truck and made notes on road safety issues as they were encountered. Many issues were also raised by the driver and these have been incorporated into this study where they relate to road safety.

Another GHD traffic engineer followed behind the garbage truck in a car and filmed the entire route to enable physical constraints to be assessed from outside the vehicle.

The garbage collection service started at approximately 8:00 am and took about two hours to complete. The weather during the site visit was overcast. As it had rained during the night the road surfaces were wet.

It is important to note that the site inspection took place during winter, outside the tourist season. It is understood that during the summer, the roads can be disproportionately busy and that the garbage truck is often blocked by parked cars. The observations made are therefore likely to be a 'best case scenario' as very few other vehicles were encountered. While the safety assessment has been undertaken without conditions during the tourist season being observed, the hazards and recommendations do consider the potential impacts on road safety of parked cars restricting garbage collection services, although it is pointed out that these potential impacts are anecdotal.

#### 2.4 Regulatory context

The vehicles used by Wheelie Waste that currently service Wye River and Separation Creek are approximately 8.8 metres long and 2.5 metres wide and are classed as standard service vehicles under AustRoads guidance. These trucks can carry up to 12 cubic metres of waste.

The areas of Wye River and Separation Creek that have been assessed by GHD are zoned under the Colac Otway Shire Planning Scheme as Township Zones (TZ). Generally roads in Township Zones cater for low daily volumes of traffic while still being of a suitable width and construction to enable servicing of residential properties. There are various definitions of road width and construction standards for roads in rural townships.

Under Table C1 in Clause 56.06 of the Colac Otway Shire Planning Scheme it is stated that a minimum carriageway width of 5.5 metres (excluding verging and on-street parking) should be provided for the following road types, all of which could theoretically be applied to residential streets in Wye River and Separation Creek:

- Access Street – Level 1
- Access Lane
- Access Place

The Infrastructure Design Manual (IDM) is a document that sets out infrastructure design standards and is widely used throughout regional Victoria for new developments. Twenty local councils in Victoria have adopted the IDM, all of whom now belong to the IDM Group, which is the principal body tasked with maintaining the IDM. In the IDM, low traffic volume residential streets should have the following minimum widths (excluding verging, shoulders and off-street parking):

- Access Place – 6.0 metres
- Access Street – 7.5 metres
- Low density residential collector road – 5.3 metres

Furthermore, with regards to infrastructure for new developments, it is stated in the IDM under Section 9.3 (Traffic Management Strategy) and Section 12.4.3 (Rural Roads) that '*Provision for emergency service vehicles, waste and recycling collection vehicles and street-sweepers shall be incorporated such that no vehicles shall need to reverse within the development.*'

Waste trucks currently used by the contractor in Wye River and Separation Creek have similar dimensions to fire trucks used by the Country Fire Authority. Under the Country Fire Authority's 'Requirements for Water Supplies and Access for Subdivisions in Residential 1 and 2 and

Township Zones' it is stated with regards to road width and construction, that 'roads are wide enough for fire trucks to gain access to a safe working area close to dwellings and water supplies whether or not on-street parking spaces are occupied' and 'roads must be constructed to facilitate the safe passage of a laden fire truck in all seasons'. Minimum road widths set out in this document are identical to those set out in Table C1 in Clause 56.06-of the Colac Otway Shire Planning Scheme.

With regards to road grades the CFA's requirements are that 'grades of roads must facilitate the safe passage of a fire truck'. More specifically the 'the average grade must be no more than 1 in 7 (14.4%) (8.1 degrees) with a maximum of no more than 1 in 5 (20%) (11.3 degrees) for no more than 50 metres'.

While many of the standards outlined above cannot be applied retrospectively it should be noted that these standards give an indication of what is currently accepted and being adopted for new developments in Victoria and provide some context for the assessment of waste collection in Wye River and Separation Creek. Many of the roads in Wye River and Separation Creek have road widths and designs that are less than what would be required for new developments to facilitate the safe movement of trucks such as waste trucks.

### 3. Risk assessment framework

The risk assessment framework used in this study is the one set out in the Austroads Guide to Road Safety: Part 6 – Road Safety Audit (2009). For each hazard identified, the system requires an assessment of—

- the likelihood of the hazard causing an incident; and
- the likely severity of an incident should it occur.

Each hazard has been recorded and assessed in accordance with the Austroads guide. The guide recommends that a risk matrix be used to determine the level of risk associated with each hazard. This risk system is described below.

It is important to note that this framework assesses risk from a **road safety** perspective, not from an **operational** perspective. There may be other considerations besides safety that would make a particular street unsuitable for kerbside garbage collection services, but they are beyond the scope of this study.

#### 3.1 Crash frequency

The probable frequency of an incident occurring as a direct result of the hazard is determined using the scale displayed in Table 1.

Table 1 Crash frequency

| Crash frequency | Description  |
|-----------------|--|
| Frequent [F]    | Once or more per week                              |
| Probable [P]    | Once or more per year, but less than once per week |
| Occasional [O]  | Once every 5 to 10 years                           |
| Improbable [I]  | Less than once every 10 years                      |

#### 3.2 Crash severity

The likely severity of the incident which occurs as a direct result of the hazard is determined using the scale in Table 2.

Table 2 Crash severity

| Severity         | Description                    | Examples   |
|------------------|--------------------------------|--|
| Catastrophic [C] | Likely multiple deaths         | <ul style="list-style-type: none"> <li>• High-speed multi-vehicle crash on a freeway</li> <li>• Car runs into crowded bus stop</li> <li>• Bus and petrol tanker collide</li> <li>• Collapse of a bridge or tunnel</li> </ul> |
| Serious [S]      | Likely death or serious injury | <ul style="list-style-type: none"> <li>• High or medium-speed vehicle/vehicle collision</li> <li>• High or medium-speed collision with a fixed roadside object</li> <li>• Pedestrian struck at high speed</li> </ul>         |

| Severity    | Description                                   | Examples   |
|-------------|---|--|
| Minor [M]   | Likely minor injury                           | <ul style="list-style-type: none"> <li>Cyclist is hit by a car</li> <li>Some low-speed vehicle collisions</li> <li>Cyclist falls from bicycle at low speed</li> <li>Left-turn rear-end crash in a slip lane</li> </ul> |
| Limited [L] | Likely trivial injury or property damage only | <ul style="list-style-type: none"> <li>Some low speed collisions</li> <li>Pedestrian walks into object (no head injury)</li> <li>Car reverses into post</li> </ul>   |

### 3.3 Deemed level of risk

The risk matrix in Table 3 is used to assess the level of risk for each hazard. The risk matrix uses a combination of the frequency and severity described above to determine the level of risk for each hazard.

Table 3 Level of risk

|              | Frequent    | Periodic | Occasional | Infrequent |
|--------------|-------------|----------|------------|------------|
| Catastrophic | Intolerable | High     | Medium     | Low        |
| Severe       | High        | Medium   | Low        | Low        |
| Minor        | Medium      | Low      | Low        | Low        |
| Limited      | Low         | Low      | Low        | Low        |

### 3.4 Treatment

Council has provided an approach to treatment for each of the risk ratings listed in Table 3, based on its tolerance of risk. These approaches are outlined in Table 4. It is important to note that this table differs slightly from that given in the Austroads guide (which is more generic), and applies only to garbage collection services.

Table 4 Approach to the treatment of hazards

| Risk        | Approach to treatment   |
|-------------|---|
| Intolerable | Must be corrected before garbage collection services can continue. Alternative waste collection options should be explored.                     |
| High        | Should be corrected or the risk significantly reduced, even if the treatment cost is high, before garbage collection services can continue.     |
| Medium      | Should be corrected or the risk significantly reduced if the treatment cost is moderate but not high. Garbage collection services can continue. |
| Low         | Garbage collection services can continue without alteration to current arrangements.  |

## 4. Road safety review

### 4.1 Safety hazards and level of risk

#### 4.1.1 Overview

The risk assessment framework adopted in this study requires a subjective assessment of both crash frequency and severity. These two elements are then combined to produce a risk rating. The assessment of frequency is based on a number of factors including:

- Road geometry (generally, the more winding a road the worse the visibility and the higher degree of driving skill required);
- Environmental considerations, such as steepness, narrowness and the presence of embankments at the side of the road that may lead to vehicle control problems should an incident occur;
- Driver skill; and
- How these factors affect the movement of a garbage truck on the roads.

The assessment of severity is similarly based on a number of factors including:

- The type of incident;
- The vulnerability of parties involved;
- Potential secondary incidents; and
- Speed.

#### 4.1.2 Methodology

Although this study is not a formal road safety audit, the assessment has been approached in the same way. That is, based on the observations made during the site inspection, on discussions with the garbage truck driver and on an understanding of how crashes occur, hazards have been identified which are deemed to present specific road safety risks. This is different from considering a specific potential incident type and then assessing the likelihood of that incident occurring at a particular location. The assessment has been carried out in the former way to avoid the need to consider every type of incident at all locations. Such an approach has the potential to yield hundreds of problems, most of which would then be deemed to present little or no risk.

#### 4.1.3 General findings

Visiting the site, riding in the garbage truck and talking to the truck driver have revealed the following common safety issues:

- Roads are often unsealed, steep, narrow and winding.
- Some roads have steep embankments. When the road is narrow, this has the potential to result in serious incidents involving the garbage truck running off the road.
- Most roads have open/swale drains. On narrow roads, the truck can slip into the drains and become stuck.
- During the summer months, parked vehicles often block the passage of the garbage truck, leading to potential property damage collisions.

These and other problems are discussed below. Where a location presents two or more hazards with the potential to cause different types of incidents, risk ratings for each incident have been assessed separately. The overall risk rating for a location is then taken as the highest rating from the individual crash types.

#### **4.1.4 Separation Creek**

The safety problems that have been identified in Separation Creek are detailed in Table 5 overleaf.

#### **4.1.5 Wye River**

The safety problems that have been identified in Separation Creek are detailed in Table 6 on page 11.

The precise locations of these problems are shown in Appendix B and the corresponding levels of risk are shown in Appendix C.

Table 5 General safety hazards to garbage collection in Separation Creek

| Location          | Hazard  | Consequence   | Frequency  | Severity | Risk   | Overall risk |
|-------------------|---|---|------------|----------|--------|--------------|
| Sarsfield Street  | Open drains on both sides   | Running off edge of road when reversing; likely to cause property damage only | Improbable | Limited  | Low    | Medium       |
|                   | No turning area – must reverse out (at least 100 m)                                       | Reversing into pedestrians and vehicles                                       | Improbable | Serious  | Medium |              |
| Stanway Drive     | Parked cars during high season  | Collisions with parked cars   | Occasional | Limited  | Low    |              |
|                   | No material hazards identified  | n/a   | n/a        | n/a      | Low    | Low          |
| Harrington Street | No material hazards identified  | n/a   | n/a        | n/a      | Low    | Low          |
| Mitchell Grove    | Truck must make a multiple point turn in an inadequate turning area at the top of a cliff | Running off edge of road and falling over the cliff                           | Occasional | Serious  | High   | High         |
|                   | Sleep and narrow  | Collisions with cars/pedestrians  | Improbable | Serious  | Medium | High         |
| Olive Street      | Open drains on both sides   | Getting stuck in drains – likely to cause property damage only                | Improbable | Limited  | Low    |              |
|                   | Sleep embankments on sharp bends  | Running off edge of road and slipping down embankment                         | Occasional | Serious  | High   |              |
|                   |   |   |            |          |        |              |



Table 6 General safety hazards to garbage collection in Wye River

| Location        | Hazard   | Consequence   | Frequency  | Severity | Risk   | Overall risk |
|-----------------|--|---|------------|----------|--------|--------------|
| Mellean Court   | Narrow and steep – collisions with parked cars                                       | Potential for property damage only  | Occasional | Limited  | Low    | Low          |
| The Bluff       | No major hazards identified  | n/a   | n/a        | n/a      | Low    | Low          |
| The Boulevard   | No major hazards identified  | n/a   | n/a        | n/a      | Low    | Low          |
| Riverside Drive | Narrow and steep in places<br>• Truck can slip on long grades<br>• Steep embankments | Collisions with parked cars<br>Loss of control leading to running off edge of road and slipping down embankment | Occasional | Limited  | Low    | High         |
| Karrigal Drive  | Narrow and steep in places<br>• Steep embankments on bends                           | Running off edge of road and slipping down embankment   | Occasional | Serious  | High   | High         |
| Dunoon Road     | Narrow and steep<br>• No turning area – must reverse out uphill, at least 100 m      | Reversing into pedestrians and vehicles   | Occasional | Serious  | High   | High         |
|                 | • Concrete surface can be slippery<br>• Steep embankments                            | Running off edge of road and slipping down embankment   | Improbable | Serious  | Medium |              |
| Durimbi Avenue  | Narrow<br>• Steep embankments on bends   | Running off edge of road and slipping down embankment   | Improbable | Serious  | Medium | Medium       |

| Location                               | Hazard   | Consequence   | Frequency  | Serious | Risk   | Overall Risk |
|--|--|---|------------|---------|--------|--------------|
| Iuka Avenue                            | <ul style="list-style-type: none"> <li>No turning area – must use Cassidy Track to turn around</li> <li>Very steep at transition to Cassidy Track</li> </ul>   | Collisions with other vehicles at transition                          | Improbable | Serious | Medium | Medium       |
|  |  |   |            |         |        |              |
| Koonya Avenue                          | <ul style="list-style-type: none"> <li>Narrow</li> <li>Steep embankments</li> </ul>  | Running off edge of road and slipping down embankment                 | Improbable | Serious | Medium | Medium       |
|  |  |   |            |         |        |              |
| Wallace Avenue                         | <ul style="list-style-type: none"> <li>No major hazards identified</li> </ul>  | n/a   | n/a        | n/a     | Low    | Low          |
| Wallace Avenue<br>(Crown land section) | <ul style="list-style-type: none"> <li>No turn around area – must use Crown land to exit</li> <li>Narrow</li> <li>Overhanging trees can block truck</li> </ul> | Potential for property damage (collision with overhanging trees)      | Occasional | Limited | Low    | Low          |
|  |  |   |            |         |        |              |
| Morley Avenue<br>(sealed section)      | <ul style="list-style-type: none"> <li>Poor visibility onto GOR</li> <li>Steep on descent to GOR</li> </ul>  | Risk of crashes at intersection with Great Ocean Road (GOR)           | Occasional | Serious | High   | Medium       |
|  |  |   |            |         |        |              |
| Start Court                            | <ul style="list-style-type: none"> <li>Steep embankments</li> <li>Steep and narrow</li> </ul>  | Running off edge of road and slipping down embankment                 | Improbable | Serious | Medium | Medium       |
|  |  |   |            |         |        |              |
| Start Court                            | <ul style="list-style-type: none"> <li>No turning area</li> <li>Must reverse downhill</li> </ul>   | Potential for property damage Reversing into pedestrians and vehicles | Occasional | Serious | High   | High         |
|  |  |   |            |         |        |              |

| Location                        | Hazard   | Consequence   | Frequency  | Severity | Risk       | Overall risk |
|---------------------------------|--|---|------------|----------|------------|--------------|
| Morley Avenue (Slashers Bypass) | <ul style="list-style-type: none"> <li>• Steep, narrow and winding</li> <li>• Unconstructed road</li> <li>• Heavily rutted</li> <li>• Unsealed and poor quality pavement</li> <li>• No opportunity to pass or turn around</li> </ul> | <ul style="list-style-type: none"> <li>• Getting stuck</li> <li>• Losing control</li> <li>• Low speed collisions with other vehicles</li> </ul> | Probable   | Minor    | High       | Inherently   |
| Mercee Road                     | <ul style="list-style-type: none"> <li>• Steep embankments on sharp bends</li> </ul>   | Running off edge of road and slipping down embankment   | Probable   | Serious  | Inherently | Inherently   |
| Morley Avenue service road      | <ul style="list-style-type: none"> <li>• No major hazards identified</li> <li>• No turning area – must reverse out (at least 50 m)</li> </ul>  | Reversing into pedestrians and vehicles   | Occasional | Serious  | High       | High         |
|                                 | Narrow   | Property damage   | Occasional | Limited  | Low        | Low          |

#### 4.1.6 Summary of risks

The hazards identified range in risk from low to intolerable. As indicated in Table 4, the risks rated as intolerable mean that garbage collection services *must* cease until works can be carried out to reduce the risk. Those rated as high mean that garbage collection services *should* cease until works can be carried out to reduce the risk. Council will need to balance the road safety risks against other factors, such as the impacts to residential amenity, costs and operational issues that would arise from ceasing services. These hazards are summarised below.

##### Intolerable risk:

- Morley Avenue (Slashers Bypass) (WR) – losing control, slipping down embankments, getting stuck

##### High risk:

- Mitchell Grove (SC) – falling off cliff
- Olive Street (SC) – collisions with cars and slipping down embankment
- Riverside Drive (WR) – slipping down embankment
- Karringal Drive (WR) – slipping down embankment
- Dunoon Road (WR) – slipping down embankment
- Durimbil Avenue (WR) – slipping down embankment
- Iluka Avenue (WR) – slipping down embankment
- Wallace Avenue (Crown land section) (WR) – risk of crashes at Great Ocean Road
- Sturt Court (WR) – collisions with cars and pedestrians while reversing
- Morley Avenue service road (WR) – collisions with cars and pedestrians while reversing

#### 4.1.7 Implications of risks identified

It is considered that most of these locations can be treated to reduce the risk. However, in the interim period, before works can be carried out, there will need to be an alternative approach to garbage collection to eliminate the risk. This issue would often extend further than the area immediately affected by the hazard. For example, if garbage collection services were to cease on Slashers Bypass, it is likely that the entire Morley Road/Mcrae Road loop would not be serviceable, as the truck would not be able to turn around. This would create a significant operational issue and may mean that residents would have to move their bins to safer, more appropriate collection points.

Although these issues are beyond the scope of this report, it is envisaged that they will be addressed in further stages of work, such as at a SWOT analysis workshop where external stakeholders will provide input to the decision process.

#### 4.2 Potential treatments

There are a number of potential treatments to mitigate the identified safety problems. These generally fall into the following categories:

- Operational treatments
- Physical treatments

Examples of these are given below.

#### 4.2.1 Operational treatments

These treatments do not involve any physical changes to the roads, but rely on changes to the operation of the garbage collection service to produce road safety improvements. These include:

- Ceasing kerbside collection and using common drop-off points to collect garbage
- Use of smaller trucks, which would be better able to negotiate the narrow roads in the area
- Use of alternate vehicles, such as a ute pulling a trailer, to collect bins

The ceasing of kerbside garbage collection would require common drop-off points to be established, to which residents would have to either deliver their bins, or carry their garbage to a large communal bin, for emptying. It is understood that Council envisages an arrangement where drop-off points would be situated at convenient locations and residents would carry their garbage to these locations as part of another trip. The intention is that few new trips would need to be made to dispose of garbage. It is considered that carrying garbage in cars used for private transport may create hygiene concerns and other practicality issues such as not being able to dispose of garbage if a vehicle is temporarily unavailable.

The use of smaller trucks for garbage collection may enable kerbside collection to continue, although some physical improvements to the roads may still be necessary (such as the provision of turning areas and safety barriers where needed). However, while smaller trucks are generally shorter than larger trucks, they are usually just as wide, and the width of the vehicle is often the critical dimension as the roads are so narrow. Consultation with Wheelie Waste indicates that a key consideration when planning garbage collection services is the capacity of the truck to accommodate enough garbage so that return trips to the depot are minimised. In the case of Wye River and Separation Creek, the return trip to the depot in Apollo Bay would take at least an hour, plus transfer time. There would also be an initial cost to Council or Wheelie Waste to purchase the required number of vehicles. In general, this option has been discounted as a short-term treatment, but it may be viable in the long term if additional waste processing facilities can be provided.

The use of alternative vehicles, such as a ute pulling a trailer, would probably have to operate as a shuttle between private residences and a central drop-off point, from where a standard garbage truck would empty the bins. It is likely that such a service would be inefficient, as the capacity of the ute and trailer would require several trips to collect all the bins. This treatment may also introduce manual handling concerns related to the loading of bins onto trailers.

#### 4.2.2 Physical treatments

These treatments would involve physical changes to the roads or their operation to produce improvements in road safety. Generally they involve improving the standard of the roads and include:

- Civil improvements, such as road sealing, stabilisation of dirt pavements, provision of kerb and channel, street lighting, road widening, etc
- Implementing one-way operation
- Improving edge delineation, such as guide posts and guard fences
- Provision of turning areas in culs-de-sac
- Regulatory controls, such as parking restrictions

- Cutting back of vegetation to improve visibility
- Installation of warning signs

It is considered that **civil improvements** have the greatest potential for improving road safety, as most of the identified safety concerns relate to the standard of the existing roads. During the site inspection it was observed that some roads, such as Iluka Avenue, are currently sealed and have formalised kerbs and channels. It is considered that upgrading all roads to this standard would significantly improve road safety and accessibility by garbage trucks.

A lower standard treatment, but still an improvement on existing conditions, would be to stabilise unsealed or dirt pavements with cement. While not as durable as a full seal, the stabilisation of dirt pavements would improve accessibility and mitigate erosion during heavy rainfall. This treatment would also help retain the rural character of the area.

**One-way operation** has the potential to reduce conflicts and therefore improve road safety. However, it would generally reduce accessibility for most residents and would do little to improve accessibility for garbage trucks, other than to minimise the need to pass oncoming vehicles. Generally, the identified hazards do not relate to the directionality of traffic, but to the condition of the roads and the presence of steep embankments at the side of the road. As discussed previously, a major issue during the tourist season is parked vehicles blocking the garbage truck, and implementing one-way operation would not prevent this. The reduced accessibility for residents may result in low compliance, which would reduce the effectiveness of this type of treatment.

**Improving edge delineation** is considered beneficial where there are steep embankments at the side of the road. Guide posts and guard fences are currently present in a number of locations and their installation would be beneficial where there is the risk of vehicles falling over the edge of the embankment.

**The provision of turning areas** in culs-de-sac is considered to be essential where a garbage truck cannot turn around and where making a three-point turn would be unsafe, impractical or not permitted. An example of such a location is at the end of Mitchell Grove in Separation Creek. Currently garbage trucks must reverse into or out of some streets, as no suitable turning areas are available. Enabling the trucks to turn around would improve road safety and accessibility.

**Regulatory controls**, such as parking restrictions, would improve accessibility by ensuring that roads are not blocked with parked cars during collection services. Additionally, it would reduce the incidence of property damage caused by garbage trucks trying to squeeze past parked cars. The introduction of parking restrictions, even if confined to collection days, is likely to be unpopular with residents, as many properties do not have adequate on-site parking and there are few alternative parking areas available. Nevertheless, liaison with Wheelie Waste indicates that parked vehicles blocking garbage trucks is a major problem during the tourist season, with drivers regularly having to ask residents to move their cars so that the trucks can pass. Parking restrictions are supported from a road safety perspective, but it is likely that compliance would be low during the summer, as there are few other locations for people to park.

**The cutting back of vegetation** is likely to be beneficial in only limited locations, as forward visibility is generally considered to be adequate in most locations. This treatment would also create a maintenance burden, as trimming would need to be carried out regularly to stay effective.

Similarly, **the installation of warning signs** is considered to have limited benefit, as the nature of the road safety problems is such that advance warning is generally not required.

#### 4.2.3 Summary of improvement measures

The above discussion indicates that while all measures have the potential to improve road safety, only some will affect the hazards that have been identified. Some of the treatments would also have further-reaching impacts. For example, implementing parking restrictions to improve accessibility for garbage trucks is likely to be inconvenient for residents, as there are few alternative locations to park.

Council has asked GHD to consider the effectiveness of implementing one-way operation on some roads as a way of reducing the road safety risk. These roads are:

- Riverside Drive and Karingal Drive in Wye River; and
- Olive Street in Separation Creek.

As indicated in Table 5 and Table 6, the identified risks on these streets are slipping off the edge of the road and rolling down the embankments. This has the potential to cause serious injury or death to the garbage truck driver. While one-way operation would eliminate the need to pass oncoming vehicles, thereby reducing the need to drive close to the edge of the road, it is considered that it would not be effective for the following reasons:

- There is likely to be low compliance by both residents and holiday tenants if enforcement is not rigorous. The identified risks would therefore not be reduced.
- Discussions with Wheelie Waste indicate that parked vehicles are a greater problem, as they block the garbage truck and often force it to drive close to the edge of the road. One-way operation would not remove this risk.
- There are locations where the truck would need to drive close to the edge of the road even if the road was one-way.

## 5. Risk mitigation

As discussed in Section 4.2, there are a number of treatments available to mitigate the road safety risks that have been identified. While all treatments discussed would have road safety benefits, some would have negative impacts on other performance criteria and have therefore largely been discounted, although they may be used in combination with other treatments. It is likely that the greatest benefits will arise from a combination of treatments, and indeed some treatments will only be effective in combination with others.

### 5.1 Separation Creek

The suggested treatments and their impact on the road safety risk are shown in Table 7 overleaf.

### 5.2 Wye River

The suggested treatments and their impact on the road safety risk are shown in Table 8 on page 20.



Table 7 Recommended treatments in Separation Creek

| Location          | Initial risk (Table 5) | Suggested treatments   | Residual hazard/consequence  | Frequency                  | Severity               | Residual risk      |
|-------------------|------------------------|--|--|----------------------------|------------------------|--------------------|
| Sarsfield Street  | Low                    | Provide turning area   | None identified  | Improbable                 | Limited                | Low                |
| Stanway Drive     | Low                    | No treatment required at this stage  | n/a  | n/a                        | n/a                    | Low                |
| Harrington Street | Low                    | No treatment required at this stage  | n/a  | n/a                        | n/a                    | Low                |
| Mitchell Grove    | High                   | <ul style="list-style-type: none"> <li>Provide turning area</li> <li>Install safety barrier at turning area</li> </ul> Cease services -- residents to deliver bins to alternate location | Barrier strikes  | Probable                   | Limited                | Medium             |
| Olive Street      | High                   | <ul style="list-style-type: none"> <li>Install safety barrier on bends</li> <li>Prohibit parking on service days</li> </ul> Implement one-way operation                                  | Barrier strikes<br><br>Running off edge of road and slipping down embankment | Probable<br><br>Occasional | Limited<br><br>Serious | Medium<br><br>High |

The above treatments are generally expected to reduce the identified risks to medium or low, which is deemed to be suitable for garbage collection services to continue (see Table 4).

Table 8 Recommended treatments in Wye River

| Location        | Initial risk (Table 5) | Suggested treatments  | Residual hazard/consequence                           | Frequency  | Severity | Residual risk |
|-----------------|------------------------|---|---|------------|----------|---------------|
| McLellan Court  | Low                    | Prohibit parking on service days  | None identified                                       | n/a        | n/a      | Low           |
| The Bluff       | Low                    | Prohibit parking on service days  | None identified                                       | n/a        | n/a      | Low           |
| The Boulevard   | Low                    | No treatment required at this stage   | n/a   | n/a        | n/a      | Low           |
| Riverside Drive | High                   | <ul style="list-style-type: none"> <li>Seal road</li> <li>Install safety barriers on bends</li> </ul> | Barrier strikes                                       | Probable   | Limited  | Medium        |
|                 |                        | Implement one-way operation   | Running off edge of road and slipping down embankment | Occasional | Serious  | High          |
| Karingal Drive  | High                   | Install safety barrier on bends   | Barrier strikes                                       | Probable   | Limited  | Medium        |
|                 |                        | Implement one-way operation   | Running off edge of road and slipping down embankment | Occasional | Serious  | High          |
| Dunoon Road     | High                   | Provide turning area  | Running off edge of road and slipping down embankment | Improbable | Serious  | Medium        |
|                 |                        | Cease services – residents to deliver bins to alternate location                                      | None identified                                       | n/a        | n/a      | Low           |
| Dunmbl Avenue   | Medium                 | No treatment required at this stage   | n/a   | n/a        | n/a      | Medium        |
| Jiluka Avenue   | Medium                 | No treatment required at this stage   | n/a   | n/a        | n/a      | Medium        |
| Koonya Avenue   | Low                    | No treatment required at this stage   | n/a   | n/a        | n/a      | Low           |
| Wallace Avenue* | Low                    | Provide turn around area  | None identified                                       | n/a        | n/a      | Low           |

| Location                         | Retail risk (Table 5) | Suggested treatments  | Residual hazard/consequence  | Frequency         | Severity       | Residual risk |
|----------------------------------|-----------------------|---|--|-------------------|----------------|---------------|
| Morley Avenue (sealed section)   | Medium                | No treatment required at this stage   | n/a  | n/a               | n/a            | Medium        |
| Sturt Court                      | High                  | Provide turning area (this may be very difficult to achieve given the land available)<br>Cease services – residents to deliver bins to alternate location | Potential for property damage<br>None identified   | Occasional<br>n/a | Limited<br>n/a | Low           |
| Morley Avenue (unsealed section) | Indeterminate         | <ul style="list-style-type: none"> <li>Construct and seal road</li> <li>Install safety barriers</li> </ul>  | <ul style="list-style-type: none"> <li>Potential for property damage</li> <li>Reversing into vehicles or pedestrians</li> <li>Barrier strikes</li> </ul> | Occasional        | Limited        | Medium        |
| Morae Road                       | Low                   | No treatment required at this stage   | n/a  | n/a               | n/a            | Low           |
| Morae Road service road          | High                  | Cease services – residents to deliver bins to alternate location<br>Continue existing arrangements  | None identified<br><ul style="list-style-type: none"> <li>Property damage</li> <li>Reversing into pedestrians</li> </ul>                                 | n/a<br>Occasional | n/a<br>Serious | Low<br>High   |

\* Although this section of Wallace Avenue is narrow, the risk of collisions with other vehicles is considered low. However, the existing service route uses a road on Crown land which is steep, unsealed and narrow and exits onto the Great Ocean Road where visibility is poor. The risk of collisions at the Great Ocean Road is considered high (see Table 6). Providing a turning area on Wallace Avenue so that garbage trucks do not need to use the Crown road would reduce the risk of property damage and the risks associated with joining the Great Ocean Road.

## 6. Cost estimates and prioritisation

### 6.1 Cost estimates

Each of the recommended treatments has been costed to enable Council to assess the feasibility of continuing garbage collection services in the long term. The costs will also assist in determining whether alternative collection methods are economically viable and in prioritising the works.

The cost estimates have been prepared based on standard unit rates for typical treatments. As no design work has been carried out, the estimates are based on approximate lengths of treatment and do not consider the impacts on underground services or any land acquisition that may be required. An uplift of 25% has been applied to account for the difficult terrain and for the fact that some of the works will probably be carried out in isolation (i.e. not as a complete package). The estimates are shown in Table 9.

Table 9 Cost estimates

| Location                         | Treatment                  | Cost      |
|----------------------------------|----------------------------|-----------|
| <i>Separation Creek</i>          |                            |           |
| Sarsfield Street                 | Turning area               | \$6,200   |
| Mitchell Grove                   | Turning area               | \$3,500   |
|                                  | Safety barrier (W-beam)    | \$11,125  |
| Olive Street                     | Safety barrier (W-beam)    | \$27,000  |
|                                  | Parking signs              | \$4,125   |
| <i>Wye River</i>                 |                            |           |
| McLellan Court                   | Parking signs              | \$1,800   |
| The Bluff                        | Parking signs              | \$2,250   |
| Riverside Drive                  | Seal road (bitumen)        | \$94,000  |
|                                  | Safety barrier (W-beam)    | \$26,450  |
|                                  | Seal road (gravel)         | \$63,400  |
| Karringal Drive                  | Safety barrier (W-beam)    | \$45,375  |
| Dunoon Road                      | Turning area               | \$4,375   |
| Wallace Avenue                   | Turning area               | \$4,375   |
| Sturt Court                      | Turning area (if possible) | Unknown   |
| Morley Avenue (unsealed section) | Seal road (bitumen)        | \$134,500 |
|                                  | Safety barrier (W-beam)    | \$34,500  |
|                                  | Seal road (gravel)         | \$93,150  |

| Location   | Treatment | Cost             |
|--|-----------|------------------|
| <b>Total using bitumen pavements where specified</b> |           | <b>\$399,575</b> |
| <b>Total using gravel pavements where specified</b>  |           | <b>\$327,625</b> |

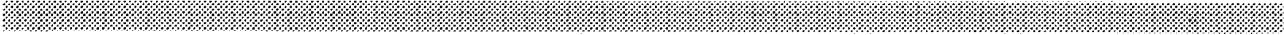
### 6.2 Prioritisation

The treatments have been prioritised in order of pre-treated road safety risk, with the highest risk hazards receiving higher priority. Where a number of hazards have the same risk rating, the priority is based firstly on the impact to garbage collection services (that is, where not addressing the hazard would create operational problems such as removing the ability to turn around, the hazard receives a higher priority) and secondly on the cost of the treatment. The priorities are shown in Table 10.

Table 10 Prioritisation of treatments

| Priority | Location                                     | Treatment                         | Initial risk | Residual risk | Cost      |
|----------|--|-----------------------------------|--------------|---------------|-----------|
| 1        | Morley Avenue (unsealed section) – Wye River | Bitumen surface<br>Safety barrier | Intolerable  | Medium        | \$169,000 |
| 2        | Mitchell Grove – Separation Creek            | Turning area<br>Safety barrier    | High         | Medium        | \$14,625  |
| 3        | Dunoon Road – Wye River                      | Turning area<br>Safety barrier    | High         | Medium        | \$4,375   |
| 4        | Olive Street – Separation Creek              | Safety barrier<br>Parking signs   | High         | Medium        | \$31,125  |
| 5        | Karringal Drive – Wye River                  | Safety barrier                    | High         | Medium        | \$45,375  |
| 6        | Riverside Drive – Wye River                  | Bitumen surface<br>Safety barrier | High         | Medium        | \$120,450 |
| 7        | McLellan Court – Wye River                   | Parking signs                     | Low          | Low           | \$1,800   |
| 8        | The Bluff – Wye River                        | Parking signs                     | Low          | Low           | \$2,250   |
| 9        | Wallace Avenue – Wye River                   | Turning area                      | Low          | Low           | \$4,375   |
| 10       | Sarsfield Street – Separation Creek          | Turning area                      | Low          | Low           | \$6,200   |

Note that the above priorities are based primarily on road safety risk. There may be other considerations which would alter the priority of some treatments. For example, the location with



the highest identified risk is Morley Road (Slashers Bypass) and accordingly this is assigned the highest priority. However, Slashers Bypass is actually on private land and Council has no power or obligation to improve the road. It may therefore move down the list of priorities while a solution is sought.

## 7. Conclusions and recommendations

This study has investigated the safety risks associated with operating kerbside garbage collection services in Wye River and Separation Creek. A site inspection has been carried out to identify the hazards and the risk assessment procedure set out in the Austroads Guide to Road Safety has been used to assess the level of risk for each hazard. Suitable treatments to reduce the road safety risk have been developed, costed and prioritised.

### 7.1 Conclusions

The broad conclusions of this study are:

- Morley Road (Slashers Bypass) in Wye River has been assessed as having intolerable risk. The approach to treatment, as outlined in Table 4, indicates that garbage collection services must cease until the road safety risk can be reduced.
- Several roads in Wye River and Separation Creek have been assessed as having a high risk rating. The approach to treatment, as outlined in Table 4, indicates that garbage collection services should cease until the road safety risk can be reduced.
- The remaining roads have a risk rating of medium or lower. For the medium risk sites, garbage collection services can continue, but works should still be carried out to reduce the safety risk. For the low risk sites, or for those where no hazards have been identified, garbage collection services can continue with no change to existing arrangements.
- Where collection services must cease (i.e. on Slashers Bypass), alternative arrangements will need to be made for collection.

### 7.2 Recommendations

The following actions are recommended:

- Council should engage with the community and stakeholders to finalise a plan of action to address the safety concerns identified in this report. It is considered that this would best be conducted in a workshop environment and comprise of a SWOT analysis to ensure that all parameters are considered.
- Subject to the outcomes of the community engagement process, Council should provide alternative collection arrangements for the unsealed section of Morley Road (Slashers Bypass).
- Council should program in a schedule of works to address the hazards that have been identified. A schedule such as that shown in Table 10 may be a suitable approach.

### 7.3 Next steps

The next step should be to hold a workshop at which a SWOT analysis will be carried out. The workshop should include engagement with a targeted consultation group established from the broader community. Following the workshop, the plan of action should be communicated to the community through public meetings, advertisements, letter drops, etc.







**Appendices**



## A. Site inspection photos

Figure A1 Separation Creek

(a) Olive Street



(b) Olive Street

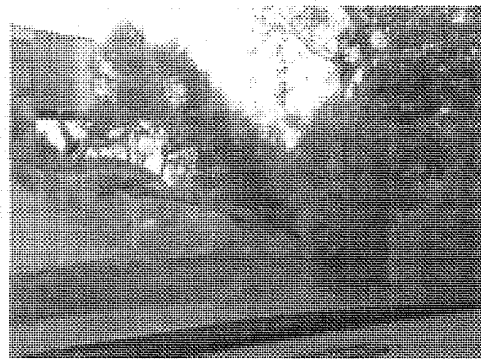
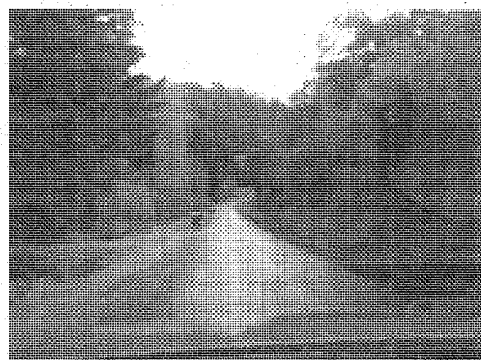


Figure A2 Wye River

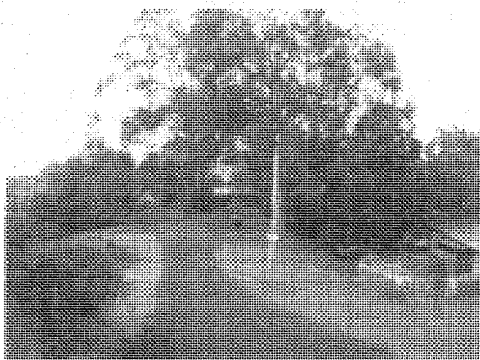
(a) Mclellan Court



(b) The Boulevarde



(c) The Bluff



(d) Riverside Drive



(e) Karringal Drive



(f) Karringal Drive at Koonya Avenue



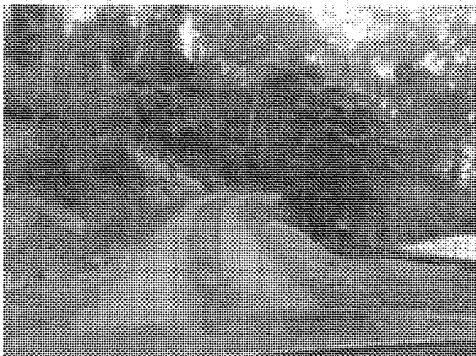
(g) Dunoon Road



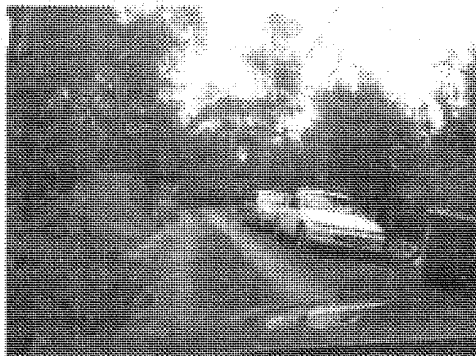
(h) Koonya Avenue



(i) Durimbil Avenue



(j) Iluka Avenue



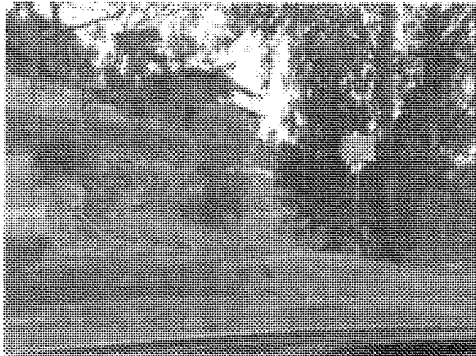
(k) Iluka Avenue at Cassidy Track



(l) Cassidy Track



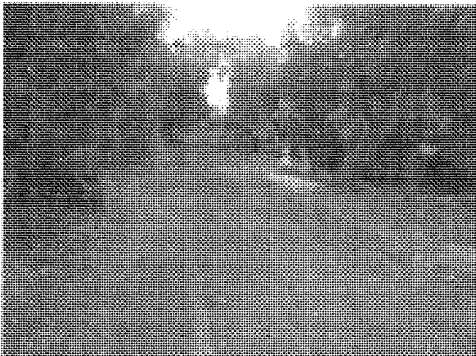
(m) Wallace Avenue at start of Crown road



(n) Wallace Avenue at Great Ocean Road



(o) Sturt Street



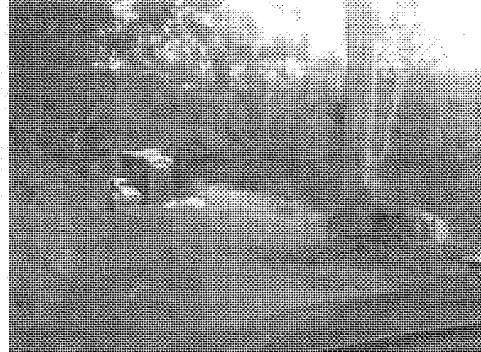
(p) Morely Avenue (Slashers Bypass)



(q) Morely Avenue (Slashers Bypass)



(r) Morely Avenue (Slashers Bypass)



(s) Mcrae Road



(t) Morley Avenue service road





## **B. Identified problems**







GHD | Report for Cape May State Council - Garbage Collection Safety Review 3/28/2012

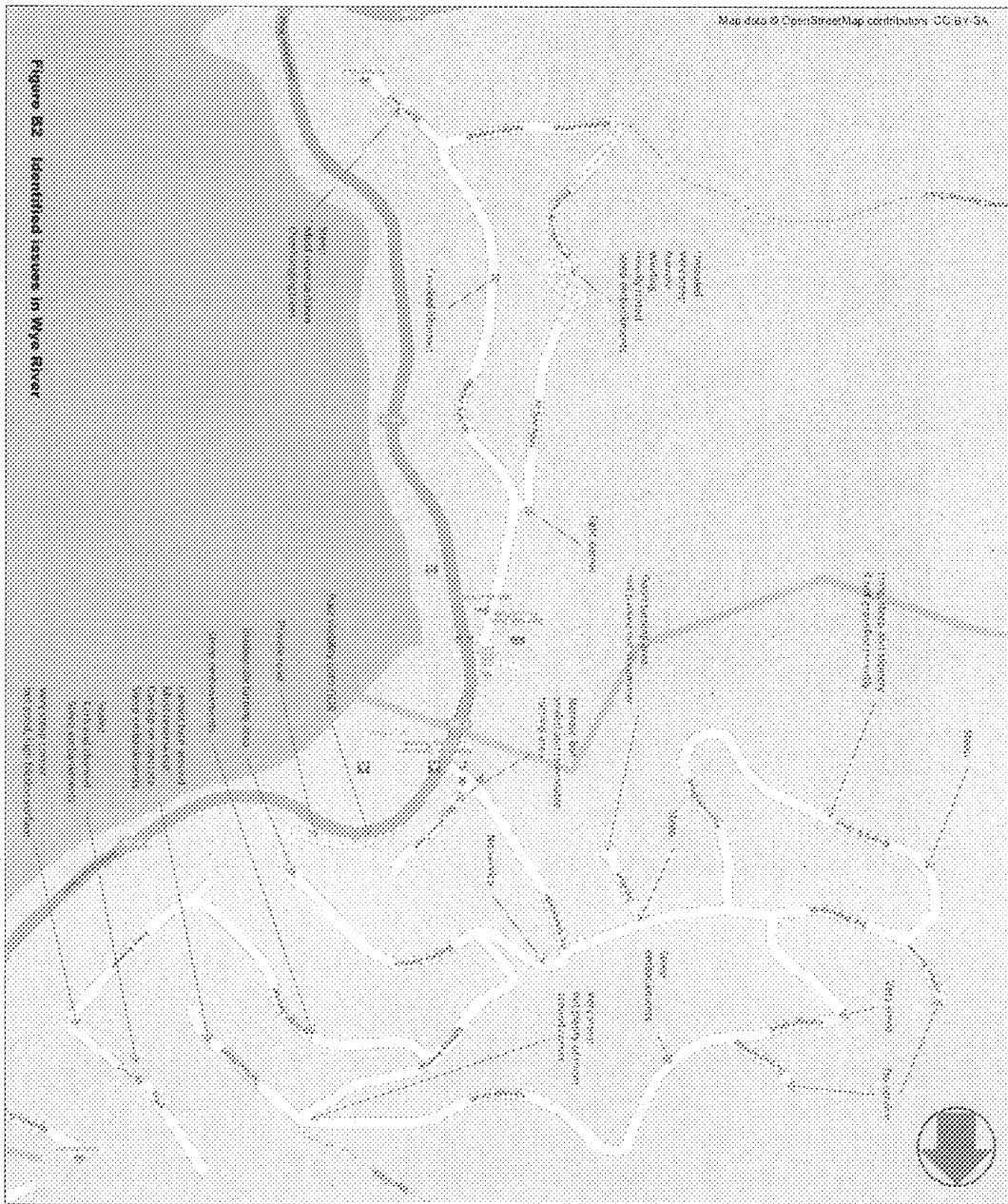


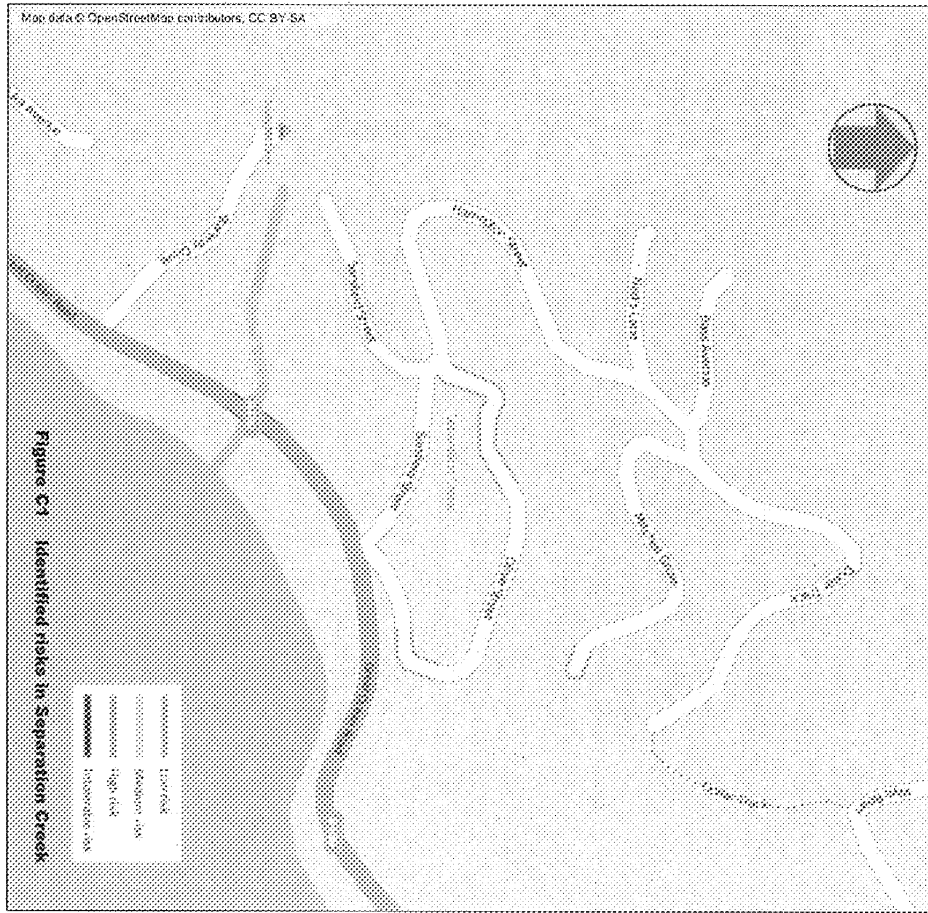
Figure 32 Identified issues for Wye River



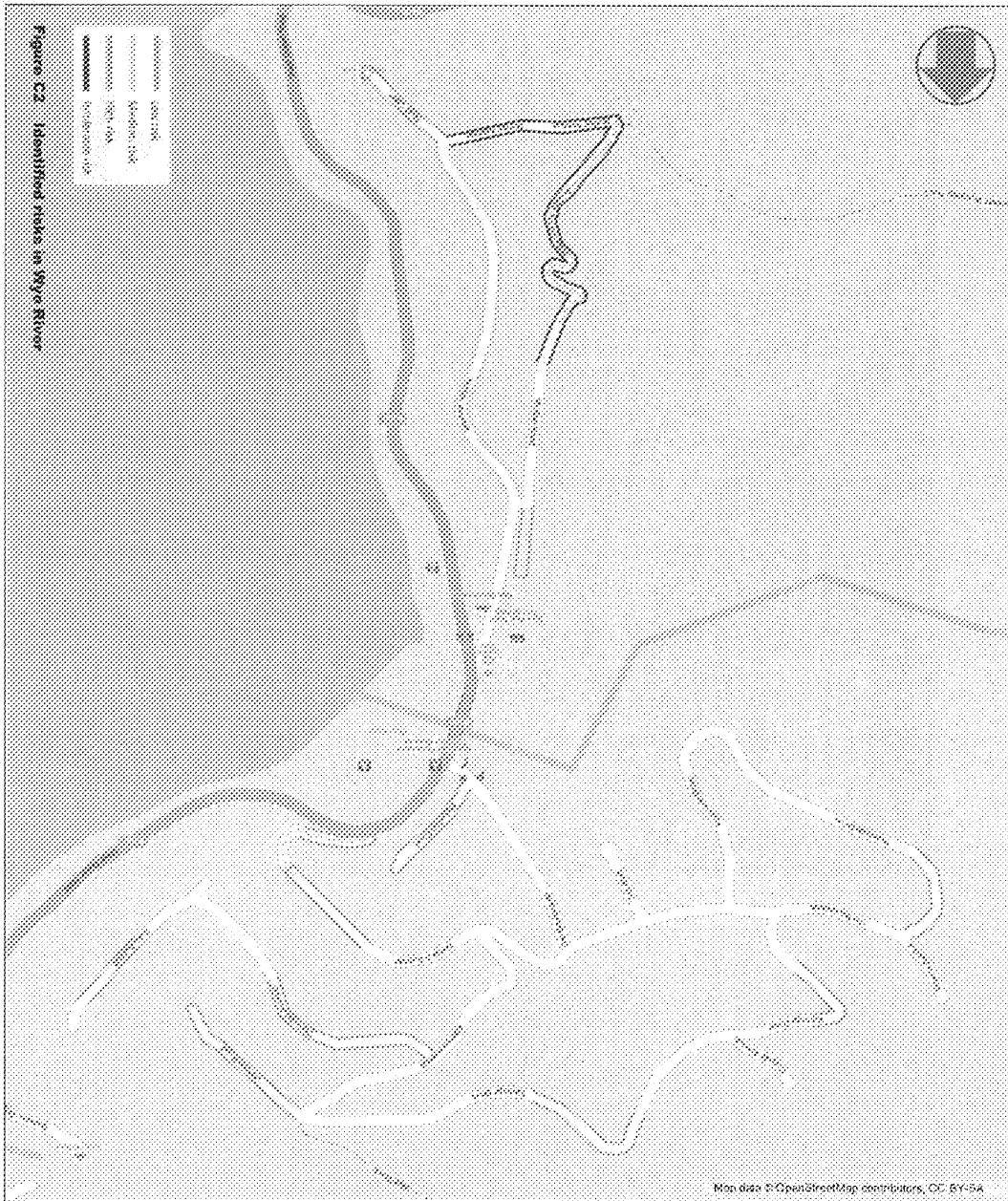
## **C. Identified risks**



GHD | Report for Cape Chesey Shire Council - Garbage Collection Safety Review 31/03/2012



GHD | Report for Ciskei County Waste Services - Garbage Collection Safety Review, 31/03/2012





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Document Status

| Rev No. | Author  | Reviewer  |   | Approved for Issue |   |          |
|---------|---------|-----------|---|--------------------|---|----------|
|         |         | Name      | Signature   | Name               | Signature   | Date     |
| A       | C. Hall | T. Cooper |   | D. Gregor          |   | 27/07/12 |
| B       | C. Hall | T. Cooper |   |                    |   | 01/08/12 |
| C       | C. Hall | T. Cooper |  | D. Gregor          |  | 03/08/12 |
| D       | C. Hall | T. Cooper |  | D. Gregor          |  | 05/09/12 |

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*Planning and Environment Act 1987*

## **Panel Report**

Colac Otway Planning Scheme  
Amendment C65 (Part 1)

**14 August 2012**

*Planning and Environment Act 1987*

Panel Report pursuant to Section 153 of the Act

Amendment C65 (Part 1) to the Colac Otway Planning Scheme

A handwritten signature in black ink, appearing to read 'Trevor', with a long, sweeping horizontal line extending to the right.

Trevor McCullough, Chair

## Amendment Summary

|                             |  |
|-----------------------------|--|
| <b>The Amendment</b>        | Colac Otway C65 (Part 1)   |
| <b>Purpose of Amendment</b> | <p>The Amendment implements a recommendation of the Panel Report for Colac Otway Amendment C55 to:</p> <ul style="list-style-type: none"> <li>• Apply Design and Development Overlay Schedule 6 (DDO6);</li> <li>• Remove Design and Development Overlay Schedule 7 (DDO7); and</li> <li>• Amend the Clause 21.03-3 reference to the subject land bounded by Cawood Street, Great Ocean Road, Murray Street and McLachlan Street in Apollo Bay.</li> </ul> |
| <b>The Proponent</b>        | Colac Otway Shire Council  |
| <b>Planning Authority</b>   | Colac Otway Shire Council  |
| <b>Exhibition</b>           | 22 February 2012 to 4 April 2012 (Exhibited as Amendment C65. Council subsequently split the Amendment into two parts.)  |

## Panel Process

|                            |   |
|----------------------------|---|
| <b>The Panel</b>           | Trevor McCullough   |
| <b>Panel hearings</b>      | The matter was dealt with on the papers with the agreement of Council and submitters  |
| <b>Site inspections</b>    | 3 August 2012   |
| <b>Submissions</b>         | <p>VicRoads – no objection<br/> Country Fire Authority – no objection<br/> Corangamite Catchment Management Authority – no objection<br/> Ms Lewis – objecting submission<br/> Mr Burns – objecting submission<br/> Barwon Water – no objection</p> |
| <b>Date of this report</b> | 14 August 2012  |

# 1 Background

## 1.1 The subject area and surrounds

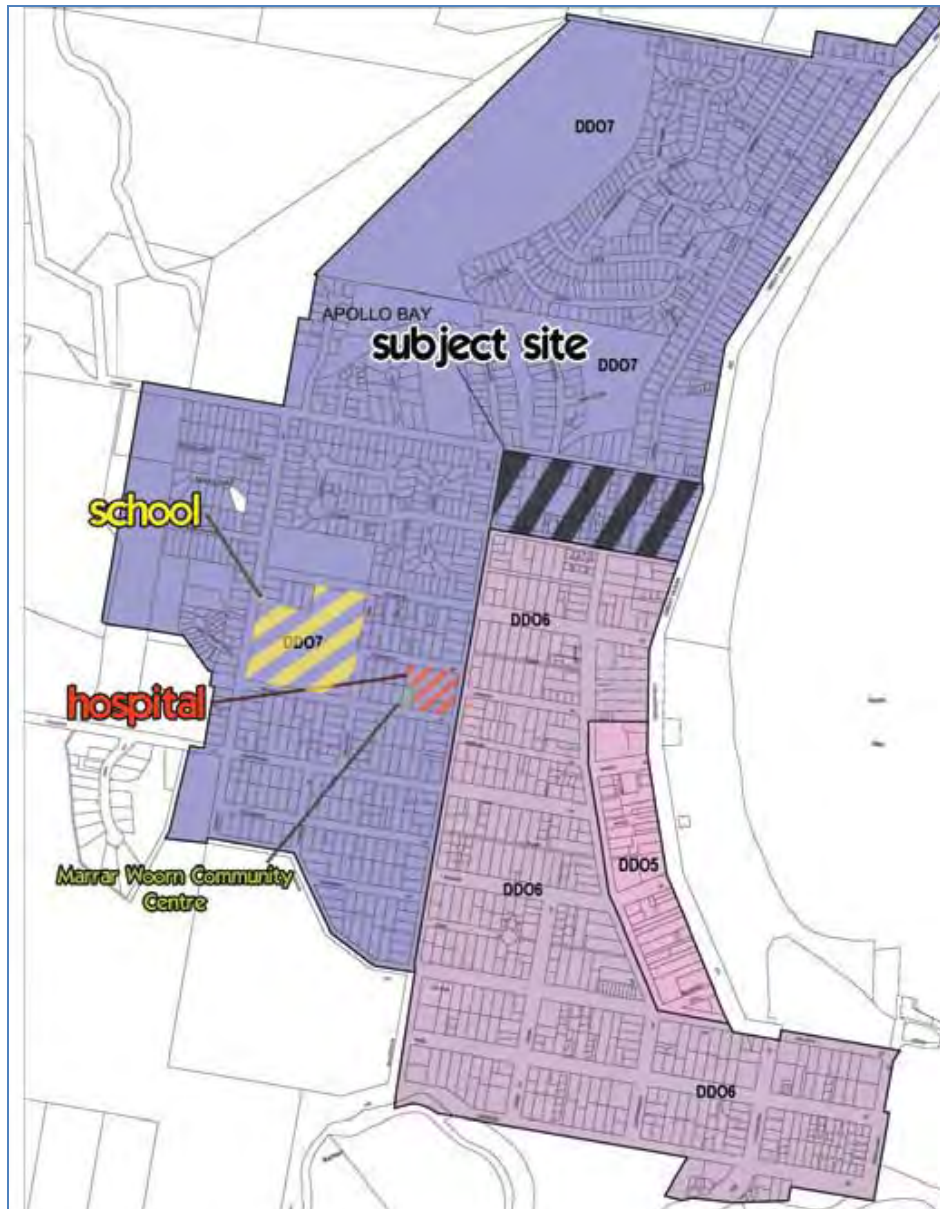


Figure 1 Subject area location (From Council submission)

The subject area is bounded by Cawood Street, Great Ocean Road, Murray Street and McLachlan Street in Apollo Bay and is immediately to the north of the existing DD06 area.

## 1.2 Background to the proposal

Council introduced a new Local Planning Policy Framework (LPPF) in 2009 via Planning Scheme Amendment C55, following a Panel review. Amendment C55 incorporated elements of earlier work on a Neighbourhood Character Study for Apollo Bay. The LPPF, amongst other things, applied the following overlays to the Apollo Bay township:

- DDO5 – applied to the central business district (CBD);
- DDO6 – applied to infill areas close to the CBD (no minimum lot size, encourages medium density residential development); and
- DDO7 – applied to areas further away from the town centre (recognises larger lot sizes and lower density development).

Amendment C55 applied the DDO7 to the subject area. The Amendment C55 Panel concluded that there was merit in the argument put by Council and one submitter to extend the DDO6 area north to Cawood Street, however it did not recommend that such a change be made at the time of implementing Amendment C55 as it judged it to be a transformation of the Amendment.

The Amendment C55 Panel recommended:

*A ‘follow on’ amendment be prepared upon adoption of Amendment C55 and that amendment include:*

- *Extend the application of DDO6 in Apollo Bay north to Cawood Street.*

The main differences between DDO6 and DDO7 are summarised in the following table:

|                              | DDO6  | DDO7   |
|------------------------------|---|--|
| Objective                    | To achieve graduated density between town centre and lower density areas  | To identify lower density areas  |
| Permit requirement           | No permit required to <u>construct or extend</u> a dwelling if: <ul style="list-style-type: none"> <li>• Less than 8m height; and</li> <li>• Lot is in excess of 300 sq m.</li> </ul> | No permit required to <u>construct</u> a dwelling if: <ul style="list-style-type: none"> <li>• Less than 8m height; and</li> <li>• Lot is in excess of 450 sq m.</li> </ul> No permit required to <u>extend</u> a dwelling if: <ul style="list-style-type: none"> <li>• Less than 8m height; and</li> <li>• Lot is in excess of 300 sq m.</li> </ul> |
| Building and works standards | Additional items to recognise proximity to commercial area  |  |
| Subdivision                  | No requirement  | Non-mandatory minimum lot sizes ranging from 450 – 4,000 sq m depending on precinct. (450 sq m applies to the subject area).<br><br>Larger lot sizes may be required depending on site characteristics.  |

Both schedules apply a mandatory building height limit of 9 m. It is also noted that neither schedule applies a mandatory limit on lot size.

## **2 Issues raised in submissions**

The main issues raised by submitters were:

- Removal of the DDO7 from the subject area will reduce the capacity for development submissions to be based on neighbourhood character;
- The change in overlay schedule will not provide sufficient controls on unwanted and inappropriate development and will threaten the holiday/fishing village character sought to be maintained;
- The change will result in overdevelopment and further exemptions to 9m height limit; and
- Lots along the Great Ocean Road frontage of the subject area are most vulnerable to redevelopment and submitters are concerned that this will impact on this 'gateway site'.

## 3 Panel consideration

### 3.1 Strategic planning context

Council provided a response to the Strategic Assessment Guidelines as part of the Explanatory Report. The assessment was not challenged by any of the submitters.

The Panel has reviewed the policy context of the Amendment and agrees with Council that the Amendment is consistent with, and implements, State and local planning policy.

### 3.2 Existing development

Council submitted that the subject area is substantially developed with medium density residential development and a tourist park, and this has altered the character of the area. Council submitted that the change to the DDO6 *'is required in order to recognise the existing pattern of medium density development in that area and to facilitate further medium density development in that precinct'*. Council argued that the extent of development that has already occurred meant that the DDO7 was no longer the most appropriate control.

Council further submitted that:

- *The precinct currently displays significant patterns of medium density development including no less than 10 multi unit developments and a 50 cabin tourist resort;*
- *The precinct is well located to community, retail and recreational facilities; and adjoins the existing DDO6 area to the south;*
- *Of the 84 lots which contain private dwellings, approximately 39 lots have an area that is under the current minimum of 450m<sup>2</sup> required by the DDO7 which confirms the precinct has already realised a significant portion of its subdivision potential;*
- *There are approximately 27 lots over 600m<sup>2</sup> which could potentially be subdivided given the minimum subdivision area of 300m<sup>2</sup> permissible by the DDO6. Higher density could be achieved by multi unit development;*
- *The application of DDO6 is required in order to recognise the existing pattern of medium density development and to facilitate further medium density development in an area that is a natural extension for this control; and*
- *The precinct is difficult to distinguish as an area that is representative of a low density character and is far more in line with a medium density neighbourhood.*

In support of its submission, Council also relied on the conclusion reached by the Amendment C55 Panel that the subject area should be included in the DDO6. The Panel has reviewed the report of the Amendment C55 Panel and notes that the C55 Panel seems to have accepted the argument from at least one submitter that the area is already substantially developed. The Amendment C55 Panel does not, however, seem to have given detailed consideration to the issue.



### **3.3 Differences between the DDO6 and DDO7 schedules**

Ms Lewis submitted that DDO7 better enables the neighbourhood character objectives of Council to be protected for the subject area. She submitted that DDO6 provides less opportunity to retain the fishing village character of the town. This seems to be a reference to the additional subdivision requirements included in the DDO7 which provide some guidance on where higher lot sizes may be required based on site location and characteristics.

Council submitted that both the Apollo Bay and Marengo Neighbourhood Character Study and the Apollo Bay Structure Plan recognise the significant landscape in Apollo Bay and the valued coastal character of the town, but both also identify the need to ensure that future growth involves more efficient land use through medium density housing. Although, on balance, opposing the Amendment, Ms Lewis acknowledged that removing the DDO7 from the subject area will help in consolidating the township within a defined area.

Ms Lewis and Mr Burns both raised concerns about the height of future development if the Amendment was approved. Council submitted that the controls on height limits are identical for both schedules and observed that the controls in DDO6 have been effective in keeping the low rise character of the town intact.

## 4 Panel findings

The Panel accepts the Council's conclusion that much of the subject area is already developed with medium density housing. This is significant when considering the existing neighbourhood character of the area and how it may impact on planning decisions. The Panel notes that, despite the subject area being within the DDO7 area, planning approval seems to have been routinely granted (by Council or VCAT) to developments with smaller than 450 sq m lot sizes. The Panel thinks that this is most likely a response to the existing development patterns in the subject area being clearly established as containing a mix of lot sizes, including a considerable proportion of medium density residential development.

The differences between the DDO6 and DDO7 are subtle. As pointed out by Council, the height controls are identical. The Panel also notes that the opportunity to apply any other planning control on development in the DDO7 seems to be limited to the non-mandatory requirements on lot sizes for subdivision. The Panel concludes that these requirements in DDO7 have not had any tangible effect in determining lot sizes in the subject area.

That is not to say that the subdivision controls are not applicable to other precincts. The wording of the DDO7 seems to indicate that the DDO7 subdivision requirements are targeted at land with significant native vegetation, land in a prominent location, land that is steep, or where the configuration of the land compromises energy efficiency. Those descriptions do not apply to the subject area, with the exception that the land fronting Great Ocean Road would reasonably be interpreted as being a 'prominent location'.

The Panel agrees with submitters that the Great Ocean Road frontage of the subject area should be regarded as an 'entrance site' and it is important that any development considers the proximity to the Great Ocean Road and foreshore. The Panel, however, agrees with Council that the design requirements of the DDO6, along with the neighbourhood character, setback and other requirements of Clauses 54 and 55 of the Planning Scheme (ResCode), provide a satisfactory level of control for these lots.

The Panel concludes that the DDO6 is a more appropriate control for the subject area than the DDO7 and inclusion of the subject area in the DDO6 will assist the consolidation of medium density residential development within a defined area. The Panel concludes that the proposed Amendment should therefore be supported as exhibited.

## 5 Recommendation

Based on the reasons set out in this Report, the Panel recommends that Amendment C65 (Part 1) to the Colac Otway Planning Scheme be adopted as exhibited.

*Planning and Environment Act 1987*

## COLAC OTWAY PLANNING SCHEME

### AMENDMENT C65 (PART 1)

#### EXPLANATORY REPORT

#### **Who is the planning authority?**

This amendment has been prepared by the Colac Otway Shire Council, which is the planning authority for this amendment.

#### **Land affected by the amendment**

The amendment applies to land:

- bound by Cawood Street, Great Ocean Road, Murray Street and McLachlan Street in Apollo Bay;

#### **What the amendment does**

The amendment:

- removes DDO7 from land bound by Cawood Street, Great Ocean Road, Murray Street and McLachlan Street in Apollo Bay.
- applies Schedule 6 to the Design and Development Overlay (DDO6) to land bound by Cawood Street, Great Ocean Road, Murray Street and McLachlan Street in Apollo Bay.

#### **Strategic assessment of the amendment**

##### **■ Why is the amendment required?**

The amendment is required to implement select recommendations from the Colac Otway C55 Panel Report.

Specifically, the removal of the DDO7 and application of the DDO6 to the area bound by Cawood Street, Great Ocean Road, Murray Street and McLachlan Street in Apollo Bay is required in order to recognise the existing pattern of medium-density development in that area and to facilitate further medium-density development in that precinct. This outcome was recommended by the C55 Amendment Panel following consideration of multiple submissions which identified the precinct as predominantly made up of medium density development.

##### **■ How does the amendment implement the objectives of planning in Victoria?**

The amendment is in accordance with the objectives of planning as set out in Section 4(1) of the *Planning and Environment Act 1987*. Specifically, the amendment fulfils:

- objective 4(a) set out in the *Planning and Environment Act 1987*, “to provide for the fair, orderly, economic and sustainable use, and development of land” by:
  - applying the DDO6 to allow a higher density of development than is afforded by the current planning controls, thereby reflecting the emerging pattern and demand for development and promoting the consolidation and sustainable use of existing residentially zoned land by facilitating medium density infill in appropriate areas within Apollo Bay.
- objective 4(f) to facilitate development in accordance with the objectives set out in the points above.

■ **How does the amendment address the environmental effects and any relevant social and economic effects?**

The amendment aims to enhance the social and economic elements of the Apollo Bay townships.

The economic and social effects of the amendment include:

- consolidating residential development on existing vacant residentially zoned land in close proximity to the Apollo Bay town centre at densities that will encourage more liveable outcomes through increased accessibility to commercial and civic services in Apollo Bay.
- providing greater flexibility and variety of dwelling types and densities and potentially greater housing choice in Apollo Bay.

■ **Does the amendment address relevant bushfire risk?**

The amendment does not impact on bushfire risk matters.

■ **Does the amendment comply with the requirements of any Minister's Direction applicable to the amendment?**

The amendment is consistent with the Ministerial Direction on the Form and Content of Planning Schemes under section 7(5) of the *Planning & Environment Act 1987*, and Ministerial Direction No. 11 on the Strategic Assessment of Amendments under Section 12(2) of the *Planning & Environment Act*.

■ **How does the amendment support or implement the State Planning Policy Framework?**

The amendment is consistent with the State Planning Policy Framework. In particular, the amendment is supportive of the following clauses of the State Planning Policy Framework:

- 15.01-3 Neighbourhood and subdivision design  
Subclause 15.01-3 seeks to create *"compact neighbourhoods that have walkable distances between activities and where neighbourhood centres provide access to services and facilities to meet day to day needs"*, and to provide *"a range of lot sizes to suit a variety of dwelling and household types to meet the needs and aspirations of different groups of people"*. The amendment supports this objective and strategy by applying the DDO6 to additional areas in Apollo Bay which will have the effect of decreasing the minimum lot size for subdivision within these areas and potentially allow for a greater range of lot sizes and an increase in the number of dwellings situated within close proximity to Apollo Bay's central business area and community and health facilities.
- 16.01-1 Integrated housing  
Subclause 16.01- seeks to *"promote a housing market that meets community needs"*, and to *"increase the supply of housing in existing urban areas by facilitating increased housing yield in appropriate locations, including under-utilised urban land"*. The amendment supports this objective and implements this strategy by acting upon submissions that were supported by the C55 Panel and identifying land bound by Cawood Street, Great Ocean Road, McLachlan Street & Murray Street in Apollo Bay as an appropriate location to support increases in housing yield.

**■ How does the amendment support or implement the Local Planning Policy Framework?**

The amendment is consistent with the Local Planning Policy Framework, including the Municipal Strategic Statement (MSS) and Local Planning Policies.

In particular, the amendment supports the following clauses of the Local Planning Policy Framework:

- 21.03 Settlement

Clause 21.03 provides strategies to encourage the provision of a wide range of housing choices for residents, short-term holiday residents and tourists within the Shire as well as promoting infill development of medium density housing within walking distance of the Apollo Bay commercial area. Council has undertaken a review of land bound by Cawood, Great Ocean Road, McLachlan Avenue and Murray Street and the area has been identified in the C55 Panel as a suitable location for increased housing density. The area has the potential to create a mix of housing types.

**■ Does the amendment make proper use of the Victoria Planning Provisions?**

The use of the DDO is considered to be the most appropriate tool to guide land use and development to achieve the outcomes as discussed above.

- Design & Development Overlay

To achieve a higher density of residential development that is in line with emerging trends for the land north of Cawood Street, Apollo Bay, it is recommended to apply Schedule 6 to the Design and Development Overlay. This is particularly required in the area given its close proximity to infrastructure, civic services and the Apollo Bay commercial precinct.

The amendment has also been prepared with reference to the VPP Practice Note 10 'Writing Schedules'.

**■ How does the amendment address the views of any relevant agency?**

The amendment does not affect any relevant agencies.

**■ Does the amendment address relevant requirements of the Transport Integration Act 2010?**

The amendment does not impact on transport matters.

**Resource and administrative costs**

**■ What impact will the new planning provisions have on the resource and administrative costs of the responsible authority?**

It is expected that the amendment will have a limited impact on the resource and administrative costs of the Responsible Authority.

**Where you may inspect this Amendment**

The amendment will be made available for public inspection, free of charge, during office hours at the following places:

**Colac Otway Shire Council**  
Colac Customer Service Centre  
2-6 Rae Street  
COLAC VIC 3250

**Colac Otway Shire Council**  
Apollo Bay Customer Service Centre  
69 Nelson Street  
APOLLO BAY VIC 3233

The amendment can also be inspected free of charge at the Department of Planning and Community Development website at [www.dpcd.vic.gov.au/planning/publicinspection](http://www.dpcd.vic.gov.au/planning/publicinspection).

*Planning and Environment Act 1987*

**COLAC OTWAY PLANNING SCHEME**

**AMENDMENT C65**

**INSTRUCTION SHEET**

The planning authority for this amendment is the Colac Otway Shire Council.

The Colac Otway Planning Scheme is amended as follows:

**Planning Scheme Maps**

The Planning Scheme Maps are amended by a total of 1 attached map.

**Overlay Maps**

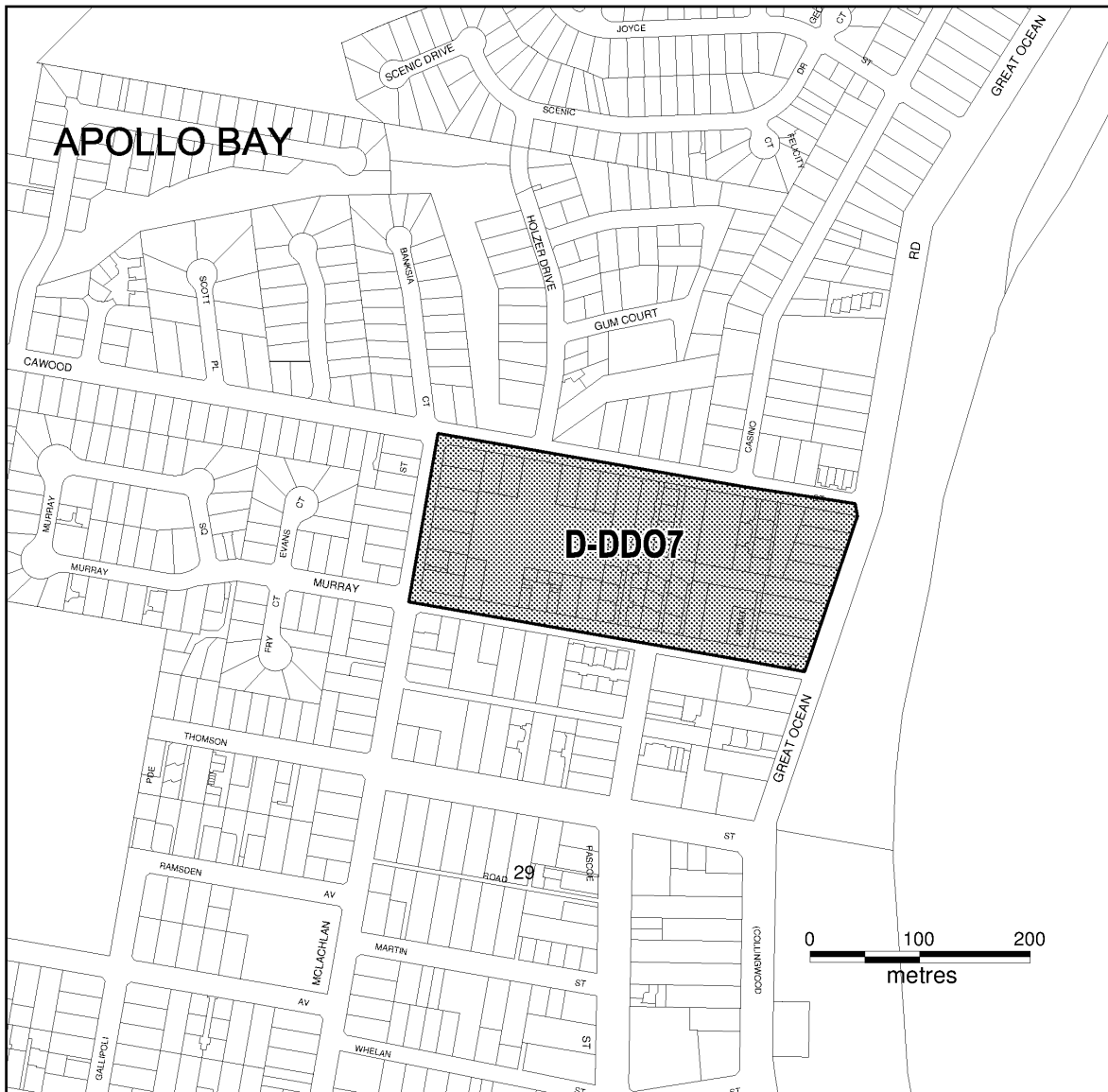
1. Planning Scheme Map No. 29DDO is amended in the manner shown on the attached maps marked "Colac Otway Planning Scheme, Amendment C65".

End of document

## Amendment C65 List of changes to the Colac Otway Planning Scheme

| Clause / Map Numbers               | Change  | Comment  |
|------------------------------------|---|--|
| <b>PLANNING SCHEME MAP CHANGES</b> |   |  |
| Map No 29                          | Planning Scheme Map No 29DDO is amended in the manner shown on the attached maps marked Colac Otway Planning Scheme, Amendment C65.   | Amends the planning scheme maps.                                   |
| <b>LIST OF AMENDMENTS</b>          |   |  |
| List of Amendments                 | <p>Insert:<br/>                     Amendment number "C65 Part 1", In operation from "[DATE TO BE INSERTED BY DPCD]", Brief description:<br/>                     "The Amendment removes Schedule 7 to the Design and Development Overlay from land bound by Cawood Street, Great Ocean Road, Murray Street and McLachlan Street in Apollo Bay and applies Schedule 6 to the Design and Development Overlay to this land. "</p> | Updates the list of amendments in the Colac Otway Planning Scheme. |

## COLAC OTWAY PLANNING SCHEME LOCAL PROVISION



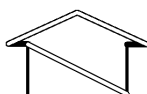
Part of Planning Scheme Map 29DDO

**LEGEND**

**D-DD07** AREA TO BE DELETED FROM A DESIGN AND DEVELOPMENT OVERLAY - SCHEDULE 7

## AMENDMENT C65

Planning Systems Services |  
Statutory Planning Systems Reform |  
Planning and Local Government |

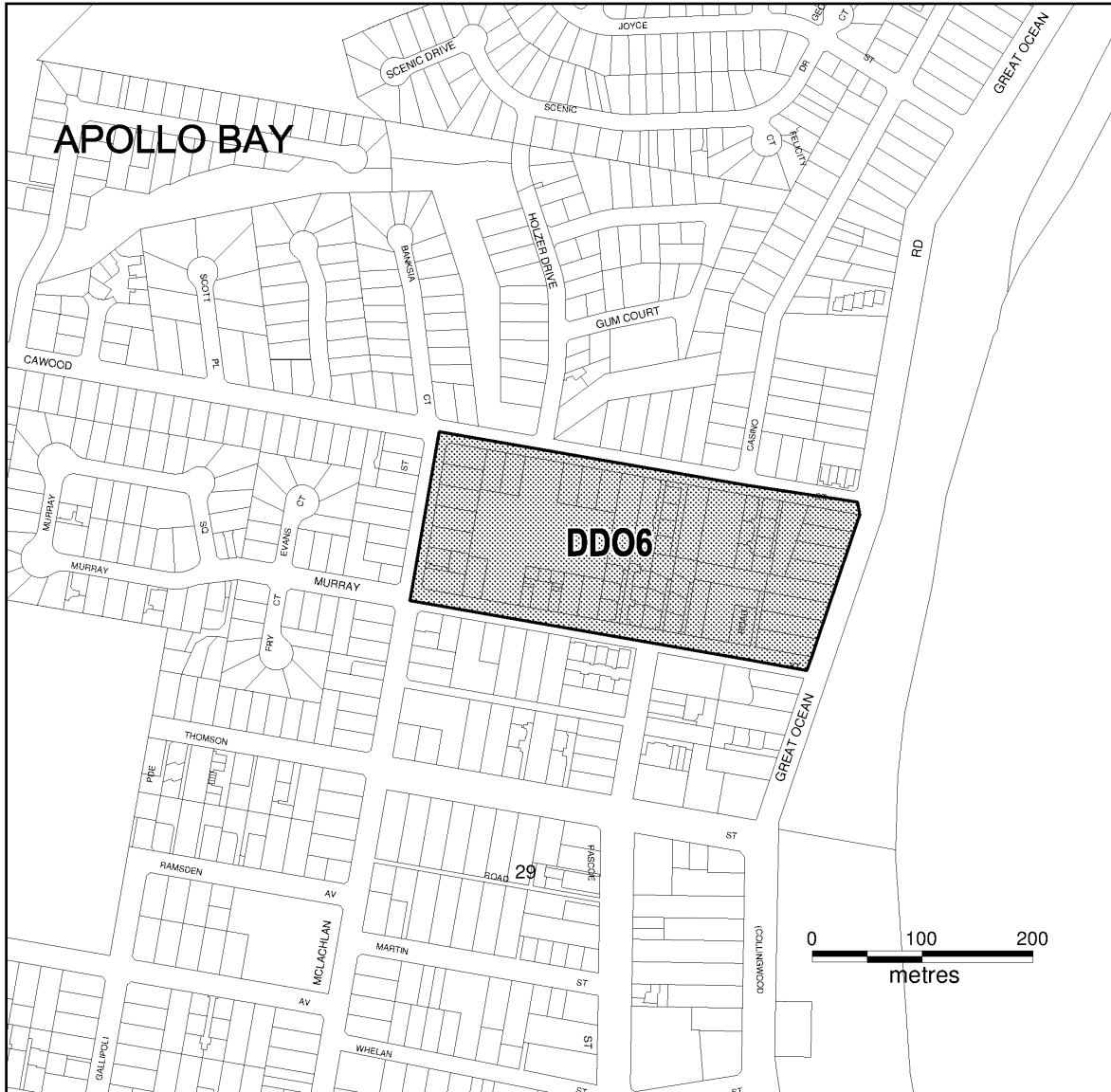


Department of Planning  
and Community Development

004



## COLAC OTWAY PLANNING SCHEME LOCAL PROVISION



Part of Planning Scheme Map 29DDO

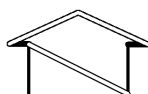
**LEGEND**



DESIGN AND DEVELOPMENT  
OVERLAY - SCHEDULE 6

## AMENDMENT C65

Planning Systems Services |  
Statutory Planning Systems Reform |  
Planning and Local Government |



Department of Planning  
and Community Development

006

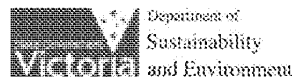


COLAC OTWAY SHIRE  
MUNICIPAL FIRE MANAGEMENT PLAN

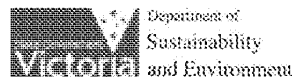
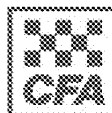
6 WEEK PUBLIC COMMENT PERIOD

OPENED: THURSDAY 5 JULY 2012  
CLOSED: THURSDAY 16 AUGUST 2012

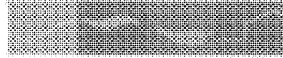
| Date               | Comment From              | Summary of Comment  | Action   |
|--------------------|---------------------------|---|--|
| 1<br>3 Aug<br>2012 | Robert Learey<br>Powercor | <p>Suggested changes to version 8 are:</p> <p>Page 24 - Beside Powercor Bushfire Mitigation Strategy add web site: HYPERLINK<br/>"http://www.powercor.com.au"www.powercor.com.au</p> <p>Page 41 - Expect 'T/L' is most likely shortened for Transmission Line. 66kV is a sub-transmission line and 22kV is a distribution feeder line. Change T/L to Line.</p> <p>Page 41 - Apollo Bay Gellibrand 22kV Line should also be included.</p> <p>Page 56 - Powerlines - Assets and Easement. Change PowerCor to Powercor.</p> <p>Page 57 - 220kV Alcoa Line. Delete reference as 220kV Line privately owned by Alcoa is not in the Colac-Otway Shire</p> <p>Page 59 - Fire Hazard Mapping: Suggest adding in 'and Councils' after 'in consultation with powerline companies'</p> <p>Page 63 - Update PRPR details per attached email.</p> <p>Page 95 - Doesn't include PRPR from appendix C. Expect not required as only relates to Appendix C, not whole document.</p> <p>In relation to Key Messages (Appendix A) starting page 80, recommend message to people not to rely on power supply. Suggested wording consistent with a message issued during 2011/12 season is as follows:</p> <p>Consider your need for back-up power if you are highly reliant on electricity. Remember power outages can also effect phones, radios and water pumps.</p> <p>Have a battery-powered radio and spare batteries or a wind-up radio available to hear alerts and warnings in case power fails;</p> <p>Have a landline with a cord, a fully charged mobile phone as backup and a spare battery and;</p> <p>Have a non-electric pump available that can be operated from an alternative water supply such as a swimming pool, concrete or metal tank, or dam.</p> | <p>Amend Plan to include</p> <p>Amend Plan to include</p> <p>Amend Plan to include</p> <p>Amend Plan to reflect change</p> <p>Amend Plan to reflect change</p> <p>Amend Plan to include</p> <p>Amend Plan to include</p> <p>Amend Plan to reflect change</p> <p>Amend Plan to include changes as suggested</p> <p>Amend Plan to include changes as suggested</p> <p>Amend Plan to include changes as suggested</p> <p>Amend Plan to include changes as suggested</p> |



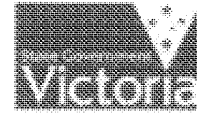
|   |             |                                   |  |   |
|---|-------------|-----------------------------------|--|---|
| 2 | July 2012   | Kate Smallwood – Surf Coast Shire | <p>Page 6 – Ensure Adequate Signatories – Major Partner Agencies and MERC</p> <p>Page 17, 3.3.3, Dot Point 2 – consider inserting -<br/> <i>"and emergency services vehicles being unable to reach the fire front and affected communities. The lack of egress from and access to coastal townships along the Great Ocean Road during a major bushfire is a serious concern for emergency services."</i></p> <p>Page 27 Paragraph 4 – DSE figures should read 25,000ha not 18,000ha</p> <p>Page 31 Paragraph 1 – the word <i>affect</i> should read <i>effect</i></p>  | <p>Amend Plan to include PV &amp; VicPer MERC signatories</p> <p>Amend Plan to include changes as suggested</p> <p>Amend Plan to include changes as suggested</p> <p>Amend Plan to include changes as suggested</p> |
| 3 | 15 Aug 2012 | Craig Quinn – VicRoads            | <p>Page 17 – Amend 3.3.3 Dot Point 2 – Delete reference to people being stranded on the Great Ocean Road as per wording suggested to Surf Coast Shire</p> <p>Page 31 – In top dot points – Insert <i>"Road Bushfire Risk Assessment Work Plans"</i> as a separate dot point before Wildfire Management Overlays</p>  | <p>Current wording reflects risk and should not be changed</p> <p>Amend Plan to include changes as suggested</p>  |
| 4 | 14 Aug 2012 | Meaghan Cooper - MFPO             | <p>Roadside Fire Hazard Risk Assessments - Insert at Appendix 1, or incorporate into Part 5 and remove from Appendices</p> <p><i>"Council and VicRoads have undertaken Risk Assessments of Roads within the shire based on a state threat assessment model designed by Terramatrix. Selected roads in high risk environments, or of high strategic value have been surveyed by a mixture of Council, VicRoads, DSE and CFA. The risk assessments looked at the road reserve, traffic lane/s and adjacent lands to measure risk values and threats and then scored to provide a risk priority order. Work done at the time of risk assessments to determine appropriate treatments for individual roadsides was also undertaken. Risk worksheets were completed using the following template – [Insert template copy JPEG].</i></p> <p><i>Risk assessments will be presented to Council's MFMP for consideration in determining annual works plan reviews"</i></p> <p><i>Mapping produced from the risk assessment process shall be provided at Appendix E2 to this Plan."</i></p> <p>Mapping is still being constructed to be inserted at E2</p> | <p>Amend Plan to include changes as suggested and incorporate into Part 5</p> <p>Endorse insertion of map once completed</p>  |



IFMP



Integrated Fire Management Planning



Our Ref: ig/bb  
Enquiries: Bob Barry  
Telephone: 5240 2700

22 August 2012

Michael Crutchfield  
Chair  
Colac Otway Municipal Fire Management Planning Committee

(Via email with hard copies following via mail)

Dear Michael

**Barwon South West (BSW) Regional Strategic Fire Management Planning Committee  
Review and comment on Colac Otway Municipal Fire Management Plan**

Further to our previous correspondence, the BSW Regional Strategic Fire Management Planning Committee (RSFMPC) Executive met last Friday 17-8-2012 to review and comment on current versions of Municipal Fire Management Plans as submitted, in accordance with Part 6A of the Emergency Management Manual Victoria (EMMV).

The Colac Otway Municipal Fire Management Plan has been reviewed for compliance with prescribed requirements, standards and relevant directives i.e. EMMV, IFMP Planning Guide and information provided by the State Committee, Fire Services, Fire Services Commissioner, plus alignment with BSW Regional Strategic Fire Management Plan priorities and objectives.

I am pleased to provide the attached checklist and comments indicating a high level of compliance with current requirements, plus a report and recommendation for your Municipal Fire Management Planning Committee as plan custodian.

As previously indicated, individual plans have not been evaluated for quality of content, only for the presence of required elements.

We trust that this expedient response will enable the current Colac Otway Municipal Fire Management Plan to proceed to Council for adoption within required timeframes.

Yours sincerely

Bob Barry  
Chair  
BSW Regional Strategic Fire  
Management Planning Committee

Cc: Executive Officer

Barwon South West  
Regional Strategic Fire Management Planning Committee

**REPORT ON MUNICIPAL FIRE MANAGEMENT PLAN**

Dear Chair of Colac Otway Shire  
Municipal Fire Management Planning Committee,

The Barwon South West Regional Strategic Fire Management Committee has reviewed your current Municipal Fire Management Plan in accordance with Part 6A of the Emergency Management Manual Victoria.

Having consideration of the iterative and dynamic nature of current fire management planning, we provide the attached table of comments for consideration by your Municipal Fire Management Planning Committee when developing the next version of the plan.

**Recommendation:**

Barwon South West Regional Strategic Fire Management Committee's commends the Colac Otway Shire Municipal Fire Management Plan Version 6 Dated 12 June 2012.

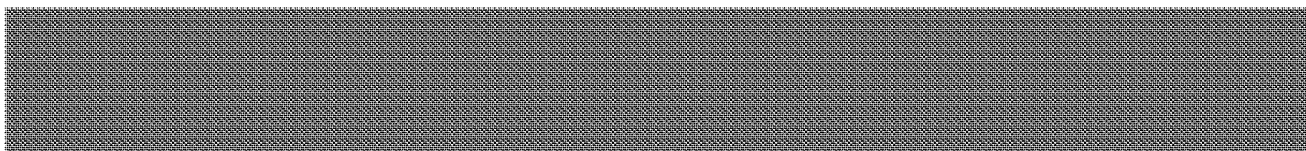
Signed:  Date: 17-8-2012

Bob Barry  
Chair  
Barwon South West Regional Strategic Fire Management Planning Committee

# Colac Otway Fire Management Plan

Version 9

September 2012



Department of  
Sustainability  
and Environment

## **Foreword**

---

The Colac Otway Shire Municipal Fire Management Plan outlines how Council, fire agencies and other relevant authorities and organisations will work together to prepare for, respond to and recover from major fires within the Shire.

The Plan is a sub-plan of the Shire's Municipal Emergency Management Plan and reflects the State Government's direction to increase integration on fire management planning between agencies and the community. The Plan was produced collaboratively by members of the Colac Otway Shire Municipal Fire Management Planning Committee. The Committee is made up of representatives from the Colac Otway Shire, the Country Fire Authority, the Department of Sustainability and Environment, Parks Victoria, Victoria Police and VicRoads.

Integrated fire management planning is risk based and tenure blind. In preparing the Plan, two main tools have been used to identify and assess bushfire risk in the Shire.

- the Victorian Fire Risk Register, a systematic process used to identify assets at risk, assess the level of bushfire risk and record a range of measures to mitigate the risks. These measures may include activities such as fuel reduction, community education programs and the creation of strategic fire breaks; and
- landscape level bushfire modelling undertaken by the Department of Sustainability and Environment (DSE) to assess bushfire risk across the Otway landscape. DSE's work has evaluated fire regimes across the entire landscape and identified opportunities to manage fuels and fire regimes across both public and private land.

Community engagement about the Plan will also help to identify any additional assets at risk and inform implementation of treatment measures.

Consistent with DSE's landscape level approach, Colac Otway Shire and Surf Coast Shire have collaborated on development of their Municipal Fire Management Plans. A coordinated strategic approach allows for better agency integration and reflects the broader landscape level bushfire risks impacting both Shires.

This Plan recognises, but doesn't duplicate, the extensive work already being undertaken in fire management and planning activities across the Colac Otway Shire. This document is essentially a plan for improving integration of this existing work and developing new ways of working together with the community.

## **Context Statement**

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The initial draft version of the Surf Coast Fire Management Plan 2011 – 14 released in October 2011 focused on bushfires (including grassfires) and environmental burns. This final version of the Plan also incorporates structural and chemical fires, but to a lesser extent than the other fires.

All comments on this Plan should be sent to:

Colac Otway Shire  
PO Box 283  
Colac VIC 3250

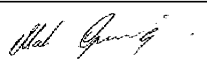
Comments may also be submitted by email to [ing@colacotway.vic.gov.au](mailto:ing@colacotway.vic.gov.au)



Version Control Table

| Version | Release Date         | Author     | Changes  |
|---------|----------------------|------------|--|
| 6       | 28 Oct 2011          | S.Anderson | Based on MFMP<br>Comments                                      |
| 7       | 15 November<br>2011  | W Fox      | Part 3, TOC  |
| 8       | 12 June 2012         | M Gunning  | Based on Stakeholder<br>Feedback, Regional<br>RSFMPC direction |
| 9       | 19 September<br>2012 | M Gunning  | Based on Feedback<br>from Public<br>Consultation Period        |

**Amendment Authorisations**

| Name             | Position  | Signature   | Date              |
|------------------|---|---|-------------------|
| Stewart Anderson | Manager<br>Environment<br>and<br>Community<br>Safety          |   | 28 October 2011   |
| Wendie Fox       | Municipal<br>Emergency<br>Management<br>Coordinator           |   | 15 November 2011  |
| Mark Gunning     | Municipal<br>Emergency<br>Management<br>(Fire)<br>Coordinator |   | 12 June 2012      |
| Mark Gunning     | Municipal<br>Emergency<br>Management<br>(Fire)<br>Coordinator |  | 19 September 2012 |

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**Authorisation and Endorsement**

This Integrated Municipal Fire Management Plan was adopted by Colac Otway Shire Council as the first iteration of Colac Otway Shire Integrated Fire Management Plan in partnership with the agencies listed below.

Rob Small  
Chief Executive Officer  
Colac Otway Shire

Bob Barry  
CFA Regional Manager

Helen Vaughan  
Regional Manager, Land & Fire  
South West  
Dept. of Sustainability and  
Environment

.....

Date:        /        /

Date:        /        /

Date:        /        /

Ken Slingsby  
Municipal Emergency  
Response Coordinator – Colac  
Otway  
Victoria Police

Trevor Dess  
Chief Ranger - Otways  
Parks Victoria

.....

Date:        /        /2012

Date:        /        /

Plan endorsed by the **Colac Otway Shire Municipal Fire Management Planning Committee** on

Date:    9 / 9 / 2012

Plan reviewed by the **Barwon South West Regional Strategic Fire Management Planning Committee** on

Date:    17 / 8 / 2012

Plan endorsed by the **Colac Otway Shire Municipal Emergency Management Planning Committee** on

Date:    16 / 8 / 2012

Plan adopted by the **Colac Otway Shire Council** on

Date:    To be inserted

## 1 Introduction

---

### 1.1 Overview

Victoria has a range of characteristics that predispose it to bushfires generally and to the occasional ferocious bushfire in particular. There are few other locations in the world with similar characteristics.<sup>1</sup>

The high bushfire risk in Victoria is the consequence of a number of factors, including vegetation, topography, climate and population patterns, which show population density increasing in bushfire-prone areas<sup>2</sup>, like the Colac Otway Shire.

Bushfires have shaped, and continue to shape, all aspects of our environment – landscape, ecosystems, biological diversity and culture.<sup>3</sup> They occur both naturally and as a result of human actions. While bushfires can be vital to the continued rejuvenation of the natural landscape, the human, social and economic impacts can be enormous. Fire management needs to address both the threats to life and property and the role that fire plays in the environment.

Fifty-two significant bushfires have been recorded in Victoria since 1851, with two-thirds of them in the past 60 years.<sup>4</sup> The last decade has seen a dramatic increase in the number, size and severity of bushfires in Victoria, as evidenced by :

- the 2002/2003 Alpine fires,
- the 2006/2007 Grampians fires,
- the 2006/2007 Great Divide fires ; and
- and the 2009 Black Saturday fires.

The two most significant fires in the Colac Otway Shire region were the 1939 and 1977 fires. In 1939, numerous fires burning separately in various parts of the state joined and peaked in severity on 13 January - "Black Friday". The fires affected almost every section of Victoria, including the Otways. On 12 February 1977 widespread fires occurred across the Western District of Victoria, mostly in grasslands. This included the Cressy (Wallinduc or Werneth) fire: 42,000ha.in which 3 people lost their lives. In Cressy 10 houses were destroyed along with 2 halls, a garage and fuel depot. The State school and tennis centre at Werneth were destroyed and a large number of outbuildings.

### 1.2 Shared Responsibility for Bushfire Safety

The 2009 Victorian Bushfires Royal Commission was guided by two overarching principles in conducting its work and preparing its Final Report – the protection of human life and shared responsibility. Shared responsibility is an essential part of effective fire management planning in the Colac Otway Shire.

The concept of shared responsibility recognises that individuals, fire authorities and all levels of government are responsible for preparing for fire and improving people's safety.<sup>5</sup> Educated and engaged communities are critical to successful fire management and planning. The Commission indicated that:

*A long term goal of Victorian bushfire policy and legislative frameworks should be to build strong, proactive communities that understand bushfire risk and make sound decisions about how they will manage and respond to those risks. This goal brings with it roles for individuals, agencies and government.<sup>6</sup>*

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<sup>1</sup> 2009 Victorian Bushfires Royal Commission, *Final Report – Volume 1: The Fires and the Fire-Related Deaths*, p. xxiv

<sup>2</sup> Ibid.

<sup>3</sup> Ibid. at p. 2

<sup>4</sup> Ibid. at p. 2.

<sup>5</sup> Ibid. at p. xxviii

<sup>6</sup> Ibid.

In describing these roles further, the Commission noted that:

**Individuals** should be encouraged, to the extent of their capabilities, to make their own preparations to protect themselves and their communities from bushfire;

**Agencies** should educate, prepare and help protect individuals by ensuring that they have access to the information needed to make sound decisions. It is also vital that agencies provide accurate and prompt warnings that are easy for the public to understand.

**Government's** role is to create the legislative foundation, fund fire services, facilitate community education and support, and provide essential infrastructure and local support to help communities stay safe.

### 1.3 Integrated Fire Management Planning

Integrated Fire Management Planning (IFMP) is a central component of the State Fire Management Planning Strategy 2009. Essentially, IFMP involves bringing communities, fire agencies and state and local government departments together to deliver fire management planning.

The three key documents guiding IFMP are:

- The Integrated Fire Management Planning Framework<sup>7</sup>, which provides an overview of how IFMP works and who is involved;
- The State Fire Management Strategy 2009<sup>8</sup>, which is based on the IFMP Framework and provides a broad, strategic vision and direction for fire management planning in Victoria; and
- The Integrated Fire Management Planning Guide<sup>9</sup>, which outlines the regional and municipal fire management planning process, including the process for developing this Municipal Fire Management Plan.

IFMP builds on existing processes to support the integration, consistency and coordination of fire management planning activities of government, the fire management sector and communities. IFMP is designed to operate under existing state fire and emergency management legislation and therefore does not replace existing statutory roles and responsibilities.

Under IFMP, collaborative agency fire management planning will occur through Municipal Fire Management Planning Committees. Agency plans will be aggregated to form the basis of Municipal Fire Management Plans. Fire management planning will be aligned with each organisation's planning and business processes through:

- the implementation of common planning models and methodologies;
- allocation of resources and accountabilities;
- participation in common decision making through the committee process;
- collaborative delivery of fire management activities; and
- cooperative engagement.

<sup>7</sup> Available at [www.ifmp.vic.gov.au](http://www.ifmp.vic.gov.au)

<sup>8</sup> Available at [www.ifmp.vic.gov.au](http://www.ifmp.vic.gov.au)

<sup>9</sup> Available at [www.ifmp.vic.gov.au](http://www.ifmp.vic.gov.au)

IFMP also links fire management planning across the State to a standard risk management approach. The alignment of the IFMP planning cycle with the Australian Risk Management Standard AS/NZ ISO 3100 2009 is outlined in Table 3 below.

| <b>Stage of the IFMP planning cycle</b> | <b>Relevant aspect of the AS/NZS ISO 31000:2009 Risk Management - Principles and Guidelines</b> |
|---|---|
| Engagement Plan                         | Communicate and consult   |
| Environmental Scan                      | Establish the context   |
| Risk Assessment > Analyse               | Identify the risk > Analyse the risk > Evaluate the risk  |
| Decide > Publish                        | Determine and document treatment options  |
| Deliver                                 | Treat the risk  |
| Monitor and Improve                     | Monitor and review  |

**1.4 Authority for Plan**

This Municipal Fire Management Plan (the Plan) has been produced by and with the authority of the Colac Otway Shire Council pursuant to Section 20 of the Emergency Management Act 1986 and will be deemed to fulfil Section 55A (Municipal Fire Prevention Plans) of the Country Fire Authority Act 1958.

The Plan is a sub-plan of the Colac Otway Shire Council Municipal Emergency Management Plan.

**1.5 Period of Plan**

Municipal Fire Management Plans have a three year planning cycle. This Plan will be deemed endorsed for a period of 3 years commencing from the date of Council adoption of the Plan, and will be reviewed annually.

**1.6 Planning Process**

This Plan has been prepared by the Colac Otway Shire Municipal Fire Management Planning Committee in accordance with the IFMP Framework, the IFMP Planning Guide and the Emergency Management Manual Victoria, Part 6A – Guidelines for Municipal Fire Management Planning.

The Plan has been developed consistent with the IFMP process.

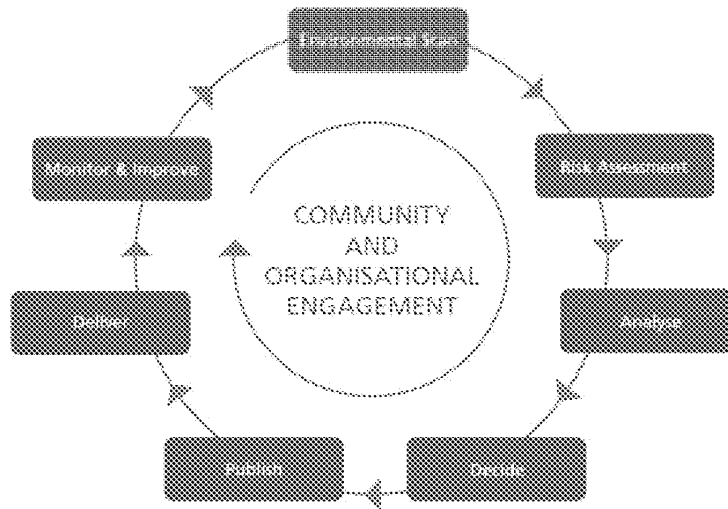


Figure 2. Integrated Fire Management Planning process

Development of the Plan has been undertaken by representatives of the various agencies that comprise the Colac Otway Shire Municipal Fire Management Planning Committee. This Plan is not intended to duplicate existing agency plans but to consolidate and coordinate the significant range of plans that exist, and apply to the Colac Otway Shire regarding fire.

### 1.7 Relationship to Municipal Fire Prevention

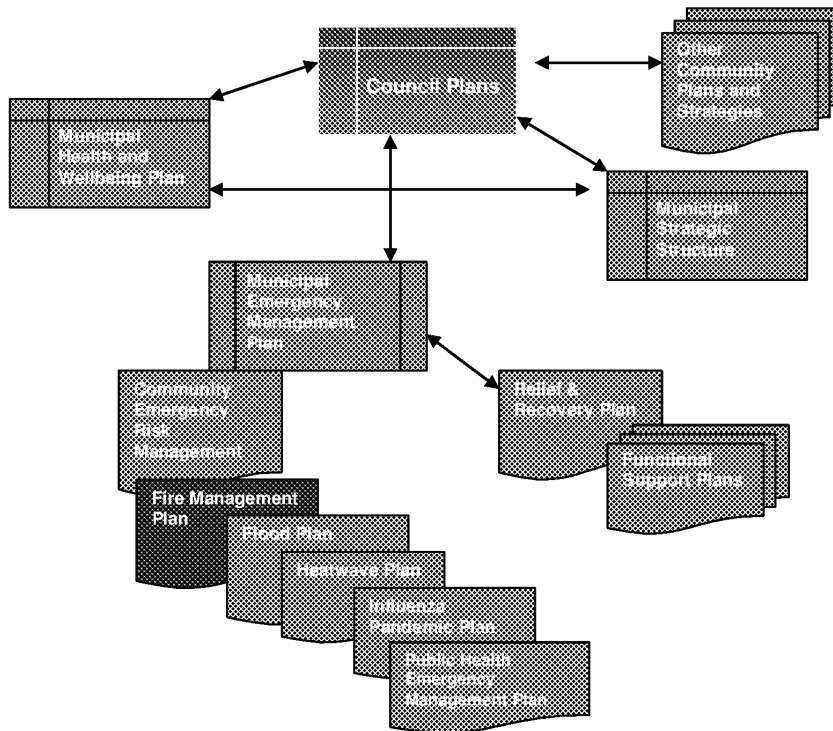
This Plan replaces the Shire's Municipal Fire Prevention Plan.

As part of the transition under Integrated Fire Management Planning from Municipal Fire Prevention Plans to integrated Municipal Fire Management Plans, both plans initially operated in tandem. The initial draft Municipal Fire Management Plan addressed bushfires, grassfires and environmental burns and the Municipal Fire Prevention Plan addressed structural and chemical fires. This Plan now addresses all fire risks..



### 1.8 Municipal Planning Structure

The Colac Otway Shire’s planning structure and the relationship of this Plan to other plans endorsed by Council is outlined in the diagram below:



### 1.9 Plan Review and Updates

The Plan will be reviewed and updated annually to ensure it:

- incorporates any new strategies, programs and tools developed by the State Fire Management Planning Committee and the Barwon South West Regional Strategic Fire Management Planning Committee;
- reflects agency updates and annual workplans; and
- meets community needs and expectations.

### 1.10 Community and Organisational Engagement Process

Stakeholder engagement and participation is an essential element of fire management planning.

Section 2 of this Plan outlines the engagement process that has been undertaken by the Municipal Fire Management Planning Committee in developing this Plan.

## 2 Engagement and Communications

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### 2.1 Integrated Fire Management Planning Engagement Process

Community and organisational engagement is required throughout the Integrated Fire Management Planning (IFMP) process. The aim is for communities and organisations to participate together in the collaborative development, delivery and monitoring of Municipal Fire Management Plans.

Consistent with the IFMP Planning Guide, the Colac Otway Shire Municipal Fire Management Planning Committee (MFMP) has developed a Community and Organisational Engagement Plan (the Engagement Plan). The Engagement Plan outlines community and organisational engagement that has been or will be undertaken by the MFMP to develop this Plan. A copy of the Engagement Plan is included in Appendix D.

The Engagement Plan identifies key stakeholders and communities and the level, method and timing of engagement. For the purposes of the Engagement Plan, 'stakeholder' means agencies responsible for fire management planning in the Colac Otway Shire.

The Engagement Plan has been developed using International Association for Public Participation Australasia (IAP2) principles. These principles are as follows:

#### **Inform**

Provide appropriate detailed and accurate information to assist stakeholders develop a shared understanding of the complexity of issues, alternatives and possible solutions.

#### **Consult**

Utilise stakeholder expertise and diversity to obtain input into analysis, alternatives and develop key decisions.

#### **Involve**

Work directly with the suite of key stakeholders throughout the various processes to ensure key issues and intent are understood and considered.

#### **Collaborate**

Partner with key stakeholders in each aspect of decision making. This includes the development of alternatives, and the identification of contributions and priority actions with a clear understanding of the responsibilities of each stakeholder.

#### **Empower**

Foster and promote transparent and accountable processes that allow each stakeholder organisation to empower themselves through key actions and the implementation of responsibilities.

### 2.2 Stakeholder Analysis

Stakeholders for this Plan have been grouped into three categories according to their chosen level of participation in integrated fire management planning and their information requirements. The three engagement categories are:

- Primary (permanent MFMP members);
- Secondary (attend MFMP by request); and
- Tertiary (other agencies, organisations and interested groups that could support the Municipal Fire Management Plan )

This stakeholder analysis helped inform the development of the Engagement Plan, including determining the level and timing of stakeholder participation.

### 2.3 Community Engagement Principles

The Colac Otway Shire recognises the value of local knowledge and the unique contribution the community can make to local fire management planning.

Effective community engagement in fire management planning is required to:

- Promote acceptance, understanding and joint problem solving;
- Raise knowledge and skills of fire management through participation;
- Produce plans that support community and organisational expectations; and
- Incorporate community and organisational needs into the development of fire management plans.

Community interest in fire management planning is usually greatest at the local level. The MFMPC will endeavour to ensure that community feedback on local fire management planning is incorporated into this Plan, where relevant and appropriate.

### 2.4 Agency Engagement and Plan Approval

As previously stated, this Plan was produced collaboratively by members of the Colac Otway Shire MFMPC. The Committee is made up of representatives from the Colac Otway Shire, the Country Fire Authority, the Department of Sustainability and Environment, Parks Victoria, Victoria Police and Vic Roads.

As a sub-plan of the Colac Otway Shire Municipal Emergency Management Plan, the draft Plan was provided to the Shire's Municipal Emergency Management Planning Committee (MEMPC) for review and comment. The MEMPC has broader representation that includes the Victorian State Emergency Service, VicRoads, Barwon Water and the Australian Red Cross. Agencies represented on the MFMPC are also represented on the MEMPC.

The draft Plan was then submitted to Council for approval prior to consultation with the community in accordance with the Engagement Plan.

The draft Plan has been revised based on community and organisational feedback and submitted for formal endorsement by the MFMPC and the MEMPC. The Plan will then be sent to the Barwon South West Regional Strategic Fire Management Planning Committee for comment, prior to recommendation to Council for consideration and adoption.

### 2.5 Outcomes

The desired outcomes from the community and organisational engagement process are:

- Relevant stakeholders are engaged at the appropriate stage of Plan development and actively participate in shaping and implementing this Plan;
- The roles and responsibilities of individuals, agencies and government in preparing for fire and improving people's safety are well understood;
- Agency fire management activities are better integrated and coordinated in the Shire;
- Community knowledge and understanding of fire risks and fire management in the Shire is significantly increased; and
- The Plan supports, or is revised to support, community and organisational needs.

### 3 Summary of Environmental Scan

#### 3.1 Location and land tenure

Colac Otway Shire is located in the South-West of Victoria, approximately 160 kilometres from Melbourne. Colac Otway Shire is bounded by Golden Plains Shire in the North, Surf Coast Shire in the East, the Southern Ocean in the South, and Corangamite Shire in the West.

Colac Otway Shire includes the townships and rural localities of:

|                  |                  |                   |                  |
|------------------|------------------|-------------------|------------------|
| Alvie            | Coragulac        | Irrewillipe       | Simpson (part)   |
| Apollo Bay       | Cororooke        | Irrewillipe East  | Skenes Creek     |
| Balintore        | Corunnun         | Jancourt East     | Stonyford (part) |
| Barongarook      | Cressy           | Johanna           | Sugarloaf        |
| Barongarook West | Cundare          | Kawarren          | Swan Marsh       |
| Barramunga       | Cundare North    | Kennett River     | Tanybryn         |
| Barwon Downs     | Dreeite          | Larpent           | Warncourt        |
| Barunah Plains   | Dreeite South    | Lavers Hill       | Warrion          |
| Beeac            | Elliminyt        | Marengo           | Weeaproinah      |
| Beech Forest     | Eurack           | Mount Sabine      | Weering          |
| Birregurra       | Ferguson         | Murroon           | Whoorel (part)   |
| Bungador         | Forrest          | Nalangil          | Wingeel (part)   |
| Cape Otway       | Gellibrand       | Ombersley (part)  | Wongarra         |
| Carlisle River   | Gellibrand Lower | Ondit             | Wool Wool (part) |
| Carpendeit       | Gerangamete      | Pennyroyal (part) | Wyelangta        |
| Chapple Vale     | Glenaire         | Petticoat Creek   | Wye River        |
| Colac            | Grey River       | Pirron Yallock    | Yeo              |
| Colac East       | Hordern Vale     | (part)            | Yeodene          |
| Colac West       | Irrewarra        | Separation Creek  | Yulong           |

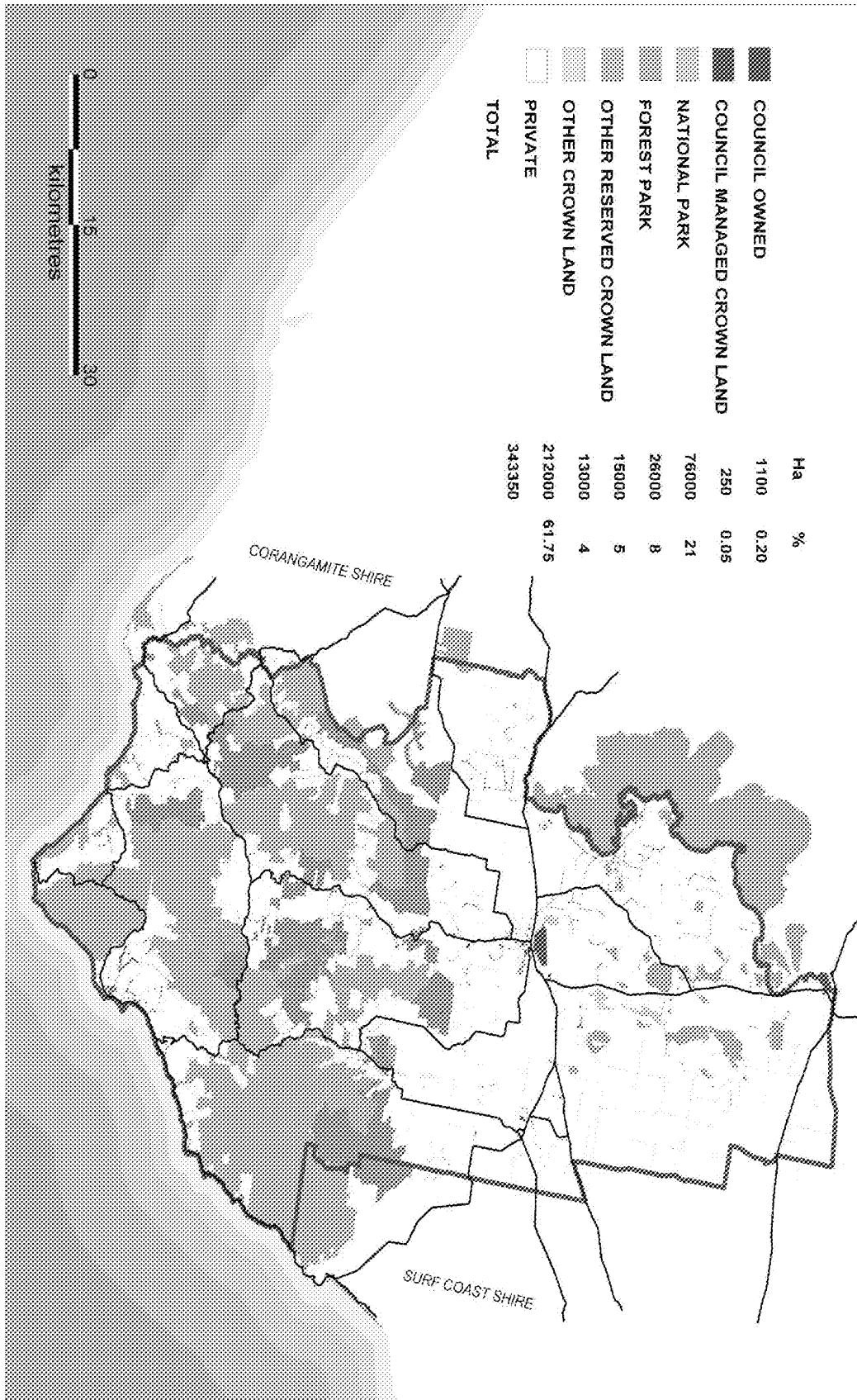
Colac Otway Shire is a predominately a rural, residential and resort area with some industrial operations in the Colac and Apollo Bay built up areas. The Shire encompasses a total land area of 3,250 square kilometres, of which a large proportion is National Park, including beaches, coastline, rainforests, waterfalls, lakes and craters. Much of the rural area is used for forestry and agriculture, with farming, cropping and dairying being the main agricultural pursuits.

Agricultural activity is concentrated in the Northern part of the Shire, although timber and fishing are prevalent in the South. Tourism is an important industry, especially in the Southern section along the Great Ocean Road. The Shire has two main townships, with many small villages and localities. The largest is the city of Colac, which serves as an administrative, retail, industrial and commercial centre. The other major township is Apollo Bay, which serves as the major tourism centre.

In the 1960s some subdivision of coastal areas occurred, with growth continuing in Apollo Bay. Since the 1970s rural residential living has become increasingly popular, with growth in smaller settlements in the Otways and further inland, such as Barongarook, Birregurra, , Forrest, Johanna and Lavers Hill. The population of the Shire declined slightly from 20,400 in 1991 to 19,600 in 1996, and then was relatively stable, increasing marginally to 19,900 in 2006.

Major features of the Shire include Great Otway National Park, Lake Colac, Cape Otway Lighthouse, Otway Fly Treetop Walk, the Great Ocean Road, the Great Ocean Walk and various beaches. The Shire is served by the Hamilton Highway, the Princes Highway, the Great Ocean Road and the Geelong-Warrnambool railway line, with stations at Colac and Birregurra.

The breakdown of land tenure in the Shire is depicted in the attached map. The map highlights that only 0.25% of land in the Shire is Council owned or managed. Approximately 38% of land is State owned and the majority of land in the Shire is privately owned.



3.2 Natural environment

The Shire is strongly influenced by physical and topographical features, which impact on urban development and land use management. It is characterised by a diverse range of environments including rugged coastline, dense native forests, rolling rural plains and significant rivers, lakes and wetlands. In the course of time these features have contributed to creating distinctive communities with quite different expectations about how their areas should develop or be maintained.

There are four distinct Bioregions within the Colac Otway Shire, known as the Otway Ranges Bioregion, Otway Plain Bioregion, the Victorian Volcanic Plain Bioregion and the Warrnambool Plains Bioregion. (Bioregions are the broad scale mapping units used for biodiversity planning in Victoria and capture the patterns and ecological characteristics in the landscape.) These are four of the 28 Bioregions found in the state of Victoria.

1. **The Otway Plain Bioregion** includes the coastal plains and dunes, the foothills with river valleys and swamps in the lowlands. The ridges seen today mark the positions of the difference to successive shorelines as the ocean has retreated from these areas over time to where it is today.
2. **The Otway Ranges Bioregion** consists of moderate to steep slopes that are deeply dissected blocks of alternating beds of sandstone, siltstone and shale's and swampy alluvium in the lowlands.
3. **The Victorian Volcanic Plain Bioregion** contains highly significant remnant vegetation communities that are supported by volcanic deposits that form an extensive flat to undulating basaltic landscape.
4. **The Warrnambool Plains Bioregion's** identifying features are nutrient deficient soils over low calcareous dune formations and the distinctive cliff coastline. Much of the limestone has been overlain by more recent sediments, and between the limestone dunes, areas of swamplands are characterised by highly fertile peats and seasonal inundation.

The Shire acknowledges its unique geographical location and the strengths and challenges of its regional position.

3.3 Climate and bushfire season

3.3.1 Climate

The Colac Otway Shire is in a mild temperate climate with defined seasonal change through summer, autumn, winter and spring.

The bushfire season generally runs from November to April annually. Prevailing weather conditions associated with the bushfire season in the Shire are high daily temperatures with north to north-westerly winds, followed by a vigorous west to south-westerly change. The wind changes in the Shire vary between an afternoon sea breeze to thunderstorms with lightning and damaging winds.

The typical/average climate in the Colac Otway Shire MFMP area is:

| Climate                         |      |       |                                 |      |      |
|---------------------------------|------|-------|---------------------------------|------|------|
| Daily mean maximum temperatures |      |       | Daily mean minimum temperatures |      |      |
|                                 | Jan  | July  |                                 | Jan  | July |
| Colac                           | 25.6 | 11.5  | Colac                           | 13.4 | 5.4  |
| Cape Otway                      | 21.2 | 12.5  | Cape Otway                      | 14.4 | 8.7  |
| Rainfall (mm) Mean              |      |       | Rain days Mean Nos.             |      |      |
|                                 | Jan  | July  |                                 | Jan  | July |
| Colac                           | 36.8 | 76.3  | Colac                           | 5.1  | 13.1 |
| Cape Otway                      | 47.7 | 105.1 | Cape Otway                      | 6.1  | 15.2 |

Source: Bureau of Meteorology [www.bom.gov.au/climate/averages/tables/](http://www.bom.gov.au/climate/averages/tables/) As at June 2007

### 3.3.2 Climate Change

In the Colac Otway Shire, climate change is expected to result in increased bushfire risk, more extreme weather events (e.g. drought, flood, wind storms, storm surges), coastal erosion and inundation due to the effects of sea level rise.

The State Government's regional climate change projections<sup>10</sup> indicate that the Shire can expect:

- More hot days;
- More intense droughts as a result of warmer temperatures and higher evaporation rates;
- Fewer rainy days, but increased rainfall intensity when it does rain;
- More droughts and higher evaporation rates; and
- Hotter drier conditions with significant reductions in run off for water catchments.

### 3.3.3 Bushfire considerations

Due to its landscape, the Colac Otway Shire is recognised by fire agencies as being one of the most fire prone areas in the State of Victoria.

There are a number of concerns regarding bushfires, which are unique to this particular region:

- A bushfire during the holiday period, where the population can increase significantly with up to 100,000 summer visitors, is particularly alarming. Public awareness and information programs therefore have to cater not only for residents, but also visitors.
- The main escape route from a major bush-fire sweeping down from a northerly direction towards the coast is the narrow, winding Great Ocean Road. This route is extremely vulnerable to blockages (accidents, rock falls etc.) which could result in significant numbers of people being stranded in coastal towns, or, more alarmingly, along the roadside.
- The northern part of the Shire is grassy plain, which is also highly prone to bushfires. In the Cressy fire in 1977 (one of the 'Black Saturday' fires), three people lost their lives, over 39,000 hectares were burnt and 10 houses were destroyed, along with several other buildings.

## 3.4 Population and demographic information

### 3.4.1 Overview

Development in the Shire dates from the 1850s when pastoralists and timber-getters established themselves in the areas around Colac. Colac experienced significant growth in the first half of the 20th Century as it became the major service centre to the agricultural areas to the north and the timber getting areas to the south. Apollo Bay was established in the 1860s as a port for the timber being harvested in the Otway Ranges. In later years it has become a holiday destination, particularly since the construction of the Great Ocean Road in the 1930s. In recent years, the Shire has catered for distinct housing markets; a relatively stable rural and regional population in the inland areas and a growing population in the coastal areas. The coastal areas, in particular Apollo Bay and Wye River, also cater for large influxes of persons during the summer holiday season. Some inland areas have also experienced growth in recent years through rural residential subdivision.

Demand for housing in the Colac area is expected to predominantly come from new households forming within the Shire. By contrast, it is expected that demand for housing in the coastal areas will predominantly come from further afield, such as Geelong and Melbourne.

With the variety of residential and rural locations, different areas within Colac Otway Shire have developed different roles within the housing market. Areas on the outskirts of Colac such as Elliminyt are attractive to both young and mature families as well as older adults. The established areas of Colac as well as the rural areas lose significant numbers of young adults as they seek employment and educational opportunities in larger centres, this trend is common to most rural and

<sup>10</sup> Department of Sustainability and Environment, *Climate Change in the Corangamite Region*, available at [www.climatechange.vic.gov.au](http://www.climatechange.vic.gov.au)

regional areas in Australia. The Great Ocean Road – Otways area attracts large numbers of young adults and retirees from outside the Shire. The variety of function and role of the small areas in Colac Otway Shire means that population outcomes differ significantly across the Shire.

There are also significant differences in the supply of residential property within the Shire which will also have a major influence in structuring different population and household futures within the Shire over the next five to ten years. New development opportunities have been identified in Elliminyt and Great Ocean Road - Otways while the established areas of Colac and the Rural Areas have relatively low amounts of new dwellings expected over the forecast period.

### 3.4.2 Population

| Brief statistics   | Colac Otway Shire |
|--|-------------------|
| Forecast population 2011:  | 22,264            |
| Change between 2011 and 2031:                                      | 4,534             |
| Average annual percentage change between 2011 and 2031 (20 years): | 0.93% per annum   |
| Total percentage change between 2011 and 2031 (20 years):          | 20.36%            |

| Population distribution throughout Colac Otway Shire |               |
|--|---------------|
| Town   | Population    |
| <b>Apollo Bay/Marengo</b>                            | <b>1375</b>   |
| Birregurra   | 466           |
| Beeac  | 200           |
| Beech Forest   | 80            |
| <b>Colac/Elliminyt</b>                               | <b>12,000</b> |
| Cressy   | 123           |
| Carlisle River                                       | 100           |
| Cororooke  | <b>136</b>    |
| Forrest  | 167           |
| Gellibrand River                                     | 160           |
| Lavers Hill  | 90            |
| Skenes Creek   | <b>160</b>    |
| Wye River/Kennett River                              | 260           |
| Other Regional Areas                                 | 5136          |

The 'Key statistics' table presented on the next page contains summary statistics for Colac Otway Shire. By default the table displays 2001 and 2006 data as both absolute numbers and percentages (where application), along with the change in number between these years.

### 3.5 Vulnerable People

Resilience is the capacity of a group or organisation to withstand loss or damage or to recover from the impact of an emergency or disaster. *Vulnerability* is a broad measure of susceptibility to suffer loss or damage. The higher the resilience, the less likely damage may be, and the faster and more effective recovery is likely to be. Conversely, the higher the vulnerability, the more exposure there is to loss and damage (*Department of Human Services, 2000*).

The following groups are generalisations which may be considered as vulnerable:

- **The aged**  
Particularly the frail – in terms of mobility and physical capacity.



- **The very young**  
Infants, babies and young children (especially 0-1 year olds , but vulnerability exists until at least four years of age in terms of managing their own recovery and in getting access to information and resources.
- **The disabled**  
Intellectual, psychiatric, and physical – in terms of managing their own recovery and in getting access to information and recourses.
- **The poor , or people with limited resources to meet essential needs**  
In terms of having the financial and physical resources to achieve recovery or to protect themselves against loss.
- **Non-English speaking**  
In terms of understanding the potential risks and in gaining access to information.
- **Low socioeconomic**  
Is based on family income, parental education level, parental occupation, and social status in the community (such as contacts within the community, group associations (and the communities perception of the family).
- **The socially isolated**  
In terms of having family and friends that can provide personal and physical support.
- **The physically isolated**  
In terms of having ease of access to resources, or in terms of being able to call on assistance from other members of the community or agencies.
- **The seriously ill**  
In terns of already being in need and having a very low capacity to carry our protective or recovery activity. Particularly cardiovascular, respiratory or renal disease.
- **People dependant on technology –based life support systems**  
In terms of already being in need and having a very low capacity to carry our protective or recovery activity or being dependant on systems over which they have no control.
- **Single parent families**  
Having to manage a range of demands with limited support.
- **People with inadequate accommodation**  
In terms of being already in strained circumstances and with existing high levels of need and support.
- **Those of holiday and travelling**  
Particularly those in tent and caravan resorts – in terms of being absent from their own communities and resources.
- **Tourists from overseas**  
Being in an unfamiliar environment with little knowledge of how to access resources and support.

### 3.5.1 Vulnerable Community/Facility Listing – (Bushfire Risk Areas)

Colac Otway Shire has identified vulnerable individuals for which the shire directly provides Health and Community Care (HACC) services. A database of individuals is regularly updated and available to response agencies in the event or possible event of a major incident. To access this database contact the rostered on-call Older Persons and Ability Support Services Officer.

The Shire also has identified external health and community agencies that provide direct services to vulnerable individuals within the municipality. Each of these agencies maintains their own lists of clients receiving various services. A register of these agencies and their contact details can be found in the Municipal Emergency Management Plan.

A register of facilities, where vulnerable people are likely to be situated – for example, aged care facilities, hospitals, schools and childcare centres can be found in the Municipal Emergency Management Plan.

| Key statistics (summary statistics): Colac Otway Shire |        |       |              |        |       |                     |      |
|--|--------|-------|--------------|--------|-------|---------------------|------|
| Enumerated data  | 2006   |       | G21 Region % | 2001   |       | Change 2001 to 2006 |      |
|  | Number | %     |              | Number | %     |                     |      |
| Enumerated population, including overseas visitors     |        |       |              |        |       |                     |      |
| Total populations (a)                                  | 19,982 | 100.0 | 100.0        | 20,089 | 100.0 | 100.0               | -107 |
| Males (a)  | 9,909  | 49.6  | 48.8         | 10,005 | 49.8  | 49.0                | -96  |
| Females (a)  | 10,073 | 50.4  | 51.2         | 10,084 | 50.2  | 51.0                | -11  |
| Overseas visitors                                      | 116    | 0.6   | 0.4          | 92     | 0.5   | 0.5                 | 24   |
| Age Structure  |        |       |              |        |       |                     |      |
| Infants 0 to 4 years                                   | 1,219  | 6.1   | 6.2          | 1,296  | 6.5   | 6.5                 | -77  |
| Children 5 to 17 years                                 | 3,806  | 19.2  | 18.3         | 4,104  | 20.5  | 19.1                | -298 |
| Adults 18 to 64 years                                  | 11,632 | 58.6  | 60.3         | 11,477 | 57.4  | 59.9                | 155  |
| Mature adults 65 to 84 years                           | 2,790  | 14.0  | 13.2         | 2,756  | 13.8  | 12.8                | 34   |

| Key statistics (summary statistics): Colac Otway Shire |        |       |              |        |       |                     |       |
|--|--------|-------|--------------|--------|-------|---------------------|-------|
| Enumerated data  | 2006   |       | G21 Region % | 2001   |       | Change 2001 to 2006 |       |
|  | Number | %     |              | Number | %     |                     |       |
| Senior citizens 85 years and over                      | 420    | 2.1   | 2.0          | 364    | 1.8   | 1.7                 | 56    |
| Households and dwellings                               |        |       |              |        |       |                     |       |
| Owned  | 3,422  | 31.9  | 31.4         | 3,961  | 39.4  | 37.8                | -539  |
| Purchasing   | 2,385  | 22.2  | 27.5         | 1,858  | 18.5  | 23.5                | 527   |
| Renting  | 1,699  | 15.8  | 18.1         | 1,361  | 13.5  | 16.9                | 338   |
| Households (occupied private dwellings)                | 7,977  | -     | -            | 7,767  | -     | -                   | 210   |
| Persons counted in households                          | 19,304 | -     | -            | 19,486 | -     | -                   | -182  |
| Average household size (persons)                       | 2.42   | -     | -            | 2.51   | -     | -                   | -0.09 |
| Total Dwellings  | 10,744 | 100.0 | 100.0        | 10,054 | 100.0 | 100.0               | 690   |
| Non-English speaking backgrounds                       | 532    | 2.7   | 7.8          | 554    | 2.8   | 8.0                 | -22   |
| Main English speaking countries                        | 830    | 4.2   | 6.4          | 814    | 4.1   | 6.6                 | 16    |

### 3.6 Fire History within the Colac Otway Shire

The Colac Otway area has on average 44 bushfires per year. The two main sources of ignition in the Shire are natural causes and suspicious events.

### 3.7 Colac-Otway Shire Major Fires

- 1851** February 6 – Black Thursday. The “Fires covered a quarter of what is now Victoria” including “The Pyrenees, the Loddon country, the Wimmera, Colac, the “far west”, the Portland country, Mount Gambier, the country between Geelong and Ballarat. Not one house in ten survived in the Barrabool Hills”
- 1886** January 4-5: Otway & Heytesbury regions, including Colac.
- 1914** Otway Ranges’  
Beech Forest and ‘forest south of Colac’
- 1919** 1/2/1919-1/3/1919 “Three people died when bushfires consumed Otway forests. Bushfires were widespread for six weeks and many homes were destroyed.”  
24 Nov 120,000 ha Otway Ranges and Grampians
- 1932** January-February: widespread fires. Reports of fires include: Beech Forest and Cape Otway near Lorne & Benwerrin
- 1939** Towards the end of a long drought, numerous fires burning separately in various parts of the state joined and peaked in severity on 13 January - “Black Friday”. The fires affected almost every section of Victoria, including the Otways. “The findings of the Royal Commission that was held following the fires were highly significant in increasing fire awareness and prevention throughout Australia.”
- 1944** Friday 14 January – 14 February: Major fires across Western District with 15-20 fatalities.
- 1962** 16 January: Otways (2,024 ha)
- 1965** 21 February: Otways (12,000 ha).
- 1966** 23 November: Otways - Modewarre, Wurdale, Anglesea (15,000 ha).
- 1968** Colac Gellibrand road, 10 miles south of Colac, Barangaroo threatened (810 ha) (11 Jan) also a fire on north side of Lorne (1215 ha) (6 Feb).
- 1977** 12 February: “Widespread fires occurred across the Western District of Victoria, mostly in grasslands This included the Cressy (Wallinduc or Werneth) fire: 42,000 ha.in which 3 people lost their lives. In Cressy 10 houses were destroyed along with 2 halls, a garage and fuel depot. The State school and tennis centre at Werneth were destroyed and a large number of outbuildings.  
There was another fire at Beeac (1500 ha).
- 1983** 16 February - “Ash Wednesday”. Over 100 fires in Victoria, with the Otway ranges severely affected. The Otway fire originated at Deans Marsh (in what is now Surf Coast Shire) and resulted in 3 deaths and around 41000 ha burnt (mainly forested country) and 729 houses lost
- 2001** February 2 “Wingeel Plains Fires” (2000 ha).
- 2002** 15 September: Chapple Vale (786 ha).

## 4 Municipal Fire Management Objectives

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### 4.1 Alignment to Regional Objectives

The Barwon South West Regional Strategic Fire Management Planning Committee has resolved that the regional priorities to be addressed first are:

- High Risk Townships
- Critical Essential Service Assets
- Tourism/Major Events
- Key Rural Industries, and
- Major Transport Corridors

### 4.2 Objectives and Outcomes

#### 4.2.1 Objectives and Legal Requirements

The primary objectives of this Plan are to:

- Protect and preserve human life;
- Protect critical infrastructure;
- Manage and reduce the risk of fire, with due regard to the natural environment;
- Align and integrate fire management planning and practices across agencies and the community; and
- Educate, inform and empower communities to become more self-reliant and resilient.

Under the Country Fire Authority Act 1958 (section 55A), this Plan must contain provisions:

- Identifying areas, buildings and land use in the Colac Otway Shire that are at particular risk in case of fire;
- Specifying how each identified risk is to be treated and who is responsible for treating those risks; and
- Identifying all designated Neighbourhood Safer Places in the Shire.

The Colac Otway Shire is required under section 43 of the Country Fire Authority Act to take all practicable steps (including burning) to prevent the occurrence of fires on, and minimize the spread of fires on and from:

- Any land vested in the Shire or under its control and management; and
- Any road under its care and management.

Other agencies and organisations, such as the Department of Sustainability and Environment, the Country Fire Authority and electricity providers such as Powercor also have various obligations, including legal obligations, in relation to fire management. (Further discussion of the Department of Sustainability and Environment's obligations in relation to planned burning on public land is included in Section 5.1.2.)

To meet these objectives and requirements, this Plan has been developed as an operational and strategic document. The Plan identifies communities and assets at risk through an Environmental Risk Scan and the Victorian Fire Risk Register (VFRR). The VFRR is a tool to identify assets at risk, assess the level of bushfire risk to assets and identify a range of treatments to mitigate the risks. Treatments may include activities such as fuel reduction, community education, property planning and preparedness programs.

The Plan also references treatments for the five regional risk priorities (listed above) identified by the Barwon South West Regional Strategic Fire Management Planning Committee. A copy of the

VFRR Municipal Risk Register for the Colac Otway Shire, with risks presented by regional risk priorities, is included in appendix A.

#### 4.2.2 Outcomes

The desired outcomes of this Plan are:

- Human life and critical infrastructure are better protected in the Shire;
- Plans are in place and activities undertaken to minimise the risk of fire and to suppress any fire that may occur within the Shire;
- Members of the Municipal Fire Management Planning Committee actively seek opportunities for agency collaboration to improve outcomes for communities and to reduce duplication;
- All agencies contribute to and are accountable for implementing agreed treatments; and
- Communities within the Colac Otway Shire have an improved understanding of fire in their environment and the shared responsibility for action to reduce the risk of fire within their community.

#### 4.3 Strategic Directions

The strategic direction of this Plan aligns directly with the State Fire Management Strategy 2009 vision for future fire management in Victoria. The vision is for fire management in Victoria that delivers:

- Active participation of community, the fire management sector and government, working together in fire management planning to reduce the destructive impact of fire on communities and the environment;
- Communities that are resilient to the effects of fire;
- Greater understanding of the fire sector within the community; and
- Healthy natural, social and built economic environments.

In addition, the ongoing development of this Plan will also consider the following broad strategic documents:

- *Fire Services Reform Program and Action Plan*, (June 2011), Fire Services Commissioner;
- *Implementing the Government's Response to the 2009 Victorian Bushfires Royal Commission*, (May 2011), State Government of Victoria;
- *Bushfire Safety Policy Framework*, (September 2011), Fire Services Commissioner;
- *Living with Fire – Victoria's Bushfire Strategy*, (June 2008), State Government of Victoria

#### 4.4 Links to Other Business and Programs

Important linkages include:

- Barwon South Western Regional Strategic Fire Management Plan;
- Colac Otway Shire Municipal Emergency Management Plan;
- Municipal Fire Management Plans for our neighbouring municipalities, Surf Coast Shire, Corangamite Shire and Golden Plains Shire;
- Department of Sustainability and Environment:
  - Fire Operations Plan 2011/12 – 2013/14: Otways District/Region;
  - Barwon Otway Bushfire Management Plan; and
  - Great Otway National Park and Otway Forest Park Management Plan.
- Country Fire Authority:

- website [www.cfa.vic.gov.au](http://www.cfa.vic.gov.au) (for general fire information and warnings, community information and engagement programs, Township Protection Plans and Neighbourhood Safer Places – Places of Last Resort and other CFA initiatives);
- Operation plans and Brigade plans; and
- Barwon South West Community Safety Program and Resource Catalogue.
- Powercor Bushfire Mitigation Strategy (<http://www.powercor.com.au/>) and
- SP Ausnet Bushfire Mitigation Strategy.

## 5 Fire Management Risk Strategies

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### 5.1 Risk Assessment Methodologies

To determine the bushfire risk within the Colac Otway Shire, two main risk assessment processes were used:

- The Victorian Fire Risk Register; and
- The Department of Sustainability and Environment's landscape level bushfire management planning process – the 'Otways Bushfire Management Project'.

Each of these processes is described in greater detail below.

To determine the structural and chemical fire risk within the Shire, incident data and major assets were used to inform identification of key risks.

#### 5.1.1 Victorian Fire Risk Register

The Victorian Fire Risk Register (VFRR) application is a systematic process that identifies assets at risk of bushfire on a consistent state wide basis using the Australian/New Zealand Risk Management Standard ISO:31000 2009.

The aim of the VFRR is to identify the risk of bushfires on assets and values in human settlement, cultural heritage, economic and environmental contexts.

The objective of the VFRR is to:

- identify and rate bushfire risks to assets;
- identify current mitigation treatments to manage the risk;
- identify the agencies responsible for implementing mitigation treatments and strategies;
- produce an integrated document and risk register across responsible agencies; and
- support and inform planning at a local level.

The primary outputs of the VFRR process are a series of satellite maps displaying assets at risk, plus a municipal bushfire risk register, listing the risk rating for each asset and current risk mitigation treatments.

A copy of the Colac Otway Shire Risk Register, with risks presented by regional risk priorities, is included in Appendix A .1. A list of the VFRR risk mitigation treatments is included in Appendix A.2

#### 5.1.2 Landscape Level Bushfire Management Planning

The 2009 Victorian Bushfires Royal Commission (VBRC) recommended a substantial increase in planned burning on public land.<sup>11</sup> The State Government, in accepting this recommendation, committed to increasing the amount of planned burning across the public land of Victoria to 390,000 hectare per annum by 2015.

The VBRC stated that the approach must be based on an explicit risk analysis model that also takes into account effects on biodiversity .The challenge is to reduce bushfire risk to life and property while also maintaining a healthy environment.

DSE developed the "Future Fire Management Project" to deliver these outcomes. This project assists fire managers to work with communities to choose the best mix of treatments to both protect communities and sustain natural biodiversity and ecosystem resources, such as carbon and water. It is based on our best understanding of bushfire risk, provides our best estimate of potential impacts of fire (possible outcomes), focuses on how well we are achieving these goals, and will be continuously reviewed and improved through research and monitoring.

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<sup>11</sup> Recommendation 56, 2009 Victorian Bushfires Royal Commission, *Final Report – Volume II: Fire Preparation, Response and Recovery*, p. 295. See also related recommendations 57 and 58.

Since 2006, an active partnership between the Department of Sustainability and Environment (DSE), Parks Victoria, the Country Fire Authority and local government, particularly Surf Coast Shire and Colac Otway Shire, has developed a coordinated strategic approach to protecting the vulnerable coastal communities in the Otways. Many of these communities were devastated during the 1983 Ash Wednesday fires. A Bushfire Management planning process, Future Fire in the Otways Pilot Study, (the Pilot) commenced in the Otways in 2010. It is supported by a stakeholder reference group and aims to plan across both public and private land.

Community consultation helped to identify locally important social, economic and environmental values. The planning then set objectives considering these values. Using Phoenix RapidFire, a computer-based tool that simulates the growth of bushfire under set conditions it is possible to show partners and the community what is likely happen in a bushfire under given conditions but most importantly, what beneficial effects arise from treatments like burning on the spread of a bushfire. When linked with knowledge of how our natural forests respond to fire, it also enables us to assess the cost-benefits of many fires spread over a long period of time (fire regimes). This allows more informed and transparent decisions. This tool, and ways of using it to support planning, have been developed by the University of Melbourne, the Bushfire CRC, DSE and Parks Victoria.

As a part of this process, the following long term fire management options were assessed for the Otways Bushfire Management Pilot:

- Fire regimes that focus mostly on protecting built assets;
- Fire regimes that work tightly within ecological needs; and
- Several combinations of the above.

These fire regimes were then evaluated for their impact on:

- Spread, intensity and damage potential on communities of severe bushfires spreading under extreme fire conditions,
- Forest health (biodiversity and resilience); and
- Water quality and supply.

Importantly, the Pilot developed and evaluated fire regimes as they apply across the entire landscape, both public land (parks and forests) and private land. This is absolutely critical to the effectiveness of bushfire management, as bushfires do not respect land boundaries. An integrated approach to managing fuels and fire regimes across both public and private land is essential to better managing bushfire.

The Pilot has produced information that is of great value to Otways' bushfire managers. Numerous fires were run by simulation over the Otways landscape. The protection and ecological and water impacts provided by various combinations of burns were estimated for many fire scenarios. These simulations enable comparative assessment of how planned fire can reduce the chance of fire starting, slow the rate and ferocity of their spread, and reduce their impact on communities and the resources (such as water) and value (such as healthy forests). Fire managers can now measure the level of risk reduction achieved by planned burning and establishment of fuel breaks, including the importance of the relationship between fuel management on both public and private land.





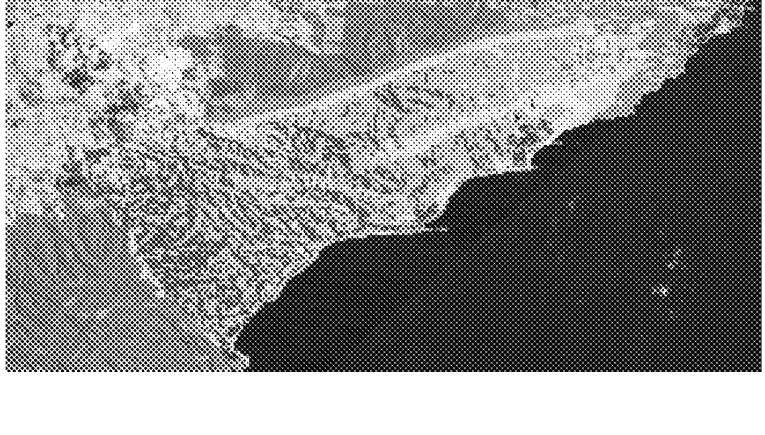


Regardless of how extensively planned burning and building fuel breaks are conducted, bushfire risk can never be totally eliminated from the Victorian landscape.

Modelling and planning using future fire management techniques in the Pilot indicates that, even with burning the maximum area possible, it is not feasible to reduce risk to communities below moderate risk levels. It shows that communities must then apply other mechanisms such as clearing around homes, getting to know neighbours, establishing network groups such as Community Fire Guard and fire strategic conversations,<sup>12</sup> and developing individual and community bushfire plans to further reduce risk. This then becomes a true expression of working together to reduce bushfire risk - an example of the “shared responsibility” discussed in Section 1.2 of this Plan.

Simulations have revealed the parts of the Otways where the most damaging bushfires may start, spread and have significant impacts on communities and water catchments. Although this information is still being refined and evaluated, it already provides critical information for Otway fire managers. Burns and other prevention works can be located with confidence and be shown to substantially reduce risk of bushfire to communities. Review, evaluation, adaptation through the incorporation of new information from research, monitoring and working with communities is fundamental to the ultimate success of fire management planning state wide.

The Pilot has not just focussed on planning future fire regimes. It has practically informed the delivery of the current burn program with approximately 25,000 hectares effectively fuel reduced over the past three years. Modelled risk reduction in the Otways has provided evidence of the need for the escalation of the DSE and Parks Victoria planned burn program, and has demonstrated how fire managers can work more transparently and cooperatively with communities to improve bushfire management outcomes for reducing bushfire risk to local communities.

<sup>12</sup> These two initiatives, and other community engagement initiatives, are described in further detail in Appendix B – Multi-Agency Work Plan: Surf Coast Shire Municipal Fire Management Plan.

|  |  |
|--|--|
| <p>Figure 2. – These three images are simulations of:</p> <ul style="list-style-type: none"> <li>(i) fire spread under near worst case conditions; and</li> <li>(ii) impacts of planned burning on reduction of fire extent, severity and community impacts.</li> </ul> <p>This image shows the projected spread of the a fire spreading under near worst case conditions without any prior planned burning and fuel management.</p> |    |
| <p>This image shows planned burn areas scheduled by the end of 2011</p>  |   |
| <p>This image shows how the proposed burning is expected to break up and reduce the severity of this fire run.</p> <p>As of 2011, DSE and Parks Victoria implemented and improved on strategies evaluated using this approach.</p>   |  |

The process of better understanding bushfire risk, the role of fire in our environment, and then working together to find the best ways to manage fire in the environment we live in and value is ongoing. This critical work will be further refined over the next few years and has the potential to support more explicit and transparent risk based decision making and improve integrated bushfire management planning. This approach gives emphasis to protecting human life by reflecting our shared responsibility for bushfire safety.<sup>13</sup>

<sup>13</sup> "Approaches to Future Fire Management – risk based planning and action from the Otway-Surf Coast", Case Study, Bushfires Royal Commission Implementation Monitor, *Progress Report*, (July 2011) at pp. 136 – 139.

5.1.3 Hazardous Roadside Vegetation

Risk Assessments have been undertaken of roads within the Colac Otway Shire by VicRoads and Council with respect to vegetation that may pose high risks in the event of bushfire based on a state threat assessment model designed by Terramatrix. Selected roads in high risk environments, or of high strategic value have been surveyed by a mixture of Council, VicRoads, DSE and CFA. Risk Assessments of VicRoads managed roads are held and managed by that agency. From the Risk Assessments suitable treatments have been prioritised and works plans prepared.

The risk assessments looked at the road reserve, traffic lane/s and adjacent lands to measure risk values and threats and then scored to provide a risk priority order. Work done at the time of risk assessments to determine appropriate treatments for individual roadsides was also undertaken. Risk worksheets were completed using the following template.

**Risk worksheet**

Road name: \_\_\_\_\_ State Assessment: \_\_\_\_\_ Total Score: \_\_\_\_\_ Street No: \_\_\_\_\_

Segment (from - to): \_\_\_\_\_

Length of segment: \_\_\_\_\_

Asphaltpaved side: 1.2m Asphaltpaved side: 1.2m

Shoulder width: 2.7m Shoulder width: 2.7m

**Vegetation Survey**

| Vegetation Type | Area (m <sup>2</sup> ) | Species | Notes |
|-----------------|------------------------|---------|-------|
| ...             | ...                    | ...     | ...   |

**Risk Assessment**

| Category | Score | Weight | Value | Sub-score |
|----------|-------|--------|-------|-----------|
| ...      | ...   | ...    | ...   | ...       |

**Physical works**

...

**General works**

...

**Complementary approaches**

...

**Treatment worksheet**

Local Score for adjacent land (both sides): \_\_\_\_\_

Local Score for road reserve (both sides): \_\_\_\_\_

...

Risk assessments will be presented to Council's MFMP for consideration in determining annual works plan reviews.

Council Roads have also been assessed using the same Risk Assessment criteria and maps of high risk roads are included in Appendix E2.

It should be noted that treatments will not always include reduction, or removal of vegetation on high risk roads and such treatments will only be applied when it is reasonable in all the circumstances, including the interests of soil stability and significant conservation value.

Fire Management Objectives for Bushfire Management on Roads (as cited by DSE<sup>14</sup>) include:

- Objective 1 – Prevent Fires on Roadsides
- Objective 2 – Contain Roadside Fuels
- Objective 3 – Manage Safety of Road Users
- Objective 4: Provide Control Lines

#### **5.1.4 Structural and Chemical Fire Risk Assessment**

This Plan recognises that an Urban Risk Assessment Tool is being developed at State level and, once completed, will be implemented by the MFMP to complete and incorporate a full Risk Register in respect of structural and chemical fires at Appendix A of this Plan. In the interim, Barwon South West IFMP and CFA staff are developing a risk assessment process for chemical and structural fires using incident statistics, key asset identification, and other available site and incident statistical information.

Risk assessment will give consideration to likelihood factors, such as structural and chemical fire history (number and type) across the municipality and across the relevant industry, and the consequences, or potential consequences of those occurrences (death, injury, economic and property loss statistics). Consideration will also be given to high risk premises and assets. Examples of high risk premises may include (for life risk) nursing homes, aged care facilities and institutional care facilities, (and for property loss risk) commercial and industrial premises. In terms of chemical fires, consideration will be given to high risk premises such as chemical manufacturers, or high chemical use industries, chemical transport industries, fuel suppliers and any other industry identified following a comprehensive risk assessment process.

Maps showing chemical and structural fire incidents for the Shire since 1999 are included in Appendix E of this Plan. These maps currently capture actual incident numbers and geographic locations of recorded incidents. Consequence data has still to be incorporated and criteria finalised for asset classification and development of a risk register. As the risk data does not meet the requirements of ISO 31000 to undertake a full risk analysis, the maps are provided in the plan for information only at this time.

The MFMP will continue to work with VFRR and Barwon South West region on the development of risk assessment criteria and tools for structure and chemical fires. The Plan will be updated to include additional information as the criteria and tools are finalised.

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<sup>14</sup> Department of Sustainability & Environment, *Roadside Vegetation Management for bushfire mitigation purposes*, 2012

**5.2 Alignment to Regional Objectives**

Assets in the Colac Otway Shire’s VFRR Risk Register are grouped according to the five regional risk priorities identified by the Barwon South West Regional Strategic Fire Management Planning Committee. These priorities are: high risk townships, critical essential services, tourism and major events, key rural industries and major transport corridors. The table below aligns the regional risk priorities to the asset classes and sub-classes within the VFRR.

| Barwon South West Regional Risk Priority              | Asset Class      | Asset Subclass                                      |
|---|------------------|---|
| High Risk Townships                                   | Human Settlement | Residential<br>Other                                |
| Critical Essential Services                           | Economic         | Drinking Water Catchment<br>Infrastructure          |
| Tourism and Major Events                              | Economic         | Tourist and Recreational<br>Special Fire Protection |
| Key Rural Industries                                  | Economic         | Agriculture<br>Commercial<br>Commercial Forests     |
| Major Transport Corridors                             | Economic         | Infrastructure                                      |
| Other assets not included in regional risk priorities | Human Settlement | Special Fire Protection                             |

**5.3 Treatment of Municipal Fire Risk**

The state fire management priorities are underpinned by the primacy of life, the protection of property, the economy and the environment. These priorities inform and are integrated into the primary fire risk management strategies used in this Plan (refer to Appendix B of this Plan for details), which are:

- Community education and engagement;
- Hazard reduction;
- Preparedness; and
- Regulatory controls.

The Landscape level bushfire management planning process for Otway-Surf Coast has identified the following five key focus areas to develop municipal level strategies to address bushfire risk:

- Prevention strategies aimed at reducing risk of ignition associated with road, rail and electrical infrastructure to the north of the public land.
- Review roadside management strategies to the north of the public land to ensure that works support objectives for either:
  - 1) Managing for safety of road users, or
  - 2) Provide control lines.
- Private land interface areas for planned burning integrated with public land.
- With partner agencies, implement engagement strategies and an integrated approach around community resilience, understanding and awareness of risk.

In addition to these recommended municipal strategies, there are a number of State wide and municipal treatments that have been indentified for each fire risk management strategy, which can be used by agencies to reduce the risk and effect of fire on the community. The generic State wide and municipal wide treatments include:

- Community education programs;
- Community education and engagement activities;
- Public awareness – multi media communications;
- Powerline hazard tree identification, management and reporting;
- Fire hazard inspection program and issue of notice;
- Compliance and enforcement of legislation;
- Road Bushfire Risk Assessment Work Plans
- Wildfire management overlays;
- Building code of Australia;
- Permits to Burn; and
- Local laws.

To effectively reduce community vulnerability to fire will require more than inter-agency effort alone. It will require more self-reliant and self-aware communities that have the knowledge, motivation and capacity to manage risks to reduce the threat of fire and that work as active partners with fire management agencies.

### **5.3.1 Hazard Trees**

The Electrical Safety Act 1998 provides that a municipal council must specify, within its Municipal Fire Prevention Plan:

- (a) procedures and criteria for the identification of hazard trees; and
- (b) procedures for the notification of responsible persons of trees that are hazard trees in relation to electric lines for which they are responsible.

The Colac Otway Shire's identification and notification procedures for Hazard Trees are included in Appendix C.1.

### **5.3.2 Township Protection Plans**

A key recommendation from the Victorian Bushfires Royal Commission Interim Report was the development of Township Protection Plans (TPPs) for high risk communities across Victoria. The priority given for these plans is the protection of life.

The 2009 Victorian Bushfire Royal Commission identified 52 townships throughout Victoria as highest risk. 8 of these townships are located within the Colac Otway Shire.

The VFRR risk assessment process was also used to inform decisions relating to identified high risks towns and Township Protection Planning, including the initial identification of potential Neighbourhood Safer Places – Places of Last Resort

TPPs are established for high risk communities and are regularly reviewed. Should the risk in a particular area be modified by land clearing or development, TPPs may be updated, the area covered changed or the TPP withdrawn. In addition, other TPPs may be developed in the future for communities at risk of bushfire.

TPPs for specific locations in the Colac Otway Shire can be found in Appendix C.2 – Township Protection Plans.

### 5.3.3 Bushfire Safety and Shelter Options

#### 5.3.3.1 Overview - Bushfire Safety Options

The State Government's Bushfire Safety Policy Framework recognises that there are a range of ways that people will respond to the threat of bushfires and a range of locations, both personal and communal, where people may find shelter.<sup>15</sup> The Framework includes the following bushfire safety options:

- Leaving options
  - Leaving early
  - Evacuation
- Relocation destinations
  - Leave early destinations
- Shelter options
  - Defending a well prepared home
- Contingency shelter options
  - Private bushfire shelters (bunkers)
  - Community fire refuges
  - Neighbourhood Safer Places – Places of Last Resort
  - Private places of shelter

#### 5.3.3.2 Contingency Shelter Options

The State Bushfire Safety Policy Framework recognises that not all people living or present in high bushfire risk areas will have a well developed bushfire survival plan. Four contingency shelter options are listed in the Framework – two public options (community fire refuges and Neighbourhood Safer Places – Places of Last Resort) and two private options (bunkers and other private places of shelter).

Neighbourhood Safer Places – Places of Last Resort (NSPs) are not community fire refuges or emergency relief centres. NSPs are places of last resort during the passage of a bushfire, and are intended to be used by persons whose primary bushfire plans have failed. NSPs are places of relative safety only. They do not guarantee the survival of those who assemble there. Furthermore, there may be serious risks to safety encountered in travelling and seeking access to NSPs during bushfire events. Depending on the direction of a particular fire, it may not be 'a safer place' to assemble than other places within the municipal district. At that point in time it almost certainly will be a matter for individual judgement and decision, as to which if any NSP a person or persons should travel in the presence of fire.

NSPs are places or buildings designated and signposted by the Municipal Council and meet guidelines issued by the Country Fire Authority.

There are currently no designated NSPs or community refuges within Colac Otway Shire.

### 5.3.4 Individual Bushfire Risk Treatments

#### 5.3.4.1 Vegetation Management Rights

Native vegetation is important to many Victorians and its removal is carefully regulated by the planning system.

Under the Victoria Planning Provisions, there are permit exemptions for vegetation removal around existing buildings used for accommodation and adjacent to fences on property boundaries.

<sup>15</sup> Fire Services Commissioner – Victoria, *Bushfire Safety Policy Framework*, December 2010 at p. 17, available at [www.firecommissioner.vic.gov.au](http://www.firecommissioner.vic.gov.au)

The two main exemptions are the '10/30 rule' and the '10/50 rule' which allow clearance of native vegetation around buildings used for accommodation without obtaining a planning permit. Under the 10/30 rule, landowners can clear without a planning permit:

- Any vegetation, including trees, within 10 metres of a building used for accommodation;
- Any vegetation (except for trees) within 30 metres of a building used for accommodation; and
- Any vegetation to a combined maximum width of 4 metres either side of a fence or boundary, subject to agreement with neighbouring property owners

The 10/50 rule mirrors the 10/30 rule but applies to properties within the Bushfire Management Overlay and allows clearance of vegetation (except for trees) up to 50 metres of a building used for accommodation. The exemptions only apply to existing buildings and fences constructed or approved before 10 September 2009. In the case of the 10/50 exemption, the buildings and fences must be constructed or approved before 10 September 2009 and lawfully erected before 18 November 2011.<sup>16</sup>

#### **5.3.4.2 Local Laws and Permit to Burn**

During the Declared Fire Danger Period a fire may not be lit or remain alight in the open air without a permit, and the requirements of Total Fire Bans must be complied with.

During the declared Fire Danger Period, limited permits may be obtained by individuals to conduct a fuel reduction or stubble burn within the municipality. These permits are issued by Council under authority of the CFA Act. These permits contain stringent conditions that must be complied with.

Under the Colac Otway Shire's Local Laws, for amenity and health reasons, the burning of any type of material is regulated. Further information about local laws and permits may be obtained from the Colac Otway Shire's website [www.colacotway.vic.gov.au](http://www.colacotway.vic.gov.au).

#### **5.3.4.3 Inspection of Private Properties and Issue of Notices**

The Colac Otway Shire will conduct fire hazard inspections within the municipality, concentrating on high risk areas. Fire prevention notices will be issued on land considered to be a fire risk as soon as practicable upon declaration of Fire Danger Period. Notices will address works required to further reinforce treatments required for the protection of life and property, especially in, and around areas of human settlement.

#### **5.3.4.4 Planning Permits**

When applications are lodged with the Colac Otway Shire for permits under the Planning and Environment Act for the subdivision of land or the construction of buildings in areas of high fire risk, the Shire may give consideration to the following documents in determining any such application, and also refer the application to the relevant fire agencies for comment.

- Planning Guidelines for Subdivisions in bushfire-prone areas;
- Building in a Wildfire Management Overlay – Applicant's Workbook 2010;
- Australian Standard 3959, 2009 - Construction of Buildings in Bushfire Prone Areas; and
- Bushfire Management Overlay – Colac Otway Shire Planning Scheme.

### **5.4 Treatment of Structural Fires and Chemical Fires and Incidents**

#### **5.4.1 Structural Fire Risk**

Incident statistics show a likelihood for structural fires across the municipality, but with the strongest concentration in the major townships. Structural fires may involve a range of structures from a single residential structure through to a large industrial building. The impacts of structural fires can include

<sup>16</sup> Clause 52.48, *Victoria Planning Provisions*



death or injury, loss of property, or consequential economic loss associated with the aforementioned impacts.

It is recognised that the majority of structural fires occur within townships, however isolated single structures can also be affected by structural fire.

#### **5.4.2 Structural Fire Risk Treatments**

Structural Fire Risk is treated in a number of ways to minimize their occurrence and severity. Treatment actions may include:

- building control and regulation
- public awareness and education
- household fire planning
- occupational health and safety regulation
- dangerous goods and hazardous material regulation
- response procedures of CFA, including resource and training provision, proportional and specific, to the structural risk environment

#### **5.4.3 Structural Risk Action Timelines and Responsibilities**

Determination of treatment implementation will be determined once the State Urban Risk Assessment Tool is developed and subsequently implemented. This plan recognises that many of the treatments identified at 5.4.2 are in place already. It is expected that a fully completed risk assessment process will identify any need for targeted, or alternate, treatments associated with assessed risk.

The MFMPCC will work with key agencies including CFA, Council's Municipal Building Surveyor and WorkSafe Victoria to set performance criteria (including timelines) for any identified actions and treatments from the risk assessment process.

#### **5.4.4 Chemical Fire and Incident Risk**

Incident statistics show a likelihood for fires and incidents involving chemicals across the municipality. Such incidents may involve a range of matters from a minor leak or spill (example – car leaking petrol) to a major leak and/or fire involving chemicals (examples include Coode Island fire, tar leak at Portland Harbour, Longford Gas Plant fire). The impacts of chemical fires and incidents can include death or injury, loss or damage of property and environment, or consequential economic or environmental losses associated with the aforementioned impacts.

It is recognised that the majority of chemical fires and incidents occur within townships, however isolated incidents have been known to occur, including tanker leaks and fires outside of built up areas.

#### **5.4.5 Chemical Fires and Incident Risk Treatments**

Chemical fires and incidents risk is treated in a number of ways to minimize their occurrence and severity. Treatment actions may include:

- dangerous goods and hazardous material regulation
- occupational health and safety regulation
- environmental protection regulation
- industry compliance codes, and codes of practice
- building control and regulation
- transport licensing and regulation
- public and industry awareness and education
- emergency management fire planning within industries
- response procedures of CFA, including resource and training provision specific to the structural, chemical and Hazmat risk environments

#### **5.4.6 Chemical Fires and Incident Risk Action Timelines and Responsibilities**

Determination of treatment implementation will be determined once the State Urban Risk Assessment Tool is developed and subsequently implemented. This Plan recognises that many of the treatments identified at 5.4.5 are in place already. It is expected that a fully completed risk assessment process will identify any need for targeted, or alternate, treatments associated with assessed risk.

The MF MPC will work with key agencies including CFA, WorkSafe Victoria, VicRoads and the Environment Protection Authority to set performance criteria (including timelines) for identified actions and treatments.

#### **5.4.7 Major Hazard Facilities**

Major Hazard Facilities are industrial sites that store, handle or process specific hazardous materials in quantities above a threshold amount. Examples of such facilities include oil refineries, and gas-processing plants.

Major Hazard Facilities must comply with strict legal requirements. The list of approved Major Hazard Facilities in Victoria is maintained by WorkSafe Victoria and is available at [www.worksafe.vic.gov.au](http://www.worksafe.vic.gov.au).

As at the date of this Plan, there are no Major Hazard Facilities in the Colac Otway Shire.

Major Hazard Facilities treatments are identified and managed at state level. Any Major Hazard Facilities listed in this Plan are noted for information and completeness only.

### **5.5 Treatment of Special Fire Risks**

#### **5.5.1 Yeodene Peat Fire**

The Colac Otway MF MPC, and at the advice of the Chief Officer of CFA, identify that a special fire risk exists with respect to the peat swamp area on Boundary Creek, Yeodene.

A fire burnt into the peat area on 10 October 1997, which resulted in the peat soils burning well below the ground surface that is usually burnt associated with bushfires. In March 1998 the fire that had been burning underground reignited surface fuels on a hot windy day resulting in 680 hectares of fire area to the South West of the peat area. CFA have reported intermittent smoke sightings at the peat area between late 1998 and 2010. On 2 March 2010 the fire, under relatively mild conditions, again ignited surface fuels and burnt an area of 80 hectares before being brought under control.

A sub-committee of the MF MPC has been formed to manage this special risk. The Committee is called the Yeodene Peat Fire MF MPC Sub-committee. The committee is to prepare, review, and present options to the MF MPC for consideration in the management of this special risk. The committee is led by CFA and shall report to the MF MPC as a standing agenda item. The sub-committee is to comply with governance and audit standards as required by EMMV for sub-committees of the MEMPC and MF MPC.

### 5.6 Cross Boundary Arrangements

This Plan seeks to ensure that risk environments that cross municipal and regional boundaries are treated in a seamless manner with regard to risk assessment and treatments. In part, this is achieved through a collaborative approach and the use of consistent processes and tools.

The Colac Otway Shire shares borders with the Corangamite Shire, Golden Plains Shire and Surf Coast Shire. It is the shared responsibility of the Municipal Fire Management Planning Committees for all four municipalities to ensure that risks contiguous across these borders are planned for in a consistent and seamless manner.

Clear linkages to existing organisational cross boundary agreements and Memorandums of Understanding between agencies dealing with Preparedness, Preparation, Response and Recovery activities and resource allocation arrangements are also vital.

The Surf Coast Shire and Colac Otway Shire have agreed to collaborate on development of their Municipal Fire Management Plans. A coordinated strategic approach allows for better agency integration on fire management and planning and reflects the broader landscape level considerations impacting both Shires.

To ensure that shared risk is appropriately addressed, Municipal Fire Management Plans will be considered by the Regional Strategic Fire Management Planning Committees to make certain they address risks shared across municipal and agency boundaries in a consistent and seamless manner.

It is also recognized that agencies and municipalities have existing planning relationships across multiple boundaries and that these planning arrangements need to be considered when developing future plans.

A map of the Colac Otway Shire showing municipal boundaries is provided in Appendix E.

## 6 Plan Reporting, Review and Improvement

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### 6.1 Legislative Responsibilities

The Colac Otway Shire has a legislative responsibility under the Emergency Management Act 1986 to develop a Municipal Emergency Management Plan, and under the Country Fire Authority Act 1958, to develop and implement a Municipal Fire Prevention Plan. The Municipal Fire Prevention Plan is a sub plan of the Municipal Emergency Management Plan and is prepared by the Municipal Fire Management Planning Committee (MFMPCC).

For councils wholly or partly within the country area of Victoria, the Municipal Fire Management Plan as adopted by council will be deemed to meet the requirement for a Municipal Fire Prevention Plan under Section 55A (1) of the Country Fire Authority Act, provided that it contains the provisions as set out in Section 55A (2) of the Country Fire Authority Act.

### 6.2 Plan Audit

For councils wholly or partly within the Country Area of Victoria, the Municipal Fire Management Plan will also be audited under Section 55B of the Country Fire Authority Act 1958.

### 6.3 Plan Amendment and Review

This Plan has a three year lifespan based on current audit requirements contained within Section 55B of the Country Fire Authority Act. It is acknowledged that audit process and planning cycles may change as the Integrated Fire Management Planning framework and planning processes evolve in the future.

This Plan will be reviewed and amended:

- Annually in association with the Municipal Emergency Management Plan;
- Following significant incidents if required;
- As directed by the State or Regional Fire Management Planning Committees;
- As required by legislation; and/or
- As further works are completed by the MFMPCC.

## 7 Attachments

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|                   |  |
|-------------------|--|
| <b>Appendix A</b> | <b>Colac Otway Shire Risk Management Register</b>                              |
|                   | A.1 Colac Otway Shire Risk Management Register by Regional Risk Priorities     |
|                   | A.2 List of Victorian Fire Risk Register Treatments                            |
| <b>Appendix B</b> | <b>Multi- Agency Work Plan</b>   |
| <b>Appendix C</b> | <b>Statutory Audit Obligations</b>   |
|                   | C.1 Hazard Trees – Identification and Notification Procedures                  |
|                   | C.2 Township Protection Plans  |
| <b>Appendix D</b> | <b>Community &amp; Organisational Engagement Plan</b>                          |
| <b>Appendix E</b> | <b>Maps</b>  |
|                   | E1 <b>Municipal Boundaries Map</b>   |
|                   | E2 <b>Hazardous Roadside Risk Map</b>  |
|                   | E3 <b>Structural Incidents Map – Colac Otway Shire</b>                         |
|                   | E4 <b>Chemical Incidents Map – Colac Otway Shire</b>                           |
|                   | E5 <b>Combined Chemical &amp; Structural Incidents Map – Colac Otway Shire</b> |
| <b>Appendix F</b> | <b>Terminology</b>   |
| <b>Appendix G</b> | <b>Acronyms</b>  |
| <b>Appendix H</b> | <b>Bibliography</b>  |

**Appendix A.1 : Colac Otway Shire Risk Management Register by Regional Risk Priorities**

**Priority 1 High Risk Townships**

| Map reference number | Asset Type       | Asset Sub Type | Asset Name      | Asset Location     | Likelihood     | Consequence  | Risk Rating | Priority | Treatment Number                            | Township Protection Plan | NSP's Identified |
|----------------------|------------------|----------------|-----------------|--------------------|----------------|--------------|-------------|----------|---|--------------------------|------------------|
| 16002                | Human Settlement | Residential    | Forrest         | Forrest            | Likely         | Catastrophic | Extreme     | 1B       | 100;106;202;219;223;418;420                 |                          |                  |
| 16003                | Human Settlement | Residential    | Lavers Hill     | Lavers Hill        | Likely         | Catastrophic | Extreme     | 1B       | 100;106;219;223;307;418;420                 |                          |                  |
| 16004                | Human Settlement | Residential    | Beech Forest    | Beech Forest       | Likely         | Catastrophic | Extreme     | 1B       | 800   |                          |                  |
| 16015                | Human Settlement | Residential    | Skene's Creek   | Apollo Bay Complex | Likely         | Catastrophic | Extreme     | 1B       | 800   |                          |                  |
| 16024                | Human Settlement | Residential    | Wye River       | Wye River Complex  | Likely         | Catastrophic | Extreme     | 1B       | 100;106;111;202;217;219;223;307;418;420;700 |                          |                  |
| 16025                | Human Settlement | Residential    | Kennett River   | Kennett River      | Likely         | Catastrophic | Extreme     | 1B       | 100;106;202;219;223;418;700                 |                          |                  |
| 16074                | Human Settlement | Residential    | Birregurra      | Birregurra         | Likely         | Major        | Very High   | 2A       | 800   |                          |                  |
| 16006                | Human Settlement | Residential    | Carlisle River  | Carlisle River     | Likely         | Major        | Very High   | 2A       | 100;106;219;223;307;418;420                 |                          |                  |
| 16007                | Human Settlement | Residential    | Barwon Downs    | Barwon Downs       | Likely         | Major        | Very High   | 2A       | 100;106;203;219;223;418;420                 |                          |                  |
| 16011                | Human Settlement | Residential    | Beeac           | Beeac              | Likely         | Major        | Very High   | 2A       | 800   |                          |                  |
| 16010                | Human Settlement | Residential    | Cressy          | Cressy             | Almost Certain | Moderate     | Very High   | 2C       | 800   |                          |                  |
| 16067                | Human Settlement | Residential    | Colac Interface | Colac              | Likely         | Moderate     | High        | 3A       | 800   |                          |                  |
| 16001                | Human Settlement | Residential    | Marengo         | Marengo            | Likely         | Moderate     | High        | 3A       | 100;106;219;223;307;418;420                 |                          |                  |
| 16009                | Human Settlement | Residential    | Pirron Yallock  | Pirron Yallock     | Likely         | Moderate     | High        | 3A       | 800   |                          |                  |

**Priority 1 High Risk Townships**

| Map reference number | Asset Type       | Asset Sub Type | Asset Name              | Asset Location     | Likelihood     | Consequence  | Risk Rating | Priority | Treatment Number        | Township Protection Plan | NSP's Identified |
|----------------------|------------------|----------------|-------------------------|--------------------|----------------|--------------|-------------|----------|-------------------------|--------------------------|------------------|
| 16016                | Human Settlement | Residential    | Apollo Bay              | Apollo Bay Complex | Likely         | Moderate     | High        | 3A       | 800                     |                          |                  |
| 16013                | Human Settlement | Residential    | Gallibrand              | Gallibrand Complex | Likely         | Moderate     | High        | 3A       | 800                     |                          |                  |
| 16008                | Human Settlement | Residential    | Colac                   | Colac              | Unlikely       | Minor        | Low         | 3A       | 800                     |                          |                  |
| 16069                | Human Settlement | Other          | Scoullers Rd Clifton Rd | Stonyford          | Likely         | Catastrophic | Extreme     | 1B       | 800                     |                          |                  |
| 16070                | Human Settlement | Other          | Alice Ct Telfords Rd    | Marengo            | Likely         | Catastrophic | Extreme     | 1B       | 800                     |                          |                  |
| 16072                | Human Settlement | Other          | Kawarren                | Kawarren           | Likely         | Catastrophic | Extreme     | 1B       | 100;106;219;223;418;420 |                          |                  |
| 16075                | Human Settlement | Other          | Johanna                 | Johanna            | Likely         | Catastrophic | Extreme     | 1B       | 800                     |                          |                  |
| 16078                | Human Settlement | Other          | Yeodene                 | Yeodene            | Almost Certain | Major        | Extreme     | 1C       | 800                     |                          |                  |
| 16071                | Human Settlement | Other          | Barongarook             | Barongarook        | Likely         | Major        | Very High   | 2A       | 100;106;219;223;418;420 |                          |                  |

**Priority 2 Critical Essential Services**

| Map Reference Number | Asset Type | Asset Sub Type | Asset name                        | Asset Location | Level of Impact | Cost of Recovery | Consequence rating | Do fires occur frequently | Expected to spread & reach | Likelihood     | Risk rating | Priority rating | Treatments           |
|----------------------|------------|----------------|-----------------------------------|----------------|-----------------|------------------|--------------------|---------------------------|----------------------------|----------------|-------------|-----------------|----------------------|
| 16282                | Economic   | Infrastructure | Gellibrand Main PS                | Carlisle River | National State  | High             | Catastrophic       | No                        | Yes                        | Likely         | Extreme     | 13              | 212                  |
| 16222                | Economic   | Infrastructure | Camperdown Colac 66Kv Line        | Colac Otway    | Regional        | Moderate         | Major              | Yes                       | Yes                        | Almost Certain | Extreme     | 10              | 108,219,401          |
| 16223                | Economic   | Infrastructure | Winchelsea Colac 66Kv Line        | Colac Otway    | Regional        | Moderate         | Major              | Yes                       | Yes                        | Almost Certain | Extreme     | 10              | 108,219,401          |
| 16244                | Economic   | Infrastructure | South Otway WPS                   | Lavers Hill    | Regional        | High             | Major              | No                        | Yes                        | Likely         | Very High   | 2A              | 109,214,406; 439     |
| 16245                | Economic   | Infrastructure | Arkins Creek Offtakes             | Arkins Creek   | Regional        | High             | Major              | No                        | Yes                        | Likely         | Very High   | 2A              | 214,406,439          |
| 16201                | Economic   | Infrastructure | MLTS-TGTS 220 Kv Line             | Colac          | National State  | Low              | Moderate           | Yes                       | Yes                        | Almost Certain | Very High   | 3C              | 427                  |
| 16206                | Economic   | Infrastructure | Telecommunications Towers         | Colac Otway    | Regional        | Low              | Moderate           | Yes                       | Yes                        | Almost Certain | Very High   | 2C              | 202,203,217; 224,700 |
| 16225                | Economic   | Infrastructure | Apollo Bay Barwon Downs 22Kv Line | Colac Otway    | Local           | Moderate         | Moderate           | Yes                       | Yes                        | Almost Certain | Very High   | 2C              | 108,219,401          |
| 16226                | Economic   | Infrastructure | Lorne 22kv Line                   | Colac Otway    | Local           | Moderate         | Moderate           | Yes                       | Yes                        | Almost Certain | Very High   | 2C              | 108,219,401          |
| 16255                | Economic   | Infrastructure | Mt Tanybyn Communications Tower   | Skenes Creek   | Local           | Moderate         | Moderate           | Yes                       | Yes                        | Almost Certain | Very High   | 3C              | 109,214,406; 439     |
| 16253                | Economic   | Infrastructure | West Gellibrand Reservoir         | Beech Forest   | Local           | Moderate         | Moderate           | No                        | Yes                        | Likely         | High        | 3A              | 214,406,439          |
| 16254                | Economic   | Infrastructure | Olangolah Reservoir               | Beech Forest   | Local           | Moderate         | Moderate           | No                        | Yes                        | Likely         | High        | 3A              | 214,406,439          |
| 16261                | Economic   | Infrastructure | Apollo Bay WTP                    | Marengo        | Local           | Moderate         | Moderate           | No                        | Yes                        | Likely         | High        | 3A              | 109,214,406,439      |
| 16265                | Economic   | Infrastructure | Colac Pipeline                    | Colac          | Local           | Moderate         | Moderate           | No                        | Yes                        | Likely         | High        | 3A              | 214,406,439          |



**Priority 2 Critical Essential Services**

| Map Reference Number | Asset Type | Asset Sub Type           | Asset name                              | Asset Location | Level of Impact | Cost of Recovery | Consequence rating | Do fires occur frequently | Expected to spread & reach assets | Likelihood | Risk rating | Priority rating | Treatments      |
|----------------------|------------|--------------------------|---|----------------|-----------------|------------------|--------------------|---------------------------|-----------------------------------|------------|-------------|-----------------|-----------------|
| 16239                | Economic   | Infrastructure           | Telstra Exchange                        | Barwon Downs   | Local           | Low              | Minor              | No                        | Yes                               | Likely     | Medium      | 4               | 800             |
| 16249                | Economic   | Infrastructure           | Forrest WTP                             | Forrest        | Local           | Low              | Minor              | No                        | Yes                               | Likely     | Medium      | 4               | 109;214;406;439 |
| 16250                | Economic   | Infrastructure           | West Barwon Reservoir & Forrest WPS     | Forrest        | Regional        | Moderate         | Major              | No                        | No                                | Unlikely   | Medium      | 4               | 109;214;406;439 |
| 16251                | Economic   | Infrastructure           | Gellibrand WPS                          | Gellibrand     | Local           | Low              | Minor              | No                        | Yes                               | Likely     | Medium      | 4               | 109;214;406;439 |
| 16252                | Economic   | Infrastructure           | Gellibrand WTP                          | Gellibrand     | Local           | Low              | Minor              | No                        | Yes                               | Likely     | Medium      | 4               | 109;214;406;439 |
| 16256                | Economic   | Infrastructure           | Skenes Creek High Level WT              | Skenes Creek   | Local           | Low              | Minor              | No                        | Yes                               | Likely     | Medium      | 4               | 109;214;406;439 |
| 16257                | Economic   | Infrastructure           | Skenes Creek WT & WPS                   | Skenes Creek   | Local           | Low              | Minor              | No                        | Yes                               | Likely     | Medium      | 4               | 109;214;406;439 |
| 16264                | Economic   | Infrastructure           | Apollo Bay High Level WT                | Marengo        | Local           | Low              | Minor              | No                        | Yes                               | Likely     | Medium      | 4               | 109;214;406;439 |
| 16275                | Economic   | Drinking Water Catchment | Gosling, Matthews & Penroyal Creek SWSC | Colac Otway    | Regional        | Moderate         | Major              | No                        | Yes                               | Likely     | Very High   | 2A              | 214;406;439     |
| 16277                | Economic   | Drinking Water Catchment | Upper Barwon SWSC                       | Colac Otway    | Regional        | Moderate         | Major              | No                        | Yes                               | Likely     | Very High   | 2A              | 214;406;439;700 |
| 16276                | Economic   | Drinking Water Catchment | Gellibrand River SWSC                   | Colac Otway    | Local           | Moderate         | Moderate           | No                        | Yes                               | Likely     | High        | 3A              | 214;406;439;700 |
| 16279                | Economic   | Drinking Water Catchment | Barwon Downs Wellfield Intake           | Colac Otway    | Local           | Moderate         | Moderate           | No                        | Yes                               | Likely     | High        | 3A              | 214;406;439     |
| 16280                | Economic   | Drinking Water Catchment | Barham River SWSC                       | Colac Otway    | Local           | Moderate         | Moderate           | No                        | Yes                               | Likely     | High        | 3A              | 214;406;439;700 |
| 16281                | Economic   | Drinking Water Catchment | Skenes Creek SWSC                       | Colac Otway    | Local           | Moderate         | Moderate           | No                        | Yes                               | Likely     | High        | 3A              | 214;406;439     |
| 16278                | Economic   | Drinking Water Catchment | Wurdees Buloc Inlet Channel             | Colac Otway    | Regional        | Moderate         | Major              | No                        | No                                | Unlikely   | Medium      | 4               | 109;214;406;439 |

**Priority 3 Tourism & Major Events**

| Map Reference Number | Asset Type       | Asset Sub Type          | Asset name                            | Asset Location             | Level of Impact | Cost of Recovery | Consequence rating | Do fires occur frequently | Expected to spread & reach assets | Likelihood | Risk rating | Priority rating | Treatments          |
|----------------------|------------------|-------------------------|---------------------------------------|----------------------------|-----------------|------------------|--------------------|---------------------------|-----------------------------------|------------|-------------|-----------------|---------------------|
| 16208                | Economic         | Tourist & Recreational  | Great Ocean Road                      | Colac Otway                | Regional        | High             | Major              | No                        | Yes                               | Likely     | Very High   | 3A              | 214;223;418;700     |
| 16200                | Economic         | Tourist & Recreational  | GOR Marathon                          | Apollo Bay to Lorne        | Local           | Low              | Minor              | No                        | Yes                               | Likely     | Medium      | 4               | 418;700             |
| 16202                | Economic         | Tourist & Recreational  | Otway Odyssey                         | Apollo Bay to Forrest      | Local           | Low              | Minor              | No                        | Yes                               | Likely     | Medium      | 4               | 202;203;224;307     |
| 16203                | Economic         | Tourist & Recreational  | Kona 24hr                             | Forrest                    | Local           | Low              | Minor              | No                        | Yes                               | Likely     | Medium      | 4               | 202;203;224;307     |
| 16205                | Economic         | Tourist & Recreational  | Otway Fly                             | Phillips Track             | Local           | Low              | Minor              | No                        | Yes                               | Likely     | Medium      | 4               | 700                 |
| 16204                | Economic         | Tourist & Recreational  | Apollo Bay Music Festival             | Apollo Bay                 | Local           | Low              | Minor              | No                        | Yes                               | Possible   | Low         | 3A              | 800                 |
| 16051                | Human Settlement | Special Fire Protection | Melba Gully Day Visitors Site         | Melba Gully Rd Lavers Hill |                 |                  | Catastrophic       | No                        | Yes                               | Likely     | Extreme     | 3B              | 202;224;307;700     |
| 16052                | Human Settlement | Special Fire Protection | Cape Otway Light station              | Cape Otway                 |                 |                  | Catastrophic       | No                        | Yes                               | Likely     | Extreme     | 3B              | 202;224;307;700     |
| 16053                | Human Settlement | Special Fire Protection | Triplet Falls Day Visitors Site       | Wyeiangra                  |                 |                  | Catastrophic       | No                        | Yes                               | Likely     | Extreme     | 3B              | 202;224;307;700     |
| 16054                | Human Settlement | Special Fire Protection | Maits Rest Day Visitors Site          | Cape Horn                  |                 |                  | Catastrophic       | No                        | Yes                               | Likely     | Extreme     | 3B              | 202;224;307;700     |
| 16055                | Human Settlement | Special Fire Protection | Blanket Bay Camping Ground            | Cape Otway                 |                 |                  | Catastrophic       | No                        | Yes                               | Likely     | Extreme     | 3B              | 202;203;224;307;700 |
| 16056                | Human Settlement | Special Fire Protection | Hopetoun Falls Day Visitors Site      | Beech Forest               |                 |                  | Catastrophic       | No                        | Yes                               | Likely     | Extreme     | 3B              | 202;224;307;700     |
| 16057                | Human Settlement | Special Fire Protection | Aire Valley Reserve Day Visitors Site | Beech Forest               |                 |                  | Catastrophic       | No                        | Yes                               | Likely     | Extreme     | 3B              | 224;307             |

**Priority 3 Tourism & Major Events**

| Map Reference Number | Asset Type       | Asset Sub Type          | Asset name  | Asset Location                    | Level of Impact | Cost of Recovery | Consequence rating | Do fires occur frequently | Expected to spread & reach assets | Likelihood | Risk rating | Priority rating | Treatments              |
|----------------------|------------------|-------------------------|---|-----------------------------------|-----------------|------------------|--------------------|---------------------------|-----------------------------------|------------|-------------|-----------------|-------------------------|
| 16058                | Human Settlement | Special Fire Protection | Shelly Beach Day Visitors Site                        | Marengo                           |                 |                  | Catastrophic       | No                        | Yes                               | Likely     | Extreme     | 133             | 202:224:307;<br>700     |
| 16059                | Human Settlement | Special Fire Protection | Beauchamp Falls Camping Ground                        | Beauchamp Falls Road Beech Forest |                 |                  | Catastrophic       | No                        | Yes                               | Likely     | Extreme     | 133             | 202:224:307;<br>700     |
| 16060                | Human Settlement | Special Fire Protection | Marriners Falls Day Visitor Site                      | Barham Rd Apollo Bay              |                 |                  | Catastrophic       | No                        | Yes                               | Likely     | Extreme     | 133             | 202:224:307;<br>700     |
| 16061                | Human Settlement | Special Fire Protection | Stevensons Falls Camping Ground                       | Barramunga                        |                 |                  | Catastrophic       | No                        | Yes                               | Likely     | Extreme     | 133             | 202:224:307;<br>700     |
| 16062                | Human Settlement | Special Fire Protection | Fork Paddocks Camping Ground                          | W Barwon Track Barramunga         |                 |                  | Catastrophic       | No                        | Yes                               | Likely     | Extreme     | 133             | 202:224:307;<br>700     |
| 16063                | Human Settlement | Special Fire Protection | Grey River Picnic Area                                | Grey River                        |                 |                  | Catastrophic       | No                        | Yes                               | Likely     | Extreme     | 133             | 202:203:224;<br>307:700 |
| 16064                | Human Settlement | Special Fire Protection | Lake Elizabeth Camping Ground                         | Barwon Downs                      |                 |                  | Catastrophic       | No                        | Yes                               | Likely     | Extreme     | 133             | 202:203:224;<br>307:700 |
| 16065                | Human Settlement | Special Fire Protection | Goat Track Camp Ground                                | Barwon Downs                      |                 |                  | Catastrophic       | No                        | Yes                               | Likely     | Extreme     | 133             | 202:203:224;<br>307:700 |
| 16068                | Human Settlement | Special Fire Protection | Oway Fly  | Beech Forest                      |                 |                  | Catastrophic       | No                        | Yes                               | Likely     | Extreme     | 133             | 800                     |
| 16076                | Human Settlement | Special Fire Protection | Johanna Beach 2 <sup>nd</sup> Car Park Camping Ground | Johanna Rd Johanna                |                 |                  | Catastrophic       | No                        | Yes                               | Likely     | Extreme     | 133             | 700                     |
| 16077                | Human Settlement | Special Fire Protection | Johanna Camping Ground                                | Slippery Point Rd Johanna         |                 |                  | Catastrophic       | No                        | Yes                               | Likely     | Extreme     | 133             | 700                     |

**Priority 4 Key Rural Industries**

| Map Reference Number | Asset Type | Asset Sub Type    | Asset name                     | Asset Location | Level of Impact | Cost of Recovery | Consequence rating | Do fires occur frequently | Expected to spread & reach assets | Likelihood     | Risk rating | Priority rating | Treatments           |
|----------------------|------------|-------------------|--------------------------------|----------------|-----------------|------------------|--------------------|---------------------------|-----------------------------------|----------------|-------------|-----------------|----------------------|
| 16241                | Economic   | Commercial Forest | Softwood Plantations           | Colac Otway    | Regional        | High             | Major              | Yes                       | Yes                               | Almost Certain | Extreme     | 1C              | 202;203;204; 205;224 |
| 16242                | Economic   | Commercial Forest | Hardwood Plantations           | Colac Otway    | Regional        | Moderate         | Major              | Yes                       | Yes                               | Almost Certain | Extreme     | 1C              | 202;203;204; 205;224 |
| 16217                | Economic   | Commercial        | CRF (meat processors)          | Colac East     | Regional        | Moderate         | Major              | No                        | Yes                               | Likely         | Very High   | 2A              | 800                  |
| 16218                | Economic   | Commercial        | Power Substation Precinct      | Colac East     | Regional        | Moderate         | Major              | No                        | Yes                               | Likely         | Very High   | 2A              | 800                  |
| 16216                | Economic   | Commercial        | Colac West Industrial Precinct | Colac West     | Local           | Moderate         | Moderate           | No                        | Yes                               | Likely         | High        | 3A              | 800                  |

**Priority 5 Major Transport Corridors**

| Map Reference Number | Asset Type | Asset Sub Type | Asset name             | Asset Location | Level of Impact | Cost of Recovery | Consequence rating | Do fires occur frequently | Expected to spread & reach assets | Likelihood     | Risk rating | Priority rating | Treatments      |
|----------------------|------------|----------------|------------------------|----------------|-----------------|------------------|--------------------|---------------------------|-----------------------------------|----------------|-------------|-----------------|-----------------|
| 16238                | Economic   | Infrastructure | Great Ocean Rd         | Colac Otway    | National State  | High             | Catastrophic       | Yes                       | Yes                               | Almost Certain | Extreme     | 1A              | 214;223;418;700 |
| 16207                | Economic   | Infrastructure | Warrnambool Rail Line  | Colac Otway    | Regional        | Moderate         | Major              | Yes                       | Yes                               | Almost Certain | Extreme     | 1C              | 214             |
| 16215                | Economic   | Infrastructure | Western SG Rail Line   | Cressy         | National State  | Moderate         | Major              | Yes                       | Yes                               | Almost Certain | Extreme     | 1C              | 214             |
| 16211                | Economic   | Infrastructure | Princes Highway        | Colac Otway    | Regional        | Low              | Moderate           | Yes                       | Yes                               | Almost Certain | Very High   | 2C              | 223;418         |
| 16212                | Economic   | Infrastructure | Colac Ballarat Rd      | Colac          | Regional        | Low              | Moderate           | Yes                       | Yes                               | Almost Certain | Very High   | 2C              | 223             |
| 16213                | Economic   | Infrastructure | Hamilton Highway       | Cressy         | Regional        | Low              | Moderate           | Yes                       | Yes                               | Almost Certain | Very High   | 2C              | 223;418         |
| 16214                | Economic   | Infrastructure | Colac Apollo Bay Road  | Colac Otway    | Local           | Low              | Minor              | Yes                       | Yes                               | Almost Certain | High        | 3D              | 223             |
| 16240                | Economic   | Infrastructure | Colac Lavers Hill Road | Colac Otway    | Local           | Low              | Minor              | Yes                       | Yes                               | Almost Certain | High        | 3D              | 223             |

*Other Assets not included in the 5 Priority List*

| Map Reference Number | Asset Type       | Asset Sub Type          | Asset name                      | Asset Location          | Consequence rating | Do fires occur frequently | Expected to spread & reach assets | Likelihood | Risk rating | Priority rating | Treatments |
|----------------------|------------------|-------------------------|---------------------------------|-------------------------|--------------------|---------------------------|-----------------------------------|------------|-------------|-----------------|------------|
| 16039                | Human Settlement | Special Fire Protection | Lavers Hill District Preschool  | GOR Lavers Hill         | Catastrophic       | No                        | Yes                               | Likely     | Extreme     | 1B              | 438        |
| 16027                | Human Settlement | Special Fire Protection | Lavers Hill P12                 | GOR Lavers Hill         | Catastrophic       | No                        | Yes                               | Likely     | Extreme     | 1B              | 438        |
| 16033                | Human Settlement | Special Fire Protection | Beeac Primary School            | Lang St Beeac           | Major              | No                        | Yes                               | Likely     | Very High   | 2A              | 438        |
| 16034                | Human Settlement | Special Fire Protection | Cressy Primary School           | Yarima Rd Cressy        | Major              | No                        | Yes                               | Likely     | Very High   | 2A              | 438        |
| 16026                | Human Settlement | Special Fire Protection | St Brendan's Primary School     | Coraguliac              | Major              | No                        | Yes                               | Likely     | Very High   | 2A              | 438        |
| 16032                | Human Settlement | Special Fire Protection | Birregurra Primary School       | Beal St Birregurra      | Moderate           | No                        | Yes                               | Likely     | High        | 3A              | 438        |
| 16035                | Human Settlement | Special Fire Protection | Alvie Primary School            | 40 Wool Wool Rd Alvie   | Moderate           | No                        | Yes                               | Likely     | High        | 3A              | 438        |
| 16037                | Human Settlement | Special Fire Protection | Colac South West Primary School | 238 Wilson St Colac     | Moderate           | No                        | Yes                               | Likely     | High        | 3A              | 438        |
| 16040                | Human Settlement | Special Fire Protection | Forrest Preschool               | 12 Grant St Forrest     | Moderate           | No                        | Yes                               | Likely     | High        | 3A              | 438        |
| 16041                | Human Settlement | Special Fire Protection | Beeac Health Centre             | 2 Lang St Beeac         | Moderate           | No                        | Yes                               | Likely     | High        | 3A              | 800        |
| 16042                | Human Settlement | Special Fire Protection | Birregurra Health Centre        | Sladen St Birregurra    | Moderate           | No                        | Yes                               | Likely     | High        | 3A              | 800        |
| 16043                | Human Settlement | Special Fire Protection | Colanda Disability Residence    | Colanda St Colac East   | Moderate           | No                        | Yes                               | Likely     | High        | 3A              | 800        |
| 16014                | Human Settlement | Special Fire Protection | Trinity College                 | Pound Road Colac        | Moderate           | No                        | Yes                               | Likely     | High        | 3A              | 800        |
| 16028                | Human Settlement | Special Fire Protection | Apollo Bay P12                  | Pengilly Ave Apollo Bay | Moderate           | No                        | Yes                               | Likely     | High        | 3A              | 800        |
| 16029                | Human Settlement | Special Fire Protection | Carlisle River Primary School   | Carlisle River          | Moderate           | No                        | Yes                               | Likely     | High        | 3A              | 438        |
| 16030                | Human Settlement | Special Fire Protection | Forrest Primary School          | 10 Grant St Forrest     | Moderate           | No                        | Yes                               | Likely     | High        | 3A              | 438        |

*Other Assets not included in the 5 Priority List*

|       |                  |                         |                           |                         |          |    |     |        |      |    |     |
|-------|------------------|-------------------------|---------------------------|-------------------------|----------|----|-----|--------|------|----|-----|
| 16031 | Human Settlement | Special Fire Protection | Swan Marsh Primary School | Swan Marsh              | Moderate | No | Yes | Likely | High | 3A | 438 |
| 16038 | Human Settlement | Special Fire Protection | Elliminyt Primary School  | 135 Slater Rd Elliminyt | Moderate | No | No  | Likely | High | 3A | 438 |

## Appendix A.2: List of Victorian Fire Risk Register Treatments

### Treatment Overview

| TREATMENT NAME                          | TREATMENT DEFINITION  | RESPONSIBLE AGENCY | TREATMENT NUMBER |
|---|---|--------------------|------------------|
| <b>COMMUNITY EDUCATION (100 SERIES)</b> |   |                    |                  |
| Community Education/ Engagement         | Bushfire education, engagement and training programs targeted at numerous community groups including school children, elderly, employees, and businesses. | CFA                | 100              |
|   |   | LGA                | 101              |
|   |   | DEECD              | 102              |
|   |   | Utility            | 103              |
| Agricultural Management                 | Agriculture bushfire management and safety issues for landowners/managers to assist in the preparation of property fire management plans.                 | CFA                | 104              |
|   |   | CFA, DPI           | 105              |
| Community Fire Guard                    | A CFA key engagement strategy, community development program to help reduce the loss of lives and homes in bushfires.                                     | CFA                | 106              |
| Fire Ready Victoria                     | Assists in perception and understanding bushfire risk.  | CFA                | 107              |
| Public Awareness                        | Fire information through notice boards, brochures, signage etc to raise awareness of fire risk.   | POWERCOR           | 108              |
|   |   | CFA                | 109              |
|   |   | LGA                | 110              |
|   |   | PV                 | 118              |
|   |   | Other              | 120              |
| Tourism Fire Awareness                  | Community education and information for tourists about bushfire risk in the area.   | CFA                | 111              |
|   |   | DSE, PV            | 112              |
|   |   | LGA                | 113              |
|   |   | PV                 | 114              |
|   |   | Tourism Victoria   | 117              |
| Multicultural/ Special Needs Engagement | Translations of campaigns to suite all multicultural and special needs persons.   | LGA                | 115              |
|   |   | CFA                | 116              |
| <b>HAZARD REDUCTION (200 SERIES)</b>    |   |                    |                  |
| Burn Program                            | Removal of selected vegetation in large patches to protect townships.   | LGA                | 201              |
|   |   | CFA, DSE, PV       | 202              |
| Crown Land Fuel Reduction               | Reducing fuel loads on crown land.  | DSE                | 203              |
|   |   | PV                 | 204              |
| Fuel Hazard Management                  | Reduction and removal of fuel to decrease the risk of bushfire in preparation for the Fire Danger Period.   | Other              | 205              |
|   |   | Utility            | 206              |
|   |   | LGA                | 207              |
|   |   | CFA                | 208              |
| Routine Maintenance of Rail Line        | Removal of vegetation on and around rail lines to ensure protection of assets, minimise ignition potential, and ensure adequate access and egress.        | Utility            | 209              |
|   |   | DOT                | 210              |
|   |   | CFA                | 211              |
| Routine Asset Site Maintenance          | Ongoing mowing/ slashing/ spraying of sites to reduce fuel loads for protection of assets or adjoining properties.  | Other              | 212              |
|   |   | DEECD              | 213              |
|   |   | Utility            | 214              |
|   |   | DSE, PV            | 215              |
|   |   | LGA                | 216              |
| Asset Protection Zones                  | Buffer zone between bushfire hazard and the asset.  | DSE                | 227              |
| Fire Management Zones                   | To provide areas of sufficient width to reduce the spread of bushfire.  | DSE                | 217              |
|   |   | Other              | 228              |
| Powerline Clearance                     | Vegetation management around powerlines.  | LGA                | 218              |
|   |   | POWERCOR           | 219              |
|   |   | SPAusnet           | 220              |
|   |   | TELSTRA            | 221              |
| Roadside Vegetation Management          | Removal of vegetation along roadsides.  | LGA                | 222              |
|   |   | VicRoads           | 223              |
|   |   | DSE, PV            | 224              |
|   |   | Other              | 225              |
|   |   | Private            | 226              |
| <b>IGNITION MANAGEMENT (300 SERIES)</b> |   |                    |                  |
| Operations Restrictions                 | On high fire weather days, operations of machinery in plantations is ceased.  | HVP PLANTATIONS    | 300              |
| Patrol/ Inspection                      | Inspections of assets to ensure compliance with regulations and safety requirements and to assess for fire hazards.                                       | LGA                | 303              |
|   |   | CFA                | 304              |
|   |   | DSE                | 305              |
|   |   | MFB                | 306              |
|   |   | PV                 | 307              |
| Pre Summer Inspections                  | Inspections of land holders according to bushfire risk over the summer season including exit routes, locks, gates etc.                                    | Water Authority    | 308              |
| <b>PREPAREDNESS (400 SERIES)</b>        |   |                    |                  |
| Hazard Identification                   | Preparedness including risk ratings, inspections, maintenance and response arrangements.  | Utility            | 401              |
|   |   | Water Authority    | 439              |



| TREATMENT NAME   | TREATMENT DEFINITION   | RESPONSIBLE AGENCY    | TREATMENT NUMBER |
|--|--|-----------------------|------------------|
| <b>COMMUNITY EDUCATION (100 SERIES)</b>  |  |                       |                  |
| Fire Protection Plan   | Fire Protection Plans are prepared to ensure that proper and sufficient works for Bushfire prevention and suppression activities are taking place.                             | Other                 | 400              |
|  |  | CFA                   | 402              |
|  |  | PV                    | 403              |
|  |  | DHS                   | 426              |
|  |  | SPAusnet              | 427              |
|  |  | GOULBURN MURRAY WATER | 428              |
|  |  | DEPARTMENT OF DEFENCE | 429              |
|  |  | MELBOURNE WATER       | 431              |
|  |  | HVP PLANTATIONS       | 437              |
| Fire Plug and Hydrant Installation and Maintenance   | Works carried out to ensure that the system will operate correctly when required to do so.   | LGA                   | 404              |
| Emergency Water Supply   | Emergency water supply and maintenance for fire fighting purposes, including water catchments and policy.  | Government Agencies   | 405              |
|  |  | DSE                   | 411              |
|  |  | LGA                   | 412              |
|  |  | MELBOURNE WATER       | 430              |
|  |  | Other                 | 440              |
| Emergency Management Plan (Site)   | Established framework for the effective handling of emergencies and/ or disaster.  | Utility               | 406              |
|  |  | DEECD                 | 407              |
|  |  | CFA                   | 408              |
|  |  | Other                 | 409              |
|  |  | LGA                   | 410              |
| Fire Access Roads and Tracks   | Establishment of constructed and maintained roads, bridges and tracks to allow safe passage for fire fighting vehicles.  | LGA                   | 413              |
|  |  | CFA                   | 414              |
|  |  | PV                    | 415              |
|  |  | DSE                   | 416              |
| Traffic Diversion Plans  | Establishment of an appropriate traffic flow, through traffic management in the community and appropriate access and egress for property and business owners.                  | VIC POL               | 417              |
|  |  | VIC ROADS             | 418              |
|  |  | LGA                   | 419              |
| Township Protection Plans  | Planned response (for both emergency services and the community) to a bushfire within close proximity to a township, which has the potential to impact on the local community. | CFA                   | 420              |
| Fire Operations Plan   | Proposed fire prevention activities.   | DSE                   | 423              |
| Public Land Management Plans   | Each year a statewide program of activities is planned, completed and evaluated to continue progress towards achieving natural values objectives.                              | DSE- PV               | 424              |
| Community Activities/Planning  | Local based planning/community groups who repair and manage natural resources for the event of a bushfire.   | DEECD                 | 421              |
|  |  | LGA                   | 422              |
|  |  | Community Groups      | 425              |
|  |  | CFA                   | 433              |
| Event Management Plan  | Emergency management planning of events that occur in the Fire Danger Period (FDP)   | LGA                   | 432              |
| Fire Refuge  | A declared fire refuge for the use as a last resort under direct fire attack.  | Other                 | 435              |
|  |  | LGA                   | 436              |
| Bushfire and Emergency Self Assessment   | Develop a more detailed understanding of the bushfire risk to your school.   | DEECD                 | 438              |
| <b>PROPERTY PLANNING (500 SERIES)</b>  |  |                       |                  |
| Wildfire Management Overlay  | Planning referral for new subdivisions, buildings and works that increase population. Applies conditions for access, Water Supply, Buildings/ Works and Vegetation Management. | LGA                   | 500              |
| Agreements   | Acts and agreements for Rural Residential Areas.   | LGA                   | 501              |
| <b>OTHER (700 SERIES)</b>  |  |                       |                  |
| Asset Specific Treatments  | Municipal Specific plan (details can be found in the VFRR Document).   | All Agencies          | 700              |
| <b>TOTAL IDENTIFIED (800 SERIES)</b>   |  |                       |                  |
| To be identified   | Treatments to be identified.   |                       | 800              |
| This treatment list has been created from the input of mitigation works identified through the 'Implementation Stage'. The list has been modified to capture all works the VFRR Support Team are currently aware of. Due to agency identification the allocation of treatment numbers it set as per agency request and therefore if your agency has not been identified against a current mitigation treatment please contact the VFRR Support Team for input. |  |                       |                  |

## **Appendix B: Multi-Agency Work Plan: Colac Otway Shire Municipal Fire Management Plan**

The primary fire risk management strategies used in the Colac Otway Shire Municipal Fire Management Plan are:

- Community education and engagement;
- Hazard reduction;
- Preparedness; and
- Regulatory controls

This work plan outlines the key actions that will be undertaken annually in the Shire for each of these strategies and the agencies responsible for those actions. This list highlights the main actions being undertaken – it is not intended to be an exhaustive list.

The main agencies involved in fire risk management strategies in the Shire are:

- Country Fire Authority (CFA)
- Department of Sustainability & Environment (DSE)
- Parks Victoria (PV)
- Colac Otway Shire (Council)
- VicRoads
- Powercor

Other definitions used in this work plan include:

- Municipal Fire Management Planning Committee (MFMPC)

| Community Education and Engagement |   |  |   |  |
|------------------------------------|---|--|---|--|
| Action                             | Responsible Agency  | Location/s   | Timing/ Completion Date   | Comments   |
| Community education and engagement | CFA, DSE, PV, Council   | Across the Shire                                       | Nov   | <b>MFWPC engagement on draft Municipal Fire Management Plan</b> – undertaken by Municipal Fire Management Planning Committee agencies.   |
|                                    | DSE/PV  | Across the Shire                                       | May – August  | <b>DSE/PV engagement on Fire Operations Plan</b> – involves initial call for burn nominations, followed by meetings with key stakeholders to present draft plan and maps.  |
|                                    | DSE/Greening Australia  | Gellibrand River                                       | 29 September 2011   | <b>Greening Australia DSE Fire Ecology information session</b> covering Fire Behaviour and Fire Ecology, includes a site visit to a DSE planned burn to compare burnt and unburnt areas and look at regeneration. Open to general public.  |
|                                    | CFA   | Across the Shire                                       | Year round, but with specific focus during Oct – April  | <b>CFA Fire Ready Victoria Meetings</b> - the meetings are designed to provide people with information to raise their understanding and interest in bushfire and inspire them to seek further information. A range of meetings are provided, tailored to specific circumstances, and include community meetings, street meetings, special interest group meetings and meetings delivered during an incident.   |
|                                    |   | Across the Shire                                       | Year round, but with specific focus during Oct – April  | <b>CFA Bushfire Planning Workshops</b> -The workshops are designed to allow residents who have some knowledge of bushfire safety to consider that knowledge in relation to their household circumstances and commence developing a bushfire survival plan. The Workshops provide more than just information and advice; they involve the audience in the decision-making process. They are designed to help residents assess their local risk factors and make informed plans based on that knowledge. |
|                                    | Apollo Bay, Barongarook, Barwon Downs, Bugador, Cape Otway, Carlisle River, Cressy, Forrest, Gellibrand, Grey River, Kawarren, Kennett River, Marengo, Skenes Creek, Wongarra, Birregurra, Hordern Vale and Johanna | Year round, but with specific focus during Oct – April | <b>CFA Community Fireguard (CFG)</b> -CFG is a community developed program designed to reduce the loss of lives in bushfires. CFG is based on the principles of adult education, participation and empowerment. CFA does not tell participants what to do, instead it provides facilitators who are equipped with expertise and resources, to help the groups become established and work together in a positive and productive way. With facilitator support, groups can learn and work together to develop simple and effective strategies to increase the safety of the participants. Upon completion of the CFG meeting program, groups may elect to continue meeting and undertaking activities. Groups may also choose to operate independently of the CFA. There are currently 75 CFG groups in the Shire. |  |

| Community Education and Engagement                 |                       |                           |  |  |
|--|-----------------------|---------------------------|--|--|
| Action   | Responsible Agency    | Location/s                | Timing/Completion Date                                 | Comments   |
| Community education and engagement                 | CFA                   | Across the Shire          | Year round, but with specific focus during Oct – April | <p><b>CFA Home Bushfire Advice Service</b> – under this free program, CFA officers assess the defendability of individual properties and provide specific advice to property owners to help them understand and mitigate their bushfire risk and enable them to develop their bushfire survival plan. The property inspection includes assessment of:</p> <ul style="list-style-type: none"> <li>• Defendable space</li> <li>• Vegetation management</li> <li>• Water supply</li> <li>• Access</li> <li>• Buildings/structures</li> <li>• Maintenance activities/house keeping; and</li> <li>• Personal Preparedness / Bushfire Survival Plan</li> </ul> <p>On completion of the assessment, property owners receive a comprehensive report on their property, together with additional information that will help them to prepare their property and develop their Bushfire Survival plan.</p> <p><b>Other CFA programs</b> – CFA also offers a number of other community engagement programs in the Shire which are outlined in CFA’s Barwon South West Community Safety Program and Resource Catalogue. Other programs include Juvenile Fire Awareness Intervention Program, Fire Safe Kids and the Community Safety Display Trailer for CFA Districts 6 &amp; 7.</p> <p><b>Powercor regional media</b> – the campaigns highlight various bushfire management activities using regional media. Further information is available at <a href="http://www.powercor.com.au">www.powercor.com.au</a></p> |
| Strategic Conversations initiative                 | DSE & CFA             | Cressy Gellibrand Forrest | Frequency determined by participating communities      | <p><b>‘Strategic conversations’</b> is a new DSE initiative. In partnership with CFA, for developing and sharing knowledge about fire. Strategic conversations occur through community invitation and involve members of the community and staff from DSE and CFA.</p> <p>A strategic conversation is a facilitated dialogue within a group of people for the purpose of pooling knowledge and experience about a topic or theme – in this case, fire. As people share their different perspectives, a broader and deeper understanding of the land and fire management can be achieved.</p>   |
| Coordinated agency community engagement activities | CFA, DSE, Council, PV | Across the Shire          | Ongoing  | <p><b>Community Engagement Community of Practice</b> – established in connection with the Strategic Conversations initiative. Brings together key agencies engaged in community engagement to share information and coordinate engagement activities.</p>  |

| Community Education and Engagement |                    |   |                        |   |
|------------------------------------|--------------------|---|------------------------|---|
| Action                             | Responsible Agency | Location/s  | Timing/Completion Date | Comments  |
| Township Protection Plans          | CFA, Council       | Barongarook, Barwon Downs, Carlise River, Forrest, Kawarran, Kennett River, Wye River and Lavers Hill | Ongoing                | <b>CFA Township Protection Plans (TPPs)</b> – TPPs have been developed for a number of high bushfire risk communities across the State. TPPs provide important information and direction for communities to assist with planning before, during and after a fire. Information provided includes key locations and facilities, such as Neighbourhood Safer Places, and directions on where to find the latest emergency and bushfire information. Copies of TPPs for the Shire's high risk townships are available at <a href="http://www.cfa.vic.gov.au">www.cfa.vic.gov.au</a> . |
| Tourism fire safety campaigns      | Tourism Vic        | Material available at Visitor Information Centres,  |                        |   |

| Hazard Reduction  |                                 |  |                                  |  |
|---|---------------------------------|--|----------------------------------|--|
| Action  | Responsible Agency              | Location/s   | Timing/Completion Date           | Comments   |
| Fire prevention and preparedness works (planned burns, strategic fuel breaks, mechanical fuel management, fire infrastructure management) | DSE                             | Identified in DSE's Fire Operations Plan 2011/12 – 2013/14 Otway District/Region | 2011/12 – 2013/14                | DSE's Fire Operations Plan 2011/12 – 2013/14 Otways District/Region contains DSE's proposed fire prevention and preparedness works within the Otway District. Copies of the plan and related maps are available at <a href="http://www.dse.vic.gov.au">www.dse.vic.gov.au</a> .  |
|   |                                 |  |                                  |  |
| Roadside and railway management   | Council, VicRoads, DSE, PV, CFA | Across the Shire   | 2011/12 – 2013/14                | DSE's Fire Operations Plan 2011/12 – 2013/14 Otways District/Region contains DSE and PV's proposed road management works.  |
|   |                                 | Across the Shire   | Nov – Jan                        | Council conducts an annual cut on Council roadsides in rural areas. A second cut may be undertaken if required.  |
|   |                                 | Across the Shire   | By Dec 1 if possible             | VicRoads 3 metre maintenance cut – undertaken annually on roadsides for all VicRoads' roads in the Shire.  |
|   |                                 | Princess Highway   | Prior to fire restriction period | VicRoads strategic fuel/fuse breaks – annual fence line to fence line vegetation maintenance work on roadside. Conducted along sections of Princess Highway.   |
|   | CFA, Council                    | Great Ocean Road – (focus for 2011 is Bellbrae to Apollo Bay)                    |                                  | VicRoads Great Ocean Road woody weed control – program to remove non-indigenous woody weeds along the Great Ocean Road that have regenerated beyond routine maintenance and created high fuel loads in the road reserve. Vegetation removal is prioritized in accordance with Township Protection Plans, Integrated Fire Management Planning and consideration of the risks and liabilities of fuel loads in various locations. Removal of the vegetation enhances the cover and condition of existing native vegetation and creates positive biodiversity outcomes in addition to fire management benefits. |
|   |                                 | Across the Shire   | Ongoing                          | CFA conducts fire prevention and preparedness works on roadsides and rail reserves   |
|   | V/Line                          | Warrambool Rail line, and & related railway assets in the Shire                  |                                  | Review of Strategic Fire Roads – strategic fire roads in the Shire have been mapped by Council, based on information provided by CFA brigades and Groups.  |
|   | VicTrack                        | Non-operational  | Generally October                | Railway asset management – V/Line: V/Line undertakes a variety of annual fire prevention works for its lease areas (where applicable), including slashing, grading, herbicide treatments and track spraying<br>Railway asset management – VicTrack: VicTrack is the owner of Victoria's  |

| Hazard Reduction                  |                    |   |   |  |
|-----------------------------------|--------------------|---|---|--|
| Action                            | Responsible Agency | Location/s  | Timing/ Completion Date                       | Comments   |
|                                   |                    | railway land outside of leased areas  | each year, with completion by end of November | transport related land, infrastructure and assets, but the majority of these assets are leased to rail network managers, such as V/Line. VicTrack does have responsibility for a limited number of small assets within the Shire. For these assets, fuel reduction treatments include track spraying, slashing of reserves and vacant blocks and brush cutting around road crossings. Following the first round of treatments, assets are monitored and additional works undertaken as regrowth and curing dictates. |
|                                   | ARTC               | Western SG Rail line and & related railway assets in the Shire                                      |   | <b>Railway asset management</b> (details of ARTC work still to be confirmed. No response from ARTC to date)  |
| Vegetation Control                | Council            | Across the Shire  | Ongoing                                       | <b>Vegetation control</b> is undertaken in various strategic areas throughout the Shire, such as Asset Protection Zones (bush/town interface areas).   |
|                                   |                    | Various nature reserves across the Shire  | Annually                                      | <b>Vegetation control in Nature Reserves</b> – Council has developed Fire Management Plans for some high conservation nature reserves and roadsides in the Shire. The Plans outline the annual vegetation management work that will be undertaken by Council for each reserve.   |
| Fire hazard inspections           | Council            | Across the Shire  | Prior to and during Fire Danger Period        | Property inspections are conducted by the Municipal Fire Prevention Officer throughout the Shire to identify existing or potential fire hazards, especially in Asset Protection Zone areas (bush/town interface). Officers also respond to fire hazard reports from the community.   |
| Fire prevention notices           | Council            | Across the Shire  | Ongoing throughout the year                   | Fire Prevention Notices (FPNs) may be issued by the Municipal Fire Prevention Officer or the CFA under CFA Act to an owner or occupier of land in the municipality for anything on that land (other than a building) that constitutes a danger to life or property from the threat of fire. FPNs are often directed to removing overgrown vegetation.  |
| Powerlines – assets and easements | Powercor           | Sub-transmission lines and distribution lines operating at 66,000 volts, 22,000 volts & low voltage | Ongoing                                       | <b>Powercor Vegetation Management in Declared Areas</b> – vegetation clearance around powerlines in Declared Areas is undertaken in accordance with the Electricity Safety (Electric Line Clearance) Regulations 2010.   |
|                                   |                    |   | Ongoing                                       | <b>Powercor Vegetation Management around Powerlines</b> – vegetation clearance around powerlines is undertaken in accordance with the Electricity Safety (Electric Line Clearance) Regulations 2010.   |

| Hazard Reduction                  |                    |   |                           |   |
|-----------------------------------|--------------------|---|---------------------------|---|
| Action                            | Responsible Agency | Location/s  | Timing/Completion Date    | Comments  |
|                                   |                    |   | Ongoing                   | <b>Powercor Private Overhead Electric Lines (POELs)</b> – Inspection of POELs and associated defect process management. Annual letter to customers with POELs detailing responsibilities in maintaining POELs, including vegetation clearance.  |
|                                   | SP Ausnet          | All transmission lines (on towers) within the Shire, except the 220 KV transmission line. | Every 3 mths              | <b>SP Ausnet asset and easement inspections</b> – inspections conducted every 3 months on transmission towers and in powerline easements, with additional inspections as required. Required vegetation management work is identified through the inspection cycle and also through various proactive vegetation management programs. Regular inspections also cover hazard trees identification.  |
|                                   | Council            | Colac Township  | Annually                  | <b>Council work in Declared Area</b> – annual audit conducted of roads in the Declared Area (Colac township) for trees encroaching into hazard zone for powerlines.   |
| Fire permits                      | Council, CFA       |   | During Fire Danger Period | Lighting fires during the Fire Danger Period is restricted. Permits must be obtained from the Municipal Fire Prevention Officer or the CFA.   |
| Private property hazard reduction | Property owners    | Across the Shire  | Ongoing                   | Private property owners can do various things to control vegetation on their property, including cleaning out gutters, removing dry undergrowth and leaf litter, and mowing & slashing. Information about how to reduce fire risk on private property is available at <a href="http://www.colacotway.vic.gov.au">www.colacotway.vic.gov.au</a> together with a list of slashing contractors in the Shire.                                 |
| Fire Access Road Subsidy Scheme   | CFA, Council       | Across the Shire  | Annual program            | The Fire Access Road Subsidy Scheme (FARSS) is administered by CFA and is a State Government funded subsidy scheme. Subsidies are available for municipalities for the construction and maintenance of fire access roads or construction of static water supplies. Funding is provided annually. Applications are developed by Council and reviewed by the Municipal Fire Management Planning Committee before being submitted to the CFA |



| Preparedness                                       |                    |  |  |   |
|--|--------------------|--|--|---|
| Action   | Responsible Agency | Location/s   | Timing/ Completion Date  | Comments  |
| Victorian Fire Risk Register Process               | CFA                | Assets at risk identified across the Shire   | July 2011  | The Victorian Fire Risk Register (VFRR) is a systematic process to identify assets at risk, assess the level of bushfire risk for those assets and record a range of treatments/measures to mitigate those risks. Treatments may include activities such as fuel reduction, community education and the creation of strategic fuel breaks. The Shire's VFRR municipal risk register, divided by regional risk priorities, is included in Appendix A.1 of this Plan. A list of VFRR treatments is included in Appendix A.2.  |
| DSE landscape level planning and fire modelling    | DSE                | Work initially undertaken for Otways landscape & Surf Coast  |  | DSE's landscape level bushfire modelling is being undertaken to assess bushfire risk across the Otways landscape and Surf Coast. DSE's work has evaluated fire regimes across the entire landscape and identified opportunities to manage fuels and fire regimes across both public and private land.   |
| Township planning factors                          | CFA, Council       | Barongarook<br>Barwon Downs<br>Carlise River<br>Forrest<br>Kawarran<br>Kennett River<br>Wye River<br>Lavers Hill |  | Township Planning Factors enhance the initial operational response to a bushfire impacting high risk townships. The information is prepared for high risk towns which have a Township Protection Plan. The Planning Factors include an overview of the township and a map of the key operational planning factors (such as Traffic Management Points, Neighbourhood Safer Places, essential infrastructure etc).<br>The planning factors are developed by CFA with other emergency services, the local municipality and other relevant parties. Township planning factors information is for emergency services and is not available to the general public.   |
| Neighbourhood Safer Places – Places of Last Resort | CFA, Council       | No NSPs have been designated in the Shire  | Council to review and CFA to assess each designated NSP by Aug 31 each year<br>Council to provide updated list of designated NSPs to CFA by 30 Sep each year | <ul style="list-style-type: none"> <li>▪ Neighbourhood Safer Places – Places of Last Resort (NSPs) are an area or premises that may, as a last resort, provide some sanctuary from bushfire.</li> <li>▪ Councils located wholly or partly in the country area of Victoria are required under the CFA Act to identify and designate NSPs in their municipal district.</li> <li>▪ After identifying a potential NSP, Council must ask the CFA to assess the site in accordance with CFA's Assessment Guidelines. Councils can only designate a site as an NSP if it has been certified by the CFA as meeting these Guidelines. Council also reviews potential NSP sites against its Municipal Neighbourhood Safer Places Plan, available at <a href="http://www.colacotway.vic.gov.au">www.colacotway.vic.gov.au</a></li> </ul> |
| Powerline Bushfire Mitigation Strategy Plan        | Powercor           | Across the Shire   | Ongoing  | Powercor's Bushfire Mitigation Strategy Plan is prepared in accordance with the Electrical Safety (Bushfire Mitigation) Regulations 2003. The Strategy/plan details Powercor's policies, procedures and programs for the inspection, maintenance and operation of the electricity network.  |

| Preparedness                                   |  |                  |  |  |
|--|--|------------------|--|--|
| Action   | Responsible Agency                     | Location/s       | Timing/ Completion Date                            | Comments   |
| Powerline Vegetation Management Strategy       | Powercor                               | Across the Shire | Ongoing  | Powercor's Vegetation Management Plan is prepared in accordance with the Electricity Safety (Electric Line Clearance) Regulations 2010. The Plan details Powercor's policies, procedures and programs to manage vegetation around powerlines.  |
| Powerline Easement Management                  | Powercor, Council, CFA and/or DSE      | Across the Shire | Ongoing  | Review easements, in conjunction with Municipal Fire Prevention Officers, CFA and/or DSE (as appropriate), to determine treatment works for powerline easements that form agreed Strategic Fire Breaks, Breaks for Controlled Burns or are required for Asset Access and Protection.   |
| Fire Hazard Mapping Work (Powerlines)          | CFA, Powercor                          |                  | Four yearly cycle                                  | The Fire Hazard Mapping project reviews low bushfire risk areas to determine if any changes are required to the risk level. The project is managed and undertaken over a four year cycle by CFA in rural Victoria, in consultation with powerline companies and Councils.  |
| Powerline Faults and Emergency Events Response | Powercor                               |                  | Ongoing  | Powercor maintains a 24 hour fault and emergency response including call centre, faults dispatch and system control centres. Powercor invokes escalation to manage and respond to major events, including Powercor's Emergency Management Liaison Officer attending Incident Control Centres, Municipal Emergency Coordination Centres and Community/CFA Brigade meetings when invited.  |
| Municipal Fire Management Plan                 | MFMPC (includes Council, CFA, DSE, PV) |                  | Draft plan endorsed by MFMPC and Council by Oct 31 | The Colac Otway Shire Municipal Fire Management Plan has been prepared by the Municipal Fire Management Planning Committee (MFMPC).<br>The Plan has been produced by and with the authority of Council pursuant to Section 20 of the Emergency Management Act 1986 and is deemed to fulfil Section 55A (Municipal Fire Prevention Plans) of the CFA Act 1958.<br>The Plan has been prepared in accordance with the Integrated Fire Management Planning Guide and Part 6A of the Emergency Management Manual Victoria. The Plan reflects the State Government's direction to increase integration on fire management planning between agencies and the community. |
| Evacuation Planning                            | Victoria Police                        | State wide       |  | Local Police Station representatives are participating in a State wide multi agency initiative to develop guidelines for evacuation planning.  |
| Great Ocean Road Traffic Management Plan       | Victoria Police                        |                  |  |  |

| Regulatory Controls                            |                                |  |                         |   |
|--|--------------------------------|--|-------------------------|---|
| Action   | Responsible Agency             | Location/s   | Timing/ Completion Date | Comments  |
| Fire hazard inspections (CFA Act)              | Council                        |  |                         | See 'Fire hazard inspections' section under 'Hazard Reduction'  |
| Fire prevention notices (s. 41, CFA Act)       | Council & CFA                  |  |                         | See 'Fire prevention notices' section under 'Hazard Reduction'  |
| Fire permits (s.39E, s. 40 (4E) & (5) CFA Act) | Council                        |  |                         | See ' Fire permits' section under 'Hazard Reduction'  |
| Total fire bans (s. 40, CFA Act)               | CFA                            |  |                         | A Total Fire Ban is declared by the CFA on days when fires are likely to spread rapidly and could be difficult to control. If a Total Fire Ban has not been declared for a district, fire restrictions may still apply for each municipality in that district.  |
| Fire danger period                             | CFA                            |  |                         | Fire Restrictions can be applied across most areas of Victoria by CFA, when fire danger is high. Typically this is over the summer period of November through to April. Restrictions are applied in small areas at a time.  |
| Planning schemes and building codes            | State Government, Council, CFA | Bushfire Prone Areas; areas covered by Wildfire Management Overlay | Ongoing                 | <p>When applications are lodged with Council for permits under the Planning and Environment Act for the subdivision of land or the construction of buildings in areas of high fire risk, the Shire may give consideration to the following documents in determining such application and also refer the application to the relevant fire agencies for comment :</p> <ul style="list-style-type: none"> <li>▪ Colac Otway Planning Scheme, including the Wildfire Management Overlay</li> <li>▪ Planning Conditions and Guidelines for Subdivisions (Country Fire Authority, 1991) in bushfire prone areas;</li> <li>▪ Requirements for Water Supplies and Access for Subdivisions in Residential 1 and 2 and Township Zones (Country Fire Authority, 2004)</li> <li>▪ Building in a Wildfire Management Overlay – Applicant's Workbook; and</li> <li>▪ Australian Standard 3959, 2009 – Construction of Buildings in Bushfire Prone Areas.</li> </ul> <p>Several of these documents are being amended or changed as part of State Government improvements to the planning scheme and building framework to address bushfire risk.</p> |

## Appendix C.1 Hazard Trees Identification & Notification Procedure

The Electricity Safety Act 1998 (Vic) (Electrical Safety Act) provides that a municipal council must specify, within its Municipal Fire Prevention Plan:

- (a) procedures and criteria for the identification of trees that are likely to fall onto, or come into contact with, an electric line ('hazard trees'); and
- (b) procedures for the notification of responsible persons of trees that are hazard trees in relation to electric lines for which they are responsible.

Under the Electrical Safety Act, the person responsible for maintaining vegetation and clearance space around power lines is referred to as the 'responsible person'.

The procedures outlined in this section of the Colac Otway Shire Municipal Fire Management Plan seek to address these requirements.

Each responsible person should have its own internal procedure regarding the steps that will be taken when it receives notification of a potentially hazardous tree.

### What is a hazard tree?

According to the Electrical Safety Act, a hazard tree is a tree which 'is likely to fall onto, or come into contact with, an electric line'.

The Electricity Safety (Electric Line Clearance) Regulations 2010 further provide that a responsible person may cut or remove such a tree 'provided that the tree has been assessed by a suitably qualified arborist; and that assessment confirms the likelihood of contact with an electric line having regard to foreseeable local conditions.'

Due to legal requirements which require a clearance space be maintained around an electric line, hazard trees are usually located outside the regulated clearance space. Despite being outside the clearance space, the tree may still have the potential to contact the line due to its size or because of a structural fault or weakness which renders part, or all, of the tree likely to contact or fall onto the line.

### Who is responsible for a hazard tree?

Under the Electrical Safety Act, the person responsible for maintaining vegetation and clearance space around power lines is referred to as the 'responsible person'. This includes responsibility for keeping the whole or any part of a tree clear of the line.

Under the Electrical Safety Act, responsibility is allocated between distribution businesses and other owners of electricity infrastructure, land owners and occupiers, public land managers such as municipal councils and VicRoads.

Municipal councils are responsible for trees on public land within their municipalities, for which they are the land manager, where these are also within a Declared Area for the purposes of the Electrical Safety Act. Primary responsibility for vegetation clearance and management within the municipality, for areas which are not within a Declared Area, will usually fall to the relevant electricity distribution company.

### Responsible Persons within Colac Otway Shire

There are a number of organisations that have responsibility for line clearance in the Colac Otway Shire, including:

- Powercor for trees affecting all sub transmission and distribution powerlines operating at 66,000 volts, 22,000 volts and low voltage with the exception of trees covered by Other Responsible Authorities. This includes key assets listed on the Victorian Fire Risk Register such as;

- the Winchelsea-Colac 66KV Sub Transmission Line;
- the Camperdown to Colac 66KV Sub Transmission Line;
- the Colac to Apollo Bay 22KV Distribution Feeder Line (via Gellibrand/Beech Forest);
- the Colac to Lorne 22 KV Distribution Feeder Line;
- the Colac to Apollo Bay 22 KV Distribution Feeder Line (via Barwon Downs/Forrest);
- SP Ausnet for all transmission lines (on towers) within the municipality.
- SP Ausnet, for the MLTS-TGTS Transmission Line;
- The Colac Otway Shire, for trees on public lands which are managed by the Shire and where road reserves are located within the Declared Area (for the purposes of the Electrical Safety Act);
- VicRoads, for trees on centre medians located on the Declared Main Road Network and trees on road reserves on the Declared Main Road Network that are located outside the Declared Area (for the purposes of the Electrical Safety Act);
- Parks Vic: for trees affecting powerlines on land managed by Parks Vic; and
- Foreshore Committees of Management: for trees affecting powerlines on land managed by the committee.

**Other relevant information**

Responsible persons, other than private persons, must have an electric line clearance management plan in place for areas for which they have responsibility (*refer Electricity Safety (Electric Line Clearance) Regulations 2010*)

The Colac Otway Shire has a Line Clearance Vegetation Management Plan 2011-2012 that outlines vegetation management under powerlines

**PROCEDURES AND CRITERIA FOR IDENTIFYING HAZARD TREES**

In the course of everyday duties, potentially hazardous trees may come to the attention of staff or volunteer members of the entities with representation on the Municipal Fire Management Planning Committee (MFMP), staff of the distribution business(es) or other persons, including members of the public.

There are a range of factors which may indicate that a tree is a hazard tree. That is, a tree which is likely to fall onto, or come into contact with, an electric line. Some of these factors will be obvious when looking at the tree but many may only be apparent when the tree is assessed by a person with specific expertise and training, such as an arborist.

The following criteria may be used to assist in identifying a hazard tree:

- The size of the tree suggests that it is likely to come into contact with the electric line, for example because it appears to be encroaching or growing into the line clearance space.
- There is an excessive lean on the tree, or branches hanging off the tree and the tree is in proximity to an electric (power) line.
- The size or appearance of the tree suggests it could come into contact with the line including under foreseeable local conditions.

If a potentially hazardous tree is identified, the notification procedure outlined below should be followed. Where a responsible person becomes aware of a potentially hazardous tree for which they have responsibility, they must follow their own applicable internal procedure and the notification procedure described below does not apply.

**PROCEDURES AND CRITERIA FOR NOTIFYING HAZARD TREES**

To ensure that information regarding potentially hazardous trees is captured in an efficient manner and, as appropriate, referred to the responsible person for action, the following procedure for the notification of hazardous trees should be followed:

- The person with responsibility for the highest percentage of lines within the municipality ('the primary responsible person') is the person to whom potentially hazardous trees should be reported.
- The primary responsible person (or their representative) is referred to in these Procedures as the primary responsible person representative (PRPR).
- Where any person becomes aware of, or receives a report of, a potentially hazardous tree within the municipality, this should be referred to the PRPR. Where the MFMPC becomes aware of, or receives a report of, a potentially hazardous tree within the municipality, this must be referred to the PRPR.
- Reports of potentially hazardous trees must be provided to the PRPR for action as soon as practicable. Reports must include, at a minimum:
  - The name and contact details and any relevant qualifications where known of the person making the report
  - As much detail as possible about the location of the tree (including, where known, GPS coordinates, details of numerical/name plate on nearest pole, name of nearest road or crossroads, closest landmark, whether tree is on private land or road reserve etc.)
  - A description of the tree (including, if known, the genus and species of tree)
  - The primary reasons given for the tree being identified as potentially hazardous (eg. tree is in proximity to an electric line AND there is evidence of structural weakness and/or excessive lean and/or appears to be encroaching into line clearance space etc.)
  - An indication of whether or not urgent action is required.
- The PRPR must take all necessary steps to advise the person responsible for the tree that it may be hazardous.

**Primary Responsible Person Representative (PRPR)**

For the purposes of this part of the Plan, the primary responsible person is Powercor.

All reports of hazard trees to Powercor should be made on the 'Municipal Hazard Tree Notification Form' which is located on the Powercor Website [www.powercor.com.au](http://www.powercor.com.au)

Contact details for the PRPR are as follows:

|                                  |   |
|----------------------------------|---|
| Agency Name                      | Powercor  |
| Position title of contact person | VEMCO Hazard Tree Administrator<br>[VEMCO is Powercor's Vegetation Management Contractor] |
| Telephone Number                 | 03 5338 3300  |
| Email address                    | <a href="mailto:haztrees@vemco.com.au">haztrees@vemco.com.au</a>                          |
| Facsimile Number                 | 03 8648 5621  |

PROCEDURES FOR NOTIFICATION OF RESPONSIBLE PERSONS

Where a potentially hazardous tree has been reported to the PRPR, the PRPR should follow the procedure outlined below.

|               |  |  |
|---------------|--|--|
| <b>Step 1</b> | Report provided to PRPR.   |  |
| <b>Step 2</b> | PRPR to determine who the responsible person is in relation to the reported tree.<br><br>(If necessary, the PRPR can seek assistance from Energy Safe Victoria for this step.) |  |
| <b>Step 3</b> | Is the responsible person the primary responsible person?  | <p><b>Yes =&gt;</b> applicable internal procedure for referral and assessment of potentially hazardous tree to be followed.</p> <p><b>No =&gt;</b> proceed to Step 4.</p>  |
| <b>Step 4</b> | Did the report indicate that urgent action is required?  | <p><b>Yes =&gt;</b> the responsible person should be notified as soon as possible, and by no later than the close of the next business day after the notification is assessed.</p> <p><b>No =&gt;</b> the PRPR must advise the responsible person of the existence and location of a potentially hazardous tree in accordance with the timelines below.*</p> |

\* The PRPR should put in place mutually agreed arrangements for the manner in which it passes on reports of potentially hazardous trees to responsible persons.

**Reporting Timelines**

The PRPR should provide reports to the relevant responsible person as soon as practicable.

In circumstances where:

- the potentially hazardous tree is located within a high bushfire risk area (as per s.80 of the Electrical Safety Act) and the potentially hazardous tree is reported during the fire danger period declared under the Country Fire Authority Act 1958 (Vic); or
- the report indicates that there is an imminent danger that the tree will contact or fall onto lines as a result of minor environmental changes;
- the potentially hazardous tree must be referred to the relevant responsible person for action as soon as possible, and by no later than the close of the next business day after the notification is assessed.

Each responsible person (other than the primary responsible person) must provide the PRPR with contact details of the person (position title) to whom reports should be provided. It is the responsibility of each responsible person to ensure that the PRPR is provided with up-to-date contact details.

**Register**

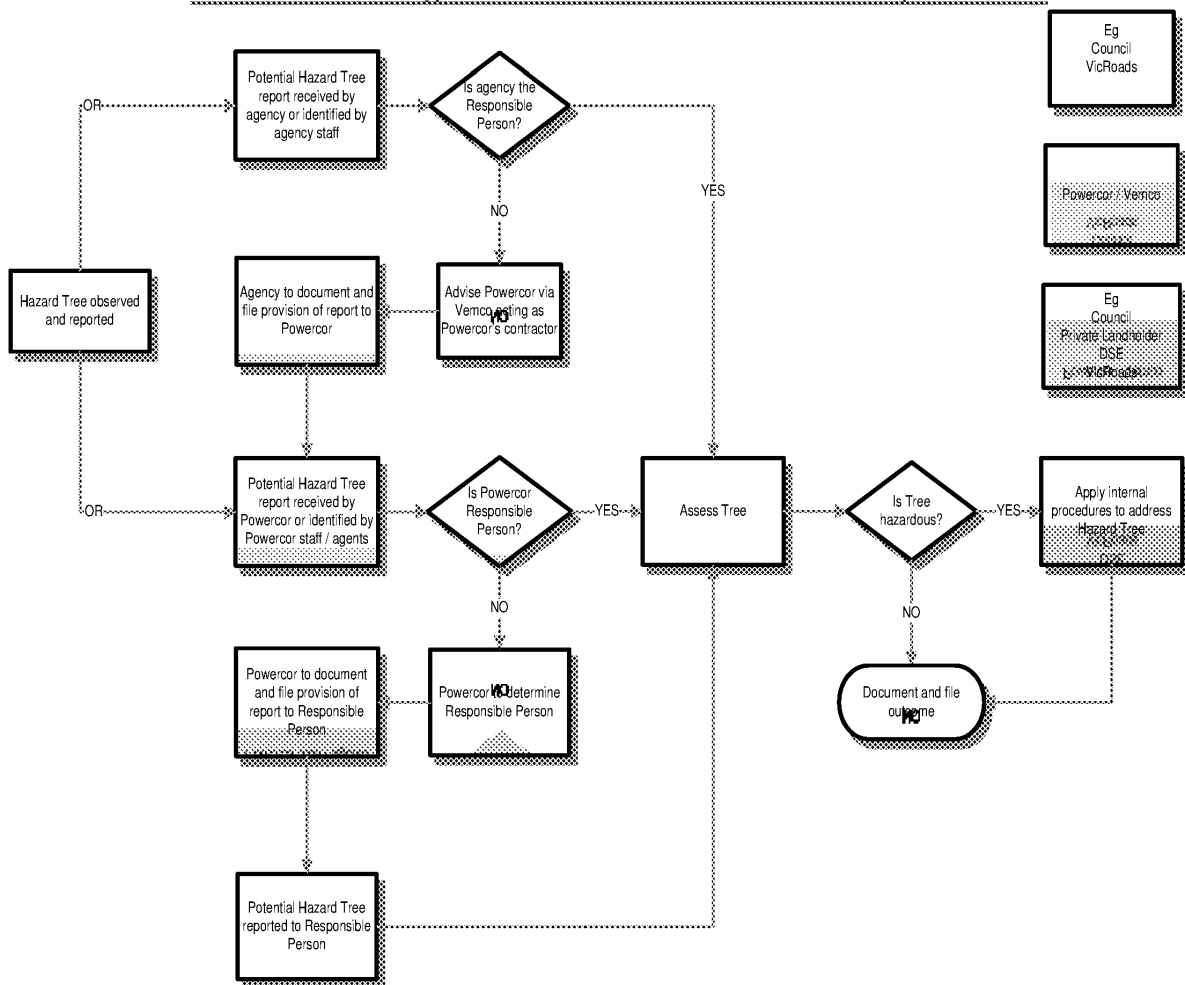
It is recommended that the PRPR maintain a register in which all notifications are recorded together with the date of receipt of the notification and the date the notification was reported to the responsible person.

It is recommended that responsible persons also maintain a register of notifications received of hazardous trees for which they are the responsible person.

**PRP Consultation**

The MFMPC notes that the Primary Responsible Person (PRP) was consulted in relation to the development of these procedures.

*Flow chart showing work flow for hazardous trees near powerlines.*





## **Appendix C.2 Township Protection Plans**

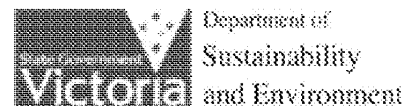
The following Township Protection Plans have been developed by the Country Fire Authority and the Colac Otway Shire.

- Barongarook
- Barwon Downs
- Carlisle River
- Forrest
- Kawarren
- Kennett River
- Wye River
- Lavers Hill

Copies of each of these Township Protection Plans are available for download from the Country Fire Authority's website at [www.cfa.vic.gov.au](http://www.cfa.vic.gov.au)

## APPENDIX D Community and Organisational Engagement Plan

Local Engagement and Participation Plan for the development of Municipal Fire  
Management Plan - September 2011



## Foreword

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The Colac Otway Shire Municipal Fire Management Plan 201-2014 (MFMP) outlines how Shire Council, fire agencies and other relevant authorities and organisations will work together to prepare for, respond to and recover from major bushfires.

The MFMP is a sub-plan of the Shire's Municipal Emergency Management Plan and reflects the State Government's direction to increase integration on fire management planning between agencies and the community. The MFMP was produced collaboratively by members of the Colac Otway Shire Municipal Fire Management Planning Committee. The Committee is made up of representatives from the Colac Otway Shire, the Country Fire Authority, the Department of Sustainability and Environment, Parks Victoria, Victoria Police and VicRoads.

The initial MFMP has been produced as an interim plan to enable and inform agency and organisational planning. The strategies and deliverables outlined in the MFMP will develop further over the next 12 months.

The initial MFMP focuses on bushfires (including grassfires) and environmental burns. Future versions of the MFMP will incorporate structural and chemical fires.

This Local Engagement and Participation Plan outlines the processes to be undertaken by fire agencies and other relevant authorities and organisations to seek local knowledge and input into the development of the MFMP.

It is recognised that a suite of broader fire awareness, education and engagement activities are already being undertaken by emergency management agencies with the public, in addition to the processes proposed by this Strategy. The Strategy aims to work in harmony with existing programs, however the engagement outlined in the Plan specifically focuses on gaining input into the MFMP, not on broader capacity building.

Questions and comments about this Plan can be directed to:

Colac Otway Shire  
PO Box 283  
Colac VIC 3250

Or via email: [inq@colacotway.vic.gov.au](mailto:inq@colacotway.vic.gov.au)

## Version Control Table

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| Version | Release Date | Author | Changes |
|---------|--------------|--------|---------|
|         |              |        |         |
|         |              |        |         |
|         |              |        |         |

## Introduction

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### Overview

This Local Engagement and Participation Strategy outlines the range of engagement and participation processes that the Colac Otway Shire Municipal Fire Management Planning Committee will implement to develop the Colac Otway Shire Municipal Fire Management Plan 2011-2014 (MFMP).

This Strategy is intended to guide public input into the establishment of the MFMP.

The Strategy is not intended to replace or replicate the ongoing development and delivery of education, awareness, engagement and participation around fire management that is already delivered by management agencies. However the Strategy will work in harmony with these activities.

### Importance of Local Engagement and Participation

A key tenet of the 2009 Victorian Bushfires Royal Commission was the concept of shared responsibility in planning for, responding to and recovering from bushfires.

The Commission noted that:

- **Individuals** should be encouraged, to the extent of their capabilities, to make their own preparations to protect themselves and their communities from bushfire;
- **Agencies** should educate, prepare and help protect individuals by ensuring that they have access to the information needed to make sound decisions; and
- **Governments** should create the legislative foundation, fund fire services, facilitate community education and support, and provide essential infrastructure and local support to help communities stay safe.

Deliberative engagement and participation through shared decision making is fundamental in enabling people to understand the complexities of fire management. This approach is one of the most powerful ways to build human capacity and equip people to act on their shared responsibility or change behaviours.

Agencies therefore need to support the public in understanding the complexities of fire management as well as demonstrating that they are listening by acting on the advice, local knowledge and aspirations provided through community participation.

Seeking local engagement and participation will build a better MFMP through incorporating knowledge and aspirations and fostering local ownership of the plan. The process of engagement also has the added benefit of extending local knowledge and relationships between the community and fire management agencies which supports overall fire preparedness and community resilience.

### About the Municipal Fire Management Plan

The MFMP outlines how Council, fire agencies and other relevant authorities and organisations will work together to prepare for, respond to and recover from major bushfires.

The MFMP is currently in draft form. It has been endorsed by the Colac Otway Shire Municipal Fire Management Planning Committee and the Colac Otway Shire Municipal Emergency Management Planning Committee and adopted by Colac Otway Shire Council as a draft plan. The draft MFMP will undergo a period of public consultation to capture local knowledge, as well as extending local participation in fire prevention and preparedness activities.

Public consultation on the MFMP will be undertaken by the Municipal Fire Management Planning Committee over the 2011/12 summer period.

#### **Authority for Municipal Fire Management Plan**

The MFMP is produced by and with the authority of the Colac Otway Shire Council pursuant to Section 20 of the Emergency Management Act 1986 and will be deemed to fulfil Section 55A (Municipal Fire Prevention Plans) of the Country Fire Authority Act 1958.

The Plan is a sub-plan of the Colac Otway Shire Council Municipal Emergency Management Plan.

#### **Integrated Fire Management Planning**

Integrated Fire Management Planning (IFMP) is a central component of Victoria's Fire Management Planning Strategy 2009. IFMP involves bringing communities, fire agencies and State and local government departments together to deliver fire management planning.

Under IFMP, collaborative agency fire management planning will occur through Municipal Fire Management Planning Committees. Agency plans will be aggregated to form the basis of Municipal Fire Management Plans. Fire management planning will be aligned with each organisation's planning and business processes through:

- the implementation of common planning models and methodologies;
- allocation of resources and accountabilities;
- participation in common decision making through the committee process;
- collaborative delivery of fire management activities; and
- cooperative engagement.

## Engagement and Participation Framework

### Defining Engagement and Participation

Engagement refers to the processes involved in public information and education activities, customer service, involvement of the public in decision making, partnerships, consultation programs, behaviour change programs, as well as education and awareness raising activities.

Engagement is not only about sharing views and ideas, we engage with a view to people taking action in their own lives, thereby increasing participation in civic life.

The Integrated Fire Management Planning (IFMP) process has adopted the International Association of Public Participation (IAP2) Framework to guide its engagement activities.

The IAP2 framework defines a range of engagement activity to support public input into shared decisions.



### IAP2 Public Participation Spectrum

Developed by the International Association for Public Participation

INCREASING LEVEL OF PUBLIC IMPACT

| CONSIDER  | CONSULT  | INVOLVE   | COLLABORATE  | EMPOWER  |
|---|--|---|--|--|
| <b>Public Participation Goal:</b>   | <b>Public Participation Goal:</b>  | <b>Public Participation Goal:</b>   | <b>Public Participation Goal:</b>  | <b>Public Participation Goal:</b>  |
| To provide the public with balanced and objective information to assist them in understanding the problem, alternatives, opportunities, and/or solutions. | To obtain public feedback on agency alternatives and/or decisions.   | To work directly with the public throughout the process to ensure that public concerns and aspirations are consistently understood and considered.  | To partner with the public in each aspect of the decision including the development of alternatives and the identification of the preferred solution.                            | To place final decision-making in the hands of the public.   |
| <b>Promise to the Public:</b>   | <b>Promise to the Public:</b>  | <b>Promise to the Public:</b>   | <b>Promise to the Public:</b>  | <b>Promise to the Public:</b>  |
| We will keep you informed.  | We will keep you informed, listen to and acknowledge concerns and provide feedback on how public input influenced the decision.          | We will work with you to ensure that your concerns and aspirations are directly reflected in the alternatives developed and provide feedback on how public input influenced the decision. | We will look to you for direct advice and innovation in formulating solutions and incorporate your advice and recommendations into the decisions to the maximum extent possible. | We will implement what you decide.   |
| <b>Example Techniques to Consider:</b>  | <b>Example Techniques to Consider:</b>   | <b>Example Techniques to Consider:</b>  | <b>Example Techniques to Consider:</b>   | <b>Example Techniques to Consider:</b>   |
| <ul style="list-style-type: none"> <li>• Fact sheets</li> <li>• Web Sites</li> <li>• Open houses</li> </ul>   | <ul style="list-style-type: none"> <li>• Public comment</li> <li>• Focus groups</li> <li>• Surveys</li> <li>• Public meetings</li> </ul> | <ul style="list-style-type: none"> <li>• Workshops</li> <li>• Deliberate polling</li> </ul>   | <ul style="list-style-type: none"> <li>• Citizen Advisory Committees</li> <li>• Consensus building</li> <li>• Participatory decision-making</li> </ul>                           | <ul style="list-style-type: none"> <li>• Citizen Juries</li> <li>• Sorts</li> <li>• Delegated decisions</li> </ul> |

© 2004 International Association for Public Participation.

## Harmonising with existing engagement

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Across the municipality and beyond a range of awareness raising, behaviour change, engagement and participatory decision making activities are undertaken with communities around fire management.

A challenge for the development of the MFMP is in capturing vital community input whilst not adding to consultation fatigue within the emergency management field. It is also important to recognise that while any engagement with the community around emergency management will ultimately have a capacity building outcome, the primary intention of the engagement around the MFMP is not capacity building, as there are already a suite of programs being delivered for this primary outcome.

It is also recognised that as a new concept, there is much education and awareness raising within emergency management agencies themselves as to the role and purpose of the MFMP.

The major local engagement programs which will be concurrently occurring during the development of the MFMP are listed below. More information about community education and engagement activities relating to bushfire preparedness is available in Appendix B to the MFMP, which contains a multi-agency work plan detailing fire risk management activities being undertaken in the Shire.

### Township Protection Plans - CFA

Township Protection Plans contain local information for high risk communities to help identify and manage the risk of bushfire. The concept evolved from a recommendation of the 2009 Victorian Bushfires Royal Commission.

The Township Protection Plans consider a town's bushfire history, terrain, vegetation and access routes and contain practical information including:

- Community based maps with key landmarks, routes and Neighbourhood Safer Places – Places of Last Resort (where applicable);
- Bushfire survival options including shelter options;
- Identification of local bushfire risks;
- Information regarding warnings, evacuation and Fire Danger Ratings;
- A relocation checklist; and
- Key contacts and information sources.

The following Township Protection Plans are currently in place for the Colac Otway Shire:

- Barongarook;
- Barwon Downs;
- Carlisle River
- Forrest
- Kawarran
- Kennett River;
- Wye River; and
- Lavers Hill

Public input into the development of Township Protection Plans is coordinated by the Country Fire Authority (CFA), with Colac Otway Shire, the Department of Sustainability and Environment (DSE) and Parks Victoria also participating in the engagement process.

### DSE Fire Operations Plans (FOPs)

The Department of Sustainability and Environment undertakes public input into the development of fire operations planning for the prevention of fire on public land. Fire prevention and preparedness works consulted upon include planned burns, strategic fuel breaks, mechanical fuel management and fire infrastructure management.

DSE has already completed their 2011/12 FOPs process prior to the development of the MFMP.

#### **Country Fire Authority education, awareness and support programs**

The majority of community education and engagement activities related to bushfire preparedness are conducted by the Country Fire Authority and include programs such as Community Fireguard, the Home Bushfire Advice Service, Bushfire Planning Workshops and Fire Ready Victoria meetings. These occur in a range of home and community settings, using a wide variety of engagement processes and extend before and throughout the fire danger season.

#### **Strategic Conversations Program – DSE and CFA**

'Strategic conversations' is a new DSE initiative, in partnership with CFA, for developing and sharing knowledge about fire. Strategic conversations occur through community invitation and involve members of the community and staff from DSE and CFA.

A strategic conversation is a facilitated dialogue within a group of people for the purpose of pooling knowledge and experience about a topic or theme – in this case, fire. As people share their different perspectives, a broader and deeper understanding of the land and fire management can be achieved.



## Local Engagement and Participation Plan

### Scope

This Strategy is intended to guide the process for public input into the establishment of the MFMP.

It is not intended to build general community fire preparedness, however it is recognised that any engagement in the field will make a contribution to community capacity building in this area.

For 2011/12, the Colac Otway Shire Municipal Fire Management Planning Committee has recommended that engagement on the draft MFMP be undertaken in conjunction with engagement on Township Protection Plans for high risk townships in the Shire. The Township Protection Plan engagement process is being led and developed by the Country Fire Authority, in conjunction with the Colac Otway Shire and the Department of Sustainability and the Environment.

### Engagement Purpose/Objectives

Local engagement on the draft MFMP is being undertaken to:

- Enrich the quality of the MFMP through local intelligence (ideas, opinions and knowledge of the local community);
- Strengthen relationships and operational effectiveness between fire management agencies through the co-delivery of engagement;
- Improve understanding of the roles and responsibilities of individuals, agencies and government in preparing for fire and improving people's safety; and
- Increase citizen knowledge of fire management planning, thereby increasing citizen capacity to contribute to local fire management and to undertake personal fire prevention and preparedness measures.

### Engagement and Participation Principles

The Colac Otway Shire recognises the value of local knowledge and the unique contribution that the community can make to local fire management planning. Engagement in fire management planning will be delivered in a manner designed to:

- Promote acceptance, understanding and joint problem solving;
- Raise knowledge and skills of fire management through participation;
- Produce plans that support community and organisational expectations; and
- Incorporate community and organisational needs into the development of fire management plans.

### Scope for Community Input

The table below outlines the degree to which public input can be acted upon by the Municipal Fire Management Planning Committee (MFMPC) in relation to the draft MFMP:

| What aspects are not open to the community to make decisions on (not negotiable with the public)  | What aspects the community can make decisions on/influence (negotiable)  |
|---|--|
| <ul style="list-style-type: none"> <li>• Roles of fire management agencies</li> <li>• Timing of the establishment of the MFMP</li> <li>• MFMP's alignment to policy and legislation</li> <li>• Council and agency compliance with legislation</li> <li>• Risk assessment standards &amp; processes</li> </ul> | <ul style="list-style-type: none"> <li>• Process of engagement and who we engage with</li> <li>• Additions to the local a risk register</li> <li>• Confirmation of local information within the MFMP</li> <li>• Fire protection measures/treatments</li> </ul> |

**Organisation and Public Stakeholders**

There are a range of stakeholders to this plan broadly grouped around three areas:

- a) Permanent MFMP members;
- b) Agencies that attend MFMP by request; and
- c) Other agencies, organisations and interested groups that could support the MFMP.

This Strategy recognises that consultation with the agencies should be separated from the consultation with public stakeholders, particularly since the community engagement undertaken for this strategy will be combined with the consultation process for Township Protection Planning. This approach has created the following two key stakeholder groupings:

**Agency and organisation stakeholders**

The Colac Otway Shire MFMP is made up of representatives from the Colac Otway Shire, the Country Fire Authority, the Department of Sustainability and Environment, Parks Victoria, the Department of Human Services, Victoria Police and VicRoads.

The MFMP is a sub-committee of the Shire’s Municipal Emergency Management Planning Committee (MEMPC). The MEMPC has broader agency representation that includes the Victoria State Emergency Service, the Department of Human Services, the Department of Health, Barwon Water and the Australian Red Cross. Agencies represented on the MFMP are also represented on the MEMPC.

**Public stakeholders**

The capacity and motivation to engage around fire management is extremely diverse in local communities. Peter Sandman, a risk communication expert uses four categories of public:

|                        |  |
|------------------------|--|
| <b>Highly involved</b> | You know their telephone numbers by heart, and they know yours. They want input into everything you decide. Your issue is their main preoccupation in life, second only to job and family (and sometimes not that).  |
| <b>Attentives</b>      | They monitor the media coverage of your issue carefully. Sometimes they go to a meeting, answer a survey, check out a web site, subscribe to a newsletter, contribute to a campaign. Your issue isn’t distorting their lives the way it is for the fanatics, but it’s in their Top 20. |
| <b>Browsers</b>        | They check you out in the media from time to time, but they don’t want to be bothered providing input. Your issue is on their “worry list,” but nowhere near the top.  |
| <b>Inattentives</b>    | They don’t know and they don’t want to know  |

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The engagement process for the MFMP is not capable of effecting large scale behaviour change or awareness raising. The time limitations for the consultation, the newness of the concept and the complexity of fire management planning preclude the engagement process from effectively targeting beyond the *Highly involved* and *Attentive* categories.

Community members in this category would include residents of high risk townships and residents who are active in Department of Sustainability and Environment or Country Fire Authority engagement processes.

### **Key messages**

#### **About the MFMP**

The MFMP outlines how Council, fire agencies and other relevant authorities and organisations will work together to prepare for, respond to and recover from major bushfires in the Colac Otway Shire.

The MFMP has been produced collaboratively by members of the Colac Otway Shire MFMP. It is a multi-agency plan for the Colac Otway Shire municipal area.

This is the first year we have developed this plan, and we intend to keep improving it each year.

#### **About the consultation program**

A consultation process has been developed to enrich the MFMP with local knowledge about what your community needs for fire protection.

Your involvement is a great way for you to find out more about what fire management agencies are doing, and what you need to do to protect yourself, your family and your property from bushfires.

Even if you do not know a lot about fire, we still value your ideas about how best to help protect your community from bushfires.

Issues about risk assessment standards and processes, government policy, legislation and fire safety initiatives are not within the scope of the consultation.

#### **About the risk of fire**

The Country Fire Authority's approved key messages for the 2011/12 fire season are attached as Appendix A to this Strategy.

## Key Stakeholders & Communities

The following table lists the key stakeholders and communities who will be targeted through the engagement process for the MFMP and the type of engagement that will be undertaken. The list is intended to be a general guide, not an exhaustive list. The range of engagement is based on the International Association of Public Participation spectrum (outlined in Section 2.1 above).

|     | INFORM                                 | CONSULT   | INVOLVE   | COLLABORATE  | EMPOWER   |
|-----|--|---|---|--|---|
| Who | General community in Colac Otway Shire | Residents, property owners, businesses and special interest groups in high risk towns, for which a Township Protection Plan has been prepared: <ul style="list-style-type: none"> <li>▪ Barongarook</li> <li>▪ Barwon Downs</li> <li>▪ Carlisle River</li> <li>▪ Forrest</li> <li>▪ Kawarran</li> <li>▪ Kennett River</li> <li>▪ Wye River</li> </ul> | Stakeholders with a special interest in the MFMP and ability to engage a broader audience <ul style="list-style-type: none"> <li>▪ CFA Brigades &amp; volunteers</li> </ul> | Organisations who have informed development of the MFMP but are not involved through MFMPC* or MEMPC** <ul style="list-style-type: none"> <li>▪ Surf Coast Shire</li> <li>▪ SP Ausnet</li> <li>▪ VicTrack</li> </ul> | Organisations who are responsible for the MFMP: <p><b>MFMPC*</b></p> <ul style="list-style-type: none"> <li>▪ Colac Otway Shire</li> <li>▪ Dept of Sustainability &amp; Environment</li> <li>▪ Country Fire Authority (Group &amp; Brigades)</li> <li>▪ Parks Victoria</li> <li>▪ Victoria Police</li> <li>▪ Vic Roads</li> </ul> <p><b>MEMPC**</b></p> <p>Agencies listed above and:</p> <ul style="list-style-type: none"> <li>▪ Powercor</li> <li>▪ VicRoads</li> <li>▪ Barwon Water</li> <li>▪ Victoria State Emergency Service</li> <li>▪ Dept of Health</li> <li>▪ Australian Red Cross</li> <li>▪ V/Line</li> <li>▪ Ambulance Victoria</li> <li>▪ Dept of Primary Industries</li> <li>▪ Other MEMPC members</li> </ul> <p>Other relevant stakeholders with operations in the municipal district.</p> |

\* MFMPC = Municipal Fire Management Planning Committee

\*\* MEMPC = Municipal Emergency Management Planning Committee

Engagement Program - summary

|                |   |  |  |
|----------------|---|--|--|
| PLAN           | Stage 1 - Align agency engagement and Strategy adoption<br>By end December 2011                                   |  |  |
|                | <b>Who</b>  | <b>How</b>   | <b>Tools</b>   |
|                | CFA<br>DSE<br>Parks Victoria<br>COS   | Workshops/meetings to: <ul style="list-style-type: none"> <li>Seek agreement on the engagement and participation strategy</li> <li>Align engagement on other initiatives eg: Township Protection Plans with MFMP</li> <li>Develop engagement schedule</li> </ul> | <ul style="list-style-type: none"> <li>Develop promotional poster, advertising</li> <li>Develop fact sheets and consultation information</li> <li>Develop consultation schedule and process</li> </ul> |
| ENGAGE         | Stage 2 - Agency/organisation engagement<br>By end of February 2011   |  |  |
|                | <b>Who</b>  | <b>How</b>   | <b>Tools</b>   |
|                | Agency/organisation stakeholders involved in MFMPC and MEMPC  | <ul style="list-style-type: none"> <li>Drafts of MFMP circulated for review and comment</li> <li>Detailed input sought on activities for multi-agency work plan</li> <li>Briefing to Committees and Council on draft MFMP</li> </ul>                             | <ul style="list-style-type: none"> <li>Draft MFMP</li> <li>Draft multi-agency work plan</li> <li>DSE bushfire landscape modelling presentation</li> </ul>  |
|                | Stage 3 - Public workshops<br>Summer 2011/2012  |  |  |
|                | <b>Who</b>  | <b>How</b>   | <b>Tools</b>   |
|                | Barongarook<br>Barwon Downs<br>Carlisle River<br>Forrest<br>Kawarren<br>Kennett River<br>Wye River<br>Lavers Hill | Combine MFMP engagement processes with CFA Community engagement programs.<br>Feedback sought on: <ul style="list-style-type: none"> <li>Local hazard reduction</li> <li>Regional risk priorities</li> <li>General information</li> </ul>                         | <ul style="list-style-type: none"> <li>CFA community engagement sessions</li> <li>Draft MFMP &amp; related materials</li> </ul>  |
|                | Online engagement   | MFMP posted on Council website   | Draft MFMP   |
| Media campaign | General awareness campaign  | Local media  |  |
| SORT           | Stage 4 - Compile and incorporate feedback<br>By June 2012  |  |  |
|                | <b>Who</b>  | <b>How</b>   | <b>Tools</b>   |
|                | MFMP Committee  | <ul style="list-style-type: none"> <li>Presentation to MFMP Committee meeting on community feedback</li> <li>Workshop what feedback can be incorporated</li> <li>Revise MFMP based on feedback from engagement process</li> </ul>                                | <ul style="list-style-type: none"> <li>Engagement Feedback Summary</li> </ul>  |

|         |   |  |  |
|---------|---|--|--|
| APPROVE | Stage 5 - Approval of final MFMP<br>Date TBC  |  |  |
|         | <b>Who</b>  | <b>How</b>   | <b>Tools</b>   |
|         | MFMP Committee<br>MEMP Committee<br>Barwon South West<br>Regional Strategic Fire<br>Management Planning<br>Committee<br>Council | <ul style="list-style-type: none"> <li>▪ Formal endorsement</li> <li>▪ Formal endorsement</li> <li>▪ Review and recommendation to Council</li> </ul><br>Adoption | Final MFMP   |
| RELEASE | Stage 6 - Release Plan<br>Date TBC  |  |  |
|         | <b>Who</b>  | <b>How</b>   | <b>Tools</b>   |
|         | MFMP Committee  | <ul style="list-style-type: none"> <li>▪ Formal feedback to participating stakeholders</li> <li>▪ Information sessions</li> <li>▪ Council website</li> </ul>     | Local media<br>Send to mailing list<br>Post on Council website |

Appendix A: Country Fire Authority Key Messages  
2011/12 Fire Season

## KEY MESSAGES – 2011/12 FIRE SEASON

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These fire safety messages are broad and cover a range of topics. They can be used in different communication channels and situations including (but not limited to):

- Talking to local communities
- Talking to the media
- Advertising
- Publications
- Media Releases
- Flyers and promotional materials

### Overarching key messages

- Victoria is one of the most fire-prone regions in the world
- If you live, work or travel in Victoria this summer, you may be at risk of bushfire
- Planning ahead can save you and your family from being killed by fire
- Victoria has experienced wet weather over the past 12 months, but it only takes two weeks of hot, dry and windy weather to create dangerous fire conditions
- Due to favourable growing conditions across Victoria in 2011 there is an above average risk for grassfires for the 2011/2012 fire season
- Grassfires should not be underestimated; they can be extremely dangerous and cause death, trauma or serious injury
- **Prepare** weeks and months before the fire season. **Act** on the daily Fire Danger Rating. **Survive** a bush or grass fire
- 75 per cent of people living in high risk bushfire areas do not have a detailed bushfire survival plan – are you one of them?  

Most people have an idea of what to do if there is a bushfire but haven't thought about what could go wrong, made a backup plan, worked out how to communicate with family and friends or practised what they will do – all these things are critical to survival
- How much do you know about planning for bushfire? Go to [www.cfa.vic.gov.au](http://www.cfa.vic.gov.au) and take the FireReady Challenge
- Leaving early is the safest way to survive a bushfire
- You need to know what to do, and when and where to go, on hot, dry, windy days
- Don't rely on an official warning to leave. Bushfires can start quickly and threaten lives and homes within minutes
- You risk your life if you "wait and see"
- The safest option is to leave high risk areas early on days of fire risk – go to a safer area, for example the home of family and friends away from high risk areas, the nearest regional centre or a built up area

## Bushfire Survival Plan

- You need a well thought out Bushfire Survival Plan if you live or holiday in high risk bushfire areas in Victoria
- Research shows 75% of people living in high risk areas do not have a detailed bushfire survival plan
- Don't have a plan? CFA can help. Visit [www.cfa.vic.gov.au](http://www.cfa.vic.gov.au) or call the Victorian Bushfire Information Line on 1800 240 667 for more information.
- You are not alone, advice and support is available. Talk to your local CFA brigade about how to plan for bushfire
- When preparing your plan consider the needs of children, the elderly, people with special needs or disability, pets and livestock
- Bushfires don't arrive at convenient times – think about what you will do if fire threatens on a work day/during school holidays/when you are away from home
- Attending a CFA FireReady meeting or joining a Community Fireguard group will help you plan for fire. You can also book a free property assessment to assess your fire risk. For more information visit [www.cfa.vic.gov.au](http://www.cfa.vic.gov.au) or call the Victorian Bushfire Information Line 1800 240 667
- Review your plan every year

## Grassfire

- Grassfires can spread quickly and are extremely dangerous, burning at 15- 20km/h or more
- As grass is a fine fuel, fire burns through it faster than through forest
- The taller and drier the grass, the more intensely a grassfire will burn
- Grassfires can start earlier in the day than forest fires as grass dries out more quickly than forest when temperatures are high
- Grassfires spread rapidly and can quickly threaten lives and property. If you live in an area with grassland you need a Bushfire Survival Plan
- Grassfires are very hot and can produce large amounts of radiant heat that can kill anyone caught out in the open
- Grassfires can be started accidentally when using machinery such as chainsaws, lawnmowers, tractors and welders over summer
- Most losses, including lose of life, occurs after a wind change in a grass fire

## Township Protection Plans

- Township Protection Plans are for local residents and visitors to the area
- Township Protection Plans contain local information for communities to help identify and manage the risk of bushfire
- Township Protection Plans are based on your town's bushfire history, terrain, vegetation and access routes. They also contain information such as:
  - Community based maps with key landmarks, routes and neighbourhood safer places (where applicable)
  - Bushfire survival options including shelter options
  - Identification of local bushfire risks
  - Information regarding warnings, evacuation and Fire Danger Ratings



- A relocation checklist; and
- Key contacts and information sources
- Know your Township Protection Plan and link it with your personal bushfire survival plan
- Managing bushfire risk is everyone's responsibility - know your Township Protection Plan
- Find your local Township Protection Plan online at [www.cfa.vic.gov.au](http://www.cfa.vic.gov.au)

## Fire Danger Ratings

- Fire Danger Ratings are forecast by the Bureau of Meteorology up to four days in advance
- FDRs predict fire behaviour should a fire start, and how hard it will be to put out
- The higher the FDR, the higher the risk
- Victoria is divided into nine FDR districts.
- To stay safe you need to be aware of the FDR in your district each day over the fire season – it is your trigger to act
- For every Fire Danger Rating there is clear advice on what you should do
- You need to find out the daily FDR in the district where you live or travel – for more information visit [www.cfa.vic.gov.au](http://www.cfa.vic.gov.au)
- Fire agencies provide clear advice on what to do for each FDR – see [www.cfa.vic.gov.au](http://www.cfa.vic.gov.au) for more information

## Code Red

- **Code Red** is the highest Fire Danger Rating – these are the worst conditions for a bush or grass fire
- Houses are not designed or constructed to withstand fires in **Code Red** conditions
- On a **Code Red** day, leaving high risk bushfire areas the night before or early in the morning is the safest option
- Code Red days are rare – when they are forecast they are **very** serious

## High-risk bushfire areas

- If you live near or visit areas that are heavily forested, have thick bush or long, dry grass, or coastal areas with lots of scrub you are at risk of fire
- Fires can occur where suburbs meet the bush or in urban areas where houses have grassland, bush or parkland around them

## Leaving early

- Leaving early is the safest way to survive a bushfire
- People die during bushfires trying to leave their homes at the last minute
- In high risk areas, leaving early is your only safe option on **Code Red** days – make a decision about when you will leave, where you will go, how you will get there, when you will return, what you will do if you cannot leave
- Only consider staying with your property on **Extreme** or **Severe** days if you are fully prepared and can actively defend your home. Visit [www.cfa.vic.gov.au](http://www.cfa.vic.gov.au) for more information

- Do you know family or friends who may need help leaving early? Don't wait, find out
- As a parent or carer please ensure your children, the elderly, people with special needs or disability are helped to leave early on Code Red, Extreme or Severe fire danger days
- Find a place away from high risk bushfire areas to relocate to – for example a shopping complex, large shopping strip, central business district of a regional centre or the home of friends and family away from high risk bushfire areas
- You will need to know what route to take and have an alternative if that route is blocked or congested. Your normal route may take much longer than expected

### Don't wait and see

- Do not wait and see – it is extremely dangerous to leave after there are signs of fire in your area
- Once a fire is in your area, it may become difficult to leave because road conditions will be dangerous. There may be road closures, smoke, fallen trees and embers
- A drive that will normally take five minutes may take up to two hours in the event of a fire
- You should not wait to receive a warning to leave. Bushfires can start quickly and threaten lives and homes within minutes

### Defending your home

- If you live in a high risk bushfire area, your home will not be defensible on a Code Red day
- If you live in a high risk bushfire area, your home may not be defensible on Extreme or Severe fire risk days. Preparation and planning is essential.
- Most homes in high risk bushfire areas are not built to withstand bushfire
- Many homes close to or surrounded by heavily forested land are extremely difficult to defend
- Defending your home is very risky – you could die or be seriously injured
- Survival must be your main priority
- Defending a house requires at least two able bodied, fit and determined adults who are physically and mentally prepared to work long and hard in arduous and difficult conditions
- Only consider staying with your property on **Extreme** or **Severe** days if you are fully prepared and can actively defend your home. Visit [www.cfa.vic.gov.au](http://www.cfa.vic.gov.au) for more information and advice on Fire Danger Ratings
- Even people who are extremely well prepared can die fighting fires at home
- Discuss your plan with all family members. Everyone should be aware that staying to defend may involve trauma, injury or possibly death
- Children, the elderly, people with special needs or disability should be well away from the threat

## Radiant heat

- Radiant heat is the heat that you feel from a fire
- Radiant heat is the biggest killer in a fire
- The best protection from radiant heat is distance
- A solid object such as a brick wall and suitable clothing can offer some protection from radiant heat but it may not save your life
- If you are in an open space put at least 300 metres between you and the fire

## Warnings

- Don't rely on an official warning to leave. Bushfires can start quickly and threaten lives and homes within minutes
- If a fire starts nearby, there may be no time for official warnings
- For alerts and warnings, visit [www.cfa.vic.gov.au](http://www.cfa.vic.gov.au), tune in to your emergency broadcasters: ABC Local Radio, commercial radio and designated community radio stations or SKY NEWS Television or call the Victorian Bushfire Information Line on 1800 240 667. You can also receive warnings via the CFA Updates Twitter account.
- Look for warnings issued for surrounding towns as your suburb or town may not be mentioned
- The three alert levels in Victoria each increase in importance – they are Advice, Watch and Act, and Emergency Warning. This information will be available on the CFA and DSE websites or via the Victorian Bushfire Information Line on 1800 240 667
- The three level alerts refer to the following:
  - Advice: provides general information to keep you up to date with developments
  - Watch and Act: means a fire is approaching, conditions are changing you must act
  - Emergency Warning: You are in danger, you will be impacted by fire, act now
- Emergency Alert telephone warnings may also be sent to your mobile and landline phone based on your billing address. This means if you live in the city and you're travelling in the country when a bushfire happens you will not receive a telephone warning by mobile phone.
- Once a fire is in your area, it may become difficult to leave because road conditions will be dangerous. There may be road closures, smoke, fallen trees and embers.

## Back up plan – if you are caught in a fire

- Fires are unpredictable and plans can fail. Having a back up plan can save your life if you are caught in a fire
- If you cannot leave the area consider shelter options close by. This may include a well-prepared home (yours or your neighbours) that you can actively defend, a private bunker (that meets current regulations) or a designated community shelter or refuge
- Whilst these survival options carry a high a risk of trauma, injury or death they may provide you with some protection from radiant heat
- Last resort options include a Neighbourhood Safer Place (place of last resort), a stationary car in a cleared area, a ploughed paddock or reserve or a body of water like a swimming pool or dam.

## Neighbourhood Safer Places (places of last resort)

- NSPs are places of last resort when all other plans have failed
- They can provide some protection from direct flame and radiant heat during a fire
- NSPs may still be subject to ember attack and they do not guarantee safety
- NSPs are not relief centres – there are limited facilities and no support or services are provided. They are not places to relocate to when leaving early
- Not every town has a NSP – identify other shelter options in your area
- NSPs are listed on CFA website [www.cfa.vic.gov.au](http://www.cfa.vic.gov.au)

## Total Fire Bans (TFB)

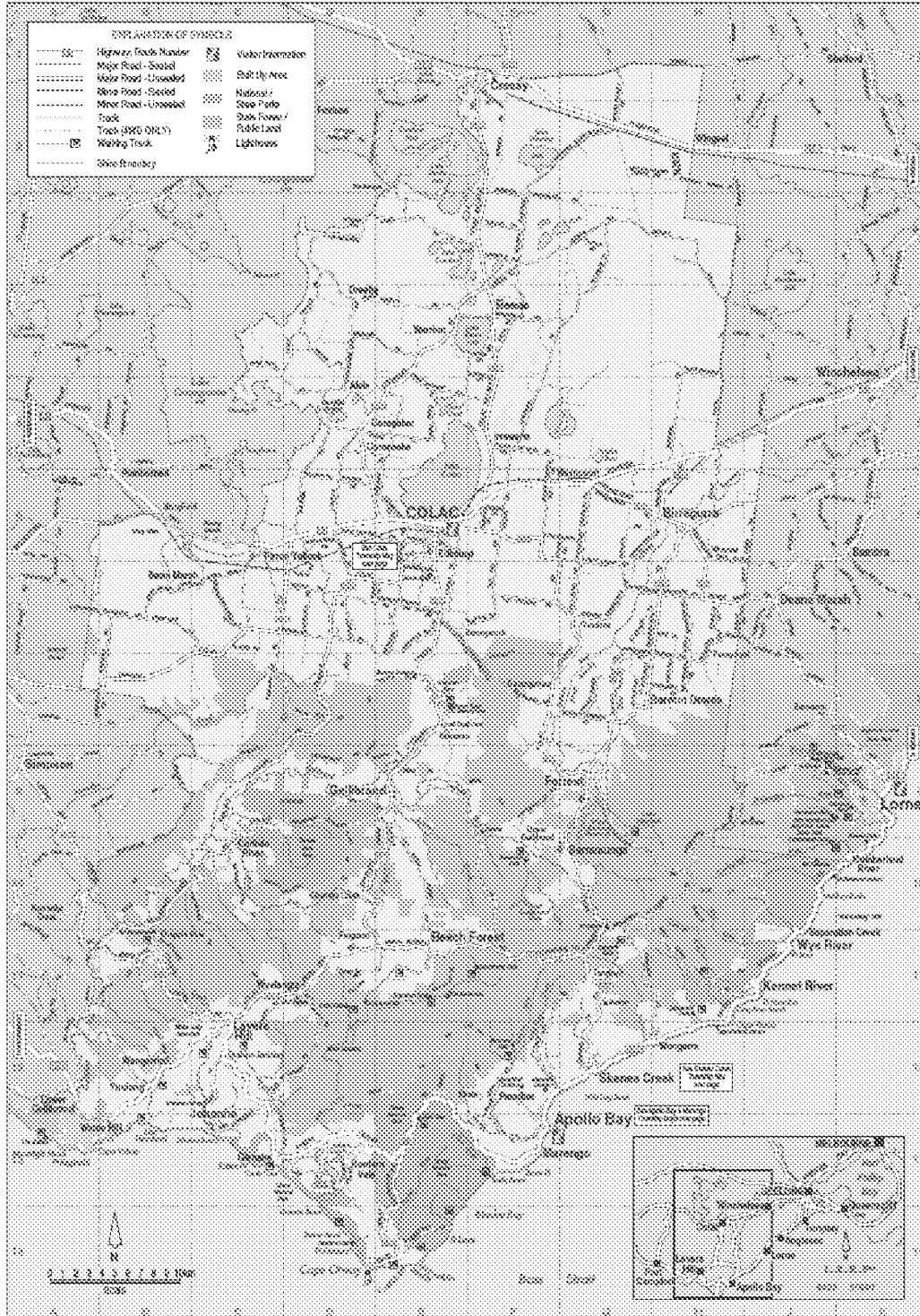
- A Total Fire Ban is a day where certain activities that may cause fire are banned.
- Total Fire Bans are declared by CFA on days when fires are more likely to start, spread rapidly and be difficult to control. A Total Fire Ban day legally bans the following activities:
  - lighting or maintaining camp fires, incinerators, fires to burn off grass, weeds or other vegetation
  - welding, grinding, soldering, gas cutting (unless a permit has been issued by CFA / MFB)
  - use of solid/ liquid fuel barbeques or ovens
  - driving a vehicle where it will be in contact with crops, grass, stubble, weeds, undergrowth, or other vegetation (and only if vehicle is fitted with an efficient silencing device or spark arrestor takes all exhaust from the engine)
- Days of Total Fire Ban still allow the use of:
  - Barbecues that are fixed appliances, fired by gas or electricity, and built into permanent structures of brick, stone or concrete ARE allowed provided that:
    - The area 3 metres around the barbecue is cleared of flammable material
    - You have either a hose connected to water supply or a vessel with at least 10 litres of water
    - An adult is there at all times when the fire is alight.
  - Gas or electric fired portable barbecues ARE allowed provided that:
    - It is located within 20 metres of your dwelling (portable places of residence such as mobile homes, caravans or tents are not dwellings in accordance with the CFA Act)
    - The area 3 metres around the barbecue is cleared of flammable material
    - You have either a hose connected to a water supply or a vessel with at least 10 litres of water
    - An adult is there at all times when the fire is alight.
- People should avoid using machinery with an internal combustion or heat engine - such as tractors, slashers, excavating or road making equipment - within 9 metres of any crops, grass, stubble, weeds, undergrowth or other vegetation. Using a chainsaw, plant or grass trimmer or lawn mower.
- Caterers can set up and light a fire to operate a barbecue or a spit at outdoor functions if they have a written permit issued by CFA or MFB and comply with it.
- For more information on Total Fire Bans and fire restrictions visit [www.cfa.vic.gov.au](http://www.cfa.vic.gov.au) or contact the Victorian Bushfires Information Line on 1800 240 667

**Suggested Key Messages from Powercor**

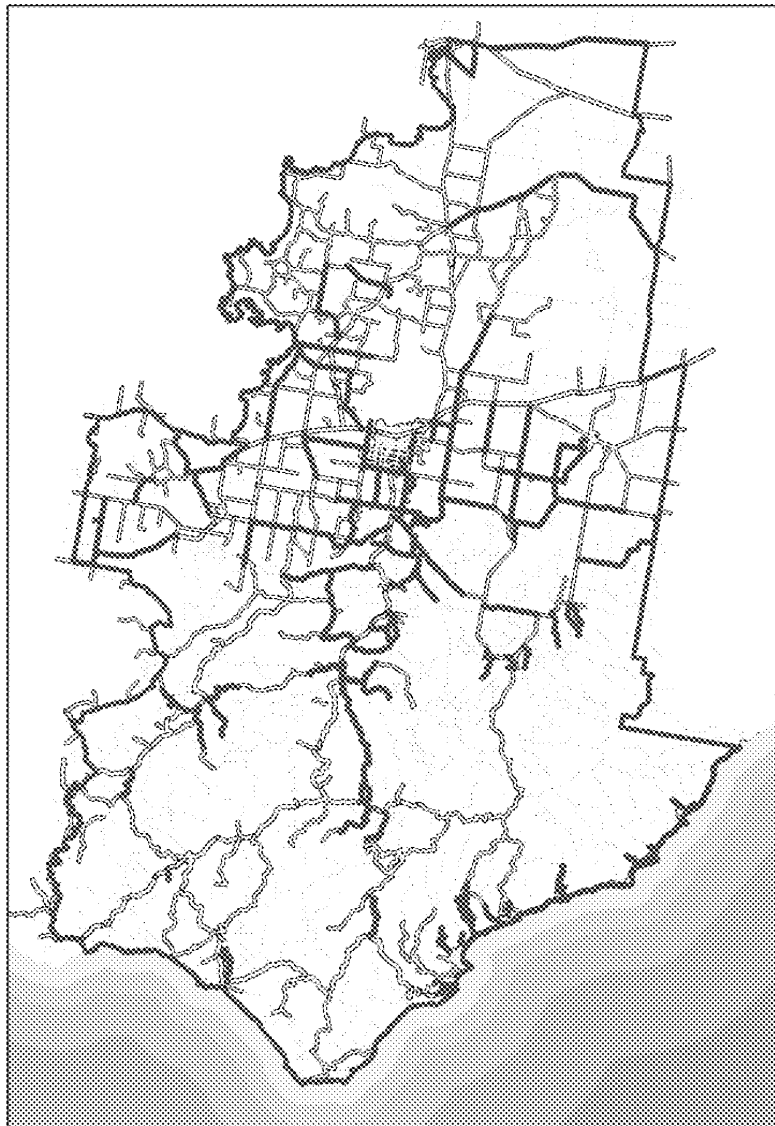
- Consider your need for back-up power if you are highly reliant on electricity. Remember power outages can also effect phones, radios and water pumps.
- Have a battery-powered radio and spare batteries or a wind-up radio available to hear alerts and warnings in case power fails;
- Have a landline with a cord, a fully charged mobile phone as backup and a spare battery and;
- Have a non-electric pump available that can be operated from an alternative water supply such as a swimming pool, concrete or metal tank, or dam.

## Appendix E Maps

### Appendix E.1 Municipal Boundaries – Colac Otway Shire

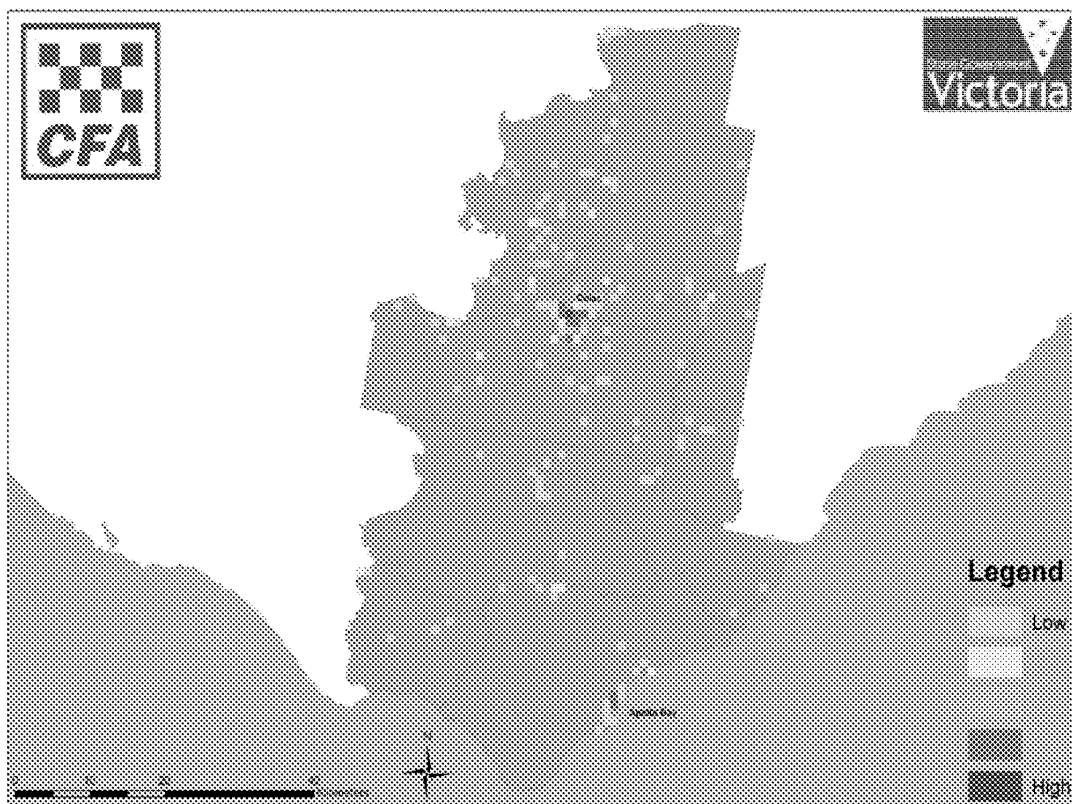


Appendix E.2 Roadside Risk Assessment -- Colac Otway Shire



Appendix E.3 Structural Incidents Map – Colac Otway Shire

Total Structural Incidents- 1999 to 2012: Colac Otway Municipal Footprint





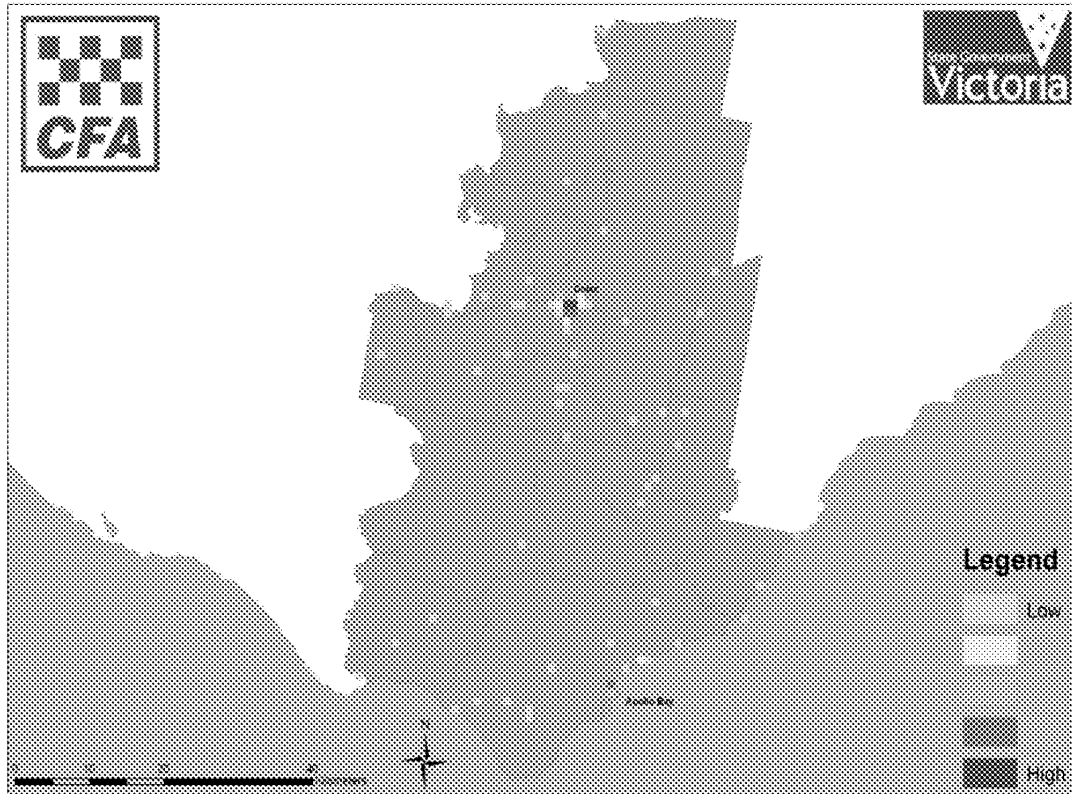
Appendix E.4 Chemical Incidents Map – Colac Otway Shire

Total Structural & Chemical Incidents- 1999 to 2012: Colac Otway Municipal Footprint



Appendix E.5 Combined Chemical and Structural Incidents – Colac Otway Shire

Total Chemical Incidents- 1999 to 2012: Colac Otway Municipal Footprint



## Appendix F Terminology

|  |  |
|--|--|
| Acceptable risk                          | The level of potential losses that a society or community considers acceptable, given existing social, economic, political, cultural, technical and environmental conditions.  |
| Agencies                                 | Refers to the agencies of the Municipal Fire Management Planning Committee. These include key agencies and organizations such as the Municipality, Department of Sustainability and Environment, Parks Victoria, the Country Fire Authority and Victoria Police.   |
| Agency Treatments                        | Refer to Appendix A.1 Municipal Risk Management Register and Appendix A.2 List of Victorian Fire Risk Register Treatments.   |
| Assets and values <sup>17</sup>          | Recognised features of the built, natural and cultural environments. Built assets may include buildings, roads and bridges; structures managed by utility and service providers; or recognised features of private land, such as houses, property, stock and crops and associated buildings and equipment. Natural assets may include forest produce, forest regeneration, conservation values including vegetation types, fauna, air and water catchments*. Cultural values may include recreational, Indigenous, historical, archaeological and landscape values.  |
| Assumption                               | A conclusion that is reached based on the information available at the time.   |
| Bushfire                                 | A general term used to describe fire in vegetation, including grass fire.  |
| Bushfire Risk                            | The chance of a bushfire igniting, spreading and causing damage to the community or the assets they value.   |
| Community                                | A group of people with a commonality of association and generally defined by location, shared experience or function.  |
| Community based disaster risk management | A process that seeks to develop and implement strategies and activities for disaster preparedness (and often risk reduction) that is locally appropriate and locally 'owned'.  |
| Consequence                              | Outcome or impact of an event.   |
| Critical infrastructure                  | Critical infrastructure includes those services, physical facilities, supply chains, information technologies and communication networks that, if destroyed, degraded or rendered unavailable for an extended period, would significantly impact on the social or economic well-being of the community.<br>Includes: <ul style="list-style-type: none"> <li>• telecommunications</li> <li>• electrical power systems</li> <li>• gas and oil storage and transportation</li> <li>• banking and finance</li> <li>• transportation</li> <li>• water supply systems (and sewerage).</li> </ul> Adapted from Critical Infrastructure Advisory Council (CIAC). |
| Elements at risk                         | The population, buildings and civil engineering works, economic activities, public services, infrastructure and so on, exposed to sources of risk.   |

<sup>17</sup> Department of Sustainability and Environment (2006), Code of Practice for Fire Management on Public Land – Revision No. 1, DSE, Victoria.

|   |  |
|---|--|
| <b>Emergency</b>                                  | An event, actual, or imminent that endangers or threatens to endanger life, property or the environment, and that requires a significant and coordinated response.   |
| <b>Essential Service<sup>18</sup></b>             | The level of potential losses that a society or community considers acceptable, given existing social, economic, political, cultural, technical and environmental conditions   |
| <b>Event</b>                                      | Occurrence of a particular set of circumstances. An incident or situation that occurs in a particular place during a particular interval of time.  |
| <b>Frequency</b>                                  | A measure of the number of occurrences per unit of time.   |
| <b>Hazard</b>                                     | A source of potential harm or situation with a potential to cause loss.<br>A potentially damaging physical event that may cause loss of life or injury, property damage, social and economic disruption or environmental degradation. <sup>19</sup>  |
| <b>Impact</b>                                     | See consequence.   |
| <b>Integrated Fire Management Planning (IFMP)</b> | Integrated Fire Management Planning is a holistic and integrated risk based planning framework for fire management, across all land tenures and boundaries including Prevention, Preparedness, Response and Recovery activities.   |
| <b>Leadership group</b>                           | A subgroup for the broader committee comprising the risk category, technical knowledge and experience  |
| <b>Likelihood</b>                                 | Used as a general description of probability or frequency – can be expressed qualitatively or quantitatively   |
| <b>Loss</b>                                       | Any negative consequence or adverse effect – financial or otherwise.   |
| <b>Mitigation</b>                                 | Measures taken in advance of a disaster, aimed at decreasing or eliminating its impact on society and the environment.   |
| <b>Monitor</b>                                    | To check, supervise, critically observe or measure the progress of an activity, action or system on a regular basis in order to identify change from the performance level required or expected.   |
| <b>Organisation</b>                               | Group of people and facilities with an arrangement of responsibilities, authorities and relationships.   |
| <b>Practicable<sup>20</sup></b>                   | What is realistic to achieve in the context of: <ul style="list-style-type: none"> <li>▪ the severity of the hazard or risk in question</li> <li>▪ the state of knowledge about that hazard or risk and any ways of</li> <li>▪ removing or mitigating that hazard or risk</li> <li>▪ the availability and suitability of ways to remove or mitigate that hazard or risk</li> </ul> the cost of removing or mitigating that hazard or risk. |
| <b>Preparedness</b>                               | Arrangements to ensure that in the event of an emergency, all those resources and services that are needed to cope with the effects can be efficiently mobilised and deployed.   |
| <b>Prevention</b>                                 | Regulatory and physical measures to ensure that emergencies are prevented, or their effects mitigated.   |

<sup>18</sup> Essential Services Commission Act 2001

<sup>19</sup> United Nations International Strategy for Disaster Reduction (2008), Climate Resilient Cities 2008 primer: reducing your vulnerabilities to climate change impacts and strengthening disaster management in East Asian cities, United Nations and the World Bank, Geneva

<sup>20</sup> Dangerous Goods (Storage and Handling) Regulations 2000 S.R. No. 127/2000.

|                         |   |
|-------------------------|---|
| Probability             | A measure of the chance of occurrence expressed as a number between 0 and 1. 'Frequency' or 'likelihood' rather than 'probability' may be used in describing risk. The likelihood of a specific outcome, as measured by the ratio of specific outcomes to the total number of possible outcomes. Probability is expressed as a number between zero and unity – zero indicating an impossible outcome and unity indicating an outcome that is certain. Probabilities are commonly expressed in terms of percentage e.g. the probability of throwing a six on a single roll of a die is 1 in 6, or 0.167, or 16.7 per cent. |
| Recovery                | The coordinated process of supporting emergency affected communities in reconstruction of the physical infrastructure and restoration of emotional, social, economic and physical wellbeing.  |
| Residual risk           | Risk remaining after implementation of risk treatment.  |
| Resilience              | The capacity of a system, community or society potentially exposed to hazards to adapt, by resisting or changing in order to reach and maintain an acceptable level of functioning and structure. This is determined by the degree to which the social system is capable of organizing itself to increase its capacity for learning from past disasters for better future protection and to improve risk reduction measures <sup>21</sup>   |
| Response                | Actions taken in anticipation of, during and immediately after an incident to ensure that its effects are minimised, and that people affected are given immediate relief and support.   |
| Risk                    | The chance of something happening that will have an impact on objectives. The probability of harmful consequences resulting from interaction between natural or human-induced hazards and vulnerable conditions <sup>22</sup> .   |
| Risk Analysis           | Systematic process to understand the nature of, and deduce, the level of risk.  |
| Risk Assessment         | The overall process of risk identification, risk analysis and risk evaluation.  |
| Risk criteria           | Terms of reference by which the significance of risk is assessed.   |
| Risk Environments       | There are four types of risk environments used in the <b>Victorian Fire Risk Register</b> tool - Human Settlement, Economic, Environmental and Cultural Heritage.   |
| Risk Evaluation         | Process of comparing the level of risk against risk criteria.   |
| Risk Identification     | The process of determining what, where, when, why and how something could happen.   |
| Risk Management         | The culture, process and structures that are directed towards realising potential opportunities while managing adverse effects.   |
| Risk Management Process | The systematic application of management of policies, procedures and practices to the tasks of communicating, establishing context, identifying, analysing, evaluating, treating, monitoring and reviewing risk.  |
| Risk Reduction          | Actions taken to lessen the likelihood, negative consequences, or both, associated with a risk.   |
| Risk Register           | A listing of risk statements describing sources of risk and elements of risk, with assigned consequences, likelihoods and levels of risk.   |
| Risk Treatment          | Process of selection and implementation of measures to modify risk. The term 'risk treatment' is sometimes used for the measures themselves.  |
| Source of Risk          | Source of potential harm.   |
| Susceptibility          | The potential to be affected by loss.   |
| Tolerable Risk          | A risk within a range that society can live with so as to secure certain net benefits. It is the range of risk regarded as non-negligible and needing to be kept under review and reduced further if possible.  |

<sup>21</sup> United Nations International Strategy for Disaster Reduction (UNISDR) (2009), UNISDR terminology on disaster risk reduction, United Nations, Geneva

<sup>22</sup> Ibid.

|                                     |  |
|-------------------------------------|--|
| Treatment                           | An existing process, policy, device, practice or other action that acts to minimise negative risk or enhance positive opportunities. The word control may also be applied to a process designed to provide reasonable assurance regarding the achievement of objectives. |
| Treatment (adequacy) assessment     | Systematic review of processes to ensure that controls are still effective and appropriate.  |
| Victorian Fire Risk Register (VFRR) | The Victorian Fire Risk Register is a systematic map based process that identifies assets, assesses assets and provides a range of treatments which contribute to the well being of communities and the environment, which suffer the adverse effects of bushfire.       |
| Vulnerability                       | The conditions determined by physical, social, economic and environmental factors or processes, which increase the susceptibility of a community to the impacts of hazards <sup>23</sup>   |

<sup>23</sup> Ibid

## Appendix G Acronyms

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|        |   |
|--------|---|
| CFA    | Country Fire Authority                                  |
| DEECD  | Department of Education and Early Childhood Development |
| DSE    | Department of Sustainability and Environment            |
| IFMP   | Integrated Fire Management Planning                     |
| MEMP   | Municipal Emergency Management Plan                     |
| MEMPC  | Municipal Emergency Management Planning Committee       |
| MFMP   | Municipal Fire Management Plan                          |
| MFMPC  | Municipal Fire Management Planning Committee            |
| MFPP   | Municipal Fire Prevention Plan                          |
| NSP    | Neighbourhood Safer Places – Places of Last Resort      |
| PPRR   | Prevention, Preparedness, Response and Recovery         |
| PRPR   | Primary Responsible Person Representative               |
| RSFMP  | Regional Strategic Fire Management Plan                 |
| RSFMPC | Regional Strategic Fire Management Planning Committee   |
| SES    | State Emergency Services                                |
| TPP    | Township Protection Plan                                |
| VBRC   | Victoria Bushfire Royal Commission                      |
| VFRR   | Victoria Fire Risk Register                             |
| WMO    | Wildfire Management Overlay                             |

## Appendix H Bibliography

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  - Department of Sustainability and Environment, *Fire and Other Emergencies - Ash Wednesday bushfire – 1983*, available at [www.dse.vic.gov.au](http://www.dse.vic.gov.au)
  - Country Fire Authority Act (1958)
  - Emergency Management Act (1986)
  - Local Government Act (1958)
-





**Colac Otway Shire**

**Taskforce 23 Neighbourhood Safer Places  
Recommendation Report – Forrest  
September 2012**

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## 1. Introduction

The purpose of this report is to provide a detailed explanation of the works associated with establishing a NSP in Forrest and to make a recommendation on whether the works should be implemented.

## 2. Background and Context

The Interim Report of the 2009 Victorian Bushfires Royal Commission recommended that neighbourhood safer places, or NSPs, be identified and established to provide persons in bushfire affected areas with a place of last resort during a bushfire.<sup>1</sup>

In response to this recommendation, the Victorian Government introduced the *Emergency Services Legislation Amendment Act 2009* which amends the *Country Fire Authority Act 1958* and the *Emergency Management Act 1986*. The effect of these amendments requires the Country Fire Authority (CFA) to certify Neighbourhood Safer Places (NSPs) against the CFA Assessment Guidelines, and Councils within Victoria to identify, designate, establish, maintain and decommission NSPs in their municipal districts.

NSPs are not community fire refuges or emergency relief centres. NSPs are **places of last resort** during the passage of a bushfire, and are intended to be used by persons whose primary bushfire plans have failed. NSPs are places of relative safety only. They do not guarantee the survival of those who assemble there. Furthermore, there may be serious risks to safety encountered in travelling and seeking access to NSPs during bushfire events. Depending on the direction of a particular fire, it may not be 'a safer place' to assemble than other places within the municipal district.

Project Taskforce 23 was commissioned in 2010 to inspect and evaluate potential sites for NSPs in 23 of the previously identified 52 high bushfire risk locations throughout Victoria that had failed to meet compliance with CFA and municipal criteria. Taskforce 23's brief was to understand the reasons for non-compliance and investigate potential options that may enable designation or provide appropriate alternative bushfire safety solutions for the communities involved. It was hoped that with the potential for additional funding to undertake modifications, NSPs could be established within more of the high risk towns. The initiative was a "Whole of Government" review, to support the review with legislative powers, CFA lead the review for Government.

Upon completion of their work Taskforce 23 made recommendations to the State Government, supported by an Action Plan and indicative costing. A number of sites within Colac Otway Shire were identified by Project Taskforce 23 as potential NSPs requiring further investigation, included were Barwon Downs Common, Barwon Downs, Carlisle River Recreation Reserve, Carlisle River and 35 Station Street, Forrest.

In 2011 the Municipal Association Victoria (MAV) developed a staged process to guide the development of these potential NSPs. The four key steps in the MAV process are explained in brief below:

**Step 1: Conduct a Desktop Assessment** of the sites against the criteria in the Municipal Neighbourhood Safer Place Plan (MNSPP) and determine if the sites generally comply. Step 1 has been completed for the identified sites at Barwon Downs, Forrest and Carlisle River. The assessment was undertaken by the members of the Municipal Fire Management Planning Committee. The assessments found that the sites at Barwon Downs, Forrest and Carlisle River generally complied with the criteria in the MNSPP based on the assumption that State Government funding would be made available to carry out the significant and

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<sup>1</sup> Recommendation 8.5, 2009 Victorian Bushfires Royal Commission Interim Report

costly activities that are necessary. This information was presented to Council and the Fire Services Commissioner.

In May 2011 a report was submitted to Council (OM112505-12) in relation to the work undertaken to complete Step 1 as outlined above.

Following consideration of the Report Council resolved that it:

1. ***“Accepts the recommendation of the Municipal Fire Management Planning Committee as a sub-committee of the Municipal Emergency Management Planning Committee that the potential Neighbourhood Safer Places (NSP) sites at Barwon Downs, Forrest and Carlisle River generally complied with the criteria in the Municipal Neighbourhood Safer Places Plan.***
2. ***Accepts the recommendation of the Municipal Fire Management Planning Committee as a sub-committee of the Municipal Emergency Management Planning Committee that the potential NSP site at Wye River did not generally comply with the criteria in the Municipal Neighbourhood Safer Places Plan.***
3. ***Approves the drafting of a letter to the Fire Services Commissioner advising of the results of the desktop assessment as outlined in the above recommendations”***

**Step 2: Prepare an Implementation Plan** for the sites that generally comply. This plan identifies the costs involved in developing detailed works plans. Step 2 has been completed. Implementation Plans were developed for Carlisle River, Forrest and Barwon Downs and forwarded to the Fire Services Commissioner in 2011. The Implementation Plans were approved by the Fire Services Commissioner in October 2011, allowing Council to progress to Step 3.

**Step 3: Develop a Recommendation Report** for the sites that have approved Implementation Plans. Step 3 will be completed for the site at Forrest on endorsement of this report by Council. This report identifies all activities including assessments, reports, permits, approvals, works and associated costs that would be required to establish the NSP and an indication of whether the NSP should be implemented. The Recommendation Report is being presented to Council for endorsement prior to being forwarded to the Fire Services Commissioner.

**Step 4: The Works Plan would be Implemented** if the Recommendation Report indicates that the NSP should be implemented and is endorsed by Council and the Fire Services Commissioner.

### **3. Site Assessment – 35 Station Street, Forrest**

The site was assessed by the Victorian Government Taskforce and the following advice was provided in the Action Plan developed by the Taskforce; *‘NSP-PLR can be achieved if the required works are undertaken and impediments overcome. Consideration should be given to the establishment of a purpose built fire refuge consistent with the revised OESC guidelines (proposed).’* A copy of the Action Plan as provided by the Taskforce can be found in Appendix 1

### **4. Scope of Works to be undertaken**

The site is considered suitable subject to the following works being undertaken in line with current Federal, State and Local, Legislation and Policy:

- Identification and removal of hazardous trees;
- Removal/modification of identified excess surface and elevated vegetation;
- Removal of identified broad areas of excess fuel loads adjacent to roads;

- Removal of buildings, structures and debris at the NSP site;
- Landscaping of the site to remove hazards;
- Remediation if required of contaminated soil at the NSP site; and
- Construction of designated car parking.

The following preliminary works have been undertaken and are discussed in more detail in the following sections:

- Arborist has identified marked and mapped all hazardous tree requiring removal or lopping on identified roads. Refer to Appendix 2 to view identified roads.
- Instructional plans developed for the removal and lopping of hazardous trees.
- Costing and development of instructional plans for the removal/modification of excess fuel hazards.
- Undertake fuel-hazard assessments in areas identified for fuel modification so as to advise on vegetation-modification requirements.
- Provision of alternative options and costing to avoid-, mitigate-, and manage the ecological and cultural/historical values in association with the above activities.
- Instructional plans developed to guide the removal of excess vegetation on identified sites.
- Undertake desktop due-diligence studies for flora, fauna, cultural and historical issues; including a review of databases held by State and National authorities.
- Cost estimates for recommended additional work, including:
  - Flora and fauna surveys;
  - Net Gain/offset arrangements;
  - Cultural and historical assessments; and
  - Geotechnical assessments.
- Identification of permit requirements and/or (possible) exemptions for the above activities, or alternatively, identify how the above activities would trigger legislative implications and the likely associated costs.
- Identification of whether the above activities create land instability and the likely costs to assess and control those risks (geotechnical assessment).
- Define legislation, standards and guidelines relevant to the removal and modification of flora, fauna, cultural and historical values.
- Identify and record quality scores (using the Habitat Hectares approach) for native vegetation within the three study areas.
- Assess fauna and flora habitat values for each native vegetation zone, focusing on the likelihood of occurrence of rare and threatened species.
- Undertake Aboriginal and historical archaeological sensitivity surveys in areas of proposed mechanical disturbance, including the inspection of mature native trees designated for removal/lopping for signs of Aboriginal cultural practices (bark removal, scars, toe-holds, etc.).
- A general geotechnical survey to assess any areas of land slip concern as a result of tree removal and vegetation modification.
- Development of a car park design and layout plan.
- Development of clear instructional plans for the construction of the car park.
- Provision of concise cost estimates for the construction of the car park.
- Identification of all permits and statutory approvals required to undertake development and construction of the car park.
- Identification of maintenance costs for car park.
- Development of a Demolition and landscaping plan for the existing buildings on the NSP site.
- Provision of a Division 6 Asbestos Audit for the NSP site.

- Provision of a valuation report for the NSP site.
- Third party review of information in regards to potential soil contaminated land at the NSP site.
- Development of potential cost range for mitigating the environmental liabilities identified and identifying what measures could be adopted to manage any unacceptable risks posed by the contamination.

#### **4.1 Document References**

A number of reports have been compiled as part the above work that has been undertaken, these reports are available for viewing upon request and include:

- Vegetation Management Assessment and Works Report – Ecology Consultants Pty Ltd;
- Car Park Design – Hyder Consulting Pty Ltd;
- 35 Station Street, Forrest, Victoria Independent Third Party Review – GHD Pty Ltd;
- DRAFT Stage 2 Assessment Report 10 September 2012 - GHD Pty Ltd;
- Valuation Report 35 Station Street, Forrest – Opteon; and
- Division 6 Asbestos Audit – Geelong Environmental Occupational Hygiene.

#### **4.2 Vegetation Management Works**

The Action Plan developed by Taskforce 23 identified a number of roadsides as access routes to NSPs requiring vegetation modification works to be undertaken.

The works included defective tree assessment works (the identification and removal/lopping of hazardous trees) and broad area vegetation modification of surface and elevated fuels in order to enable passage along access routes to the NSP in comparative safety.

A subsequent on-site inspection by officers from CFA, Department of Sustainability, Parks Victoria, Council and VicRoads in October 2011 identified further fuel modification works required on the identified access routes to enable these roads to meet the Municipal Neighbourhood Safer Places Plan criteria relating to access and egress. The additional identified works involve the removal of excess surface and elevated fuel loads on roadsides.

To assist Council in identifying accurate costs and developing works plans for this component of work for the recommendation report Ecology Consultants Pty Ltd were engaged through Council's Tender process to prepare a Vegetation Management Assessment and Works Report, the project objectives and outcomes were as follows:

##### **Project Objectives:**

- Identify all hazardous trees on identified roadsides, adjoining private property and the potential NSP sites that require removal or lopping.
- Provide clear instructional plans for the removal or lopping of identified hazardous trees and excess surface and elevated fuels.
- Provide clear and concise cost estimates (quotes) for the removal or lopping of hazardous trees and the removal of excess surface and elevated fuels.
- Provide all required detailed reports relating to flora and fauna assessments.
- Provide advice on recommended maintenance regime for all vegetation modification works.
- Identify all permits and statutory approvals from relevant authorities required to be obtained to undertake identified vegetation modification works.
- Provide clear and concise cost estimates (quotes) for the development of net gain/offsets, geotechnical and cultural heritage assessments as required.

**Project Outcomes:**

- Preparation of an Issues Analysis Paper early in the project.
- Development of a recommended approach to implement the six stages identified.
- Preparation of documents, images, plans, reports and other communication materials to Council and the project steering committee that maximise understanding of the project and opportunities to be considered.
- A Final Report addressing all issues contained in the project brief with recommendations and options that respond to these issues. Importantly all recommendations responding to these issues must have adequate strategic justification to ensure they can be successfully implemented.
- An Executive Summary that concisely summarises the work to be undertaken by the consultancy.
- Report of on ground assessment by an arborist to identify, mark and map all hazardous trees on identified roadsides, adjoining private property and potential NSP sites requiring removal or lopping.
- Development of a detailed work plan for the removal or lopping of arborist identified hazardous trees.
- Preparation of detailed cost estimate (quote) for the removal or lopping of arborist identified hazardous trees.
- Development of a detailed work plan for the removal of identified excess surface and elevated fuel loads.
- Preparation of detailed cost estimate (quote) for the removal of identified excess surface and elevated fuel loads.
- Development of a detailed maintenance program for identification of hazardous trees, including a detailed cost estimate.
- Preparation of the following reports:
  - Flora Assessment;
  - Fauna Assessment; and
  - Preliminary Cultural Heritage Assessment.
- Detailed explanatory report of all existing exemptions currently available for vegetation removal or lopping i.e. VicRoads.
- Preparation of report identifying relevant exemptions available and all permits and statutory approvals required from relevant authorities for removal or lopping of vegetation, including but not limited to the *Flora and Fauna Guarantee Act 1988* and the *Environment Protection and Biodiversity Conservation Act 1999*.
- Identify additional relevant material/assessments required for identified permits and statutory approvals.
- Preparation of detailed cost estimate (quote) for the preparation of the following reports/plans if identified as required after completion of above actions:
  - Historical Heritage Assessment;
  - Cultural Heritage Assessment;
  - Net Gain Assessment/Offset Plan; and
  - Geotechnical Assessment.

A copy of the Vegetation Management Assessment and Works Report prepared by Ecology Consultants Pty Ltd is available for viewing upon request. Appendix 2 contains a map that shows all areas identified for vegetation modification.

#### 4.2.1 Removal/Lopping of Hazardous Trees:

The following criteria originating from MAV was used to guide hazardous tree identification:

- Dead trees that are leaning towards or overhanging the road/NSP site and would likely block the road/NSP site and/or injure someone at the NSP site if they fell.
- Trees that are leaning significantly towards the road/NSP site and tree limbs that are overhanging the road/NSP site and are in immediate danger of falling on the road/NSP site.
- Diseased and/or infested trees that would likely block the road/NSP site if they fell.
- Trees at the top of cuttings, with exposed roots and/or partial support which are exposed to high winds making them highly susceptible to fall and blocking the road/NSP site.
- Trees that are clearly unstable due to poor root system making them highly susceptible to falling and blocking the road/NSP site.

All trees identified using the above criteria were assigned for lopping or removal. Trees recommended for lopping were marked with spray paint and an individually-numbered pink iodised aluminium tag, attached to the trunk (with an aluminium nail) at breast height (facing the road). For each tree identified the following information was recorded:

- a) the appropriate MAV criteria(s);
- b) diameter at breast height (over bark) of the largest trunk;
- c) species; and
- d) whether the tree was alive or dead.

Across the study area 31 trees were identified as requiring removal and 24 trees requiring lopping. The assessment for hazardous trees was undertaken by a qualified Arborist, supported by two additional staff. The following table provides a breakdown of the hazardous trees identified in the study area.

| Road Name                 | Actions                | No. of Trees Removal | No of Trees Lopping | Total No. Trees |
|---------------------------|------------------------|----------------------|---------------------|-----------------|
| NSP site – Station Street | SP, RF, WR, HWR, DW, R | 5                    | 1                   | 6               |
| Birregurra Forrest Road   | R                      | 1                    | -                   | 1               |
| Turner Drive              | SP, RF, WR, HWR, DW, R | 3                    | 9                   | 12              |
| Grant Street              | SP, RF, WR, HWR, DW, R | 19                   | 13                  | 32              |
| Colac – Forest Road       | SP, RF, WR, HWR, DW, R | 3                    | 1                   | 4               |
| <b>TOTAL</b>              |                        | <b>31</b>            | <b>24</b>           | <b>55</b>       |

Table 1: Breakdown of identified hazardous trees in the Forrest study area. Data extracted from the Neighbourhood Safer Places Vegetation Management Assessment and Works Report.

#### Legend for Actions:

- |                                    |   |
|------------------------------------|---|
| SP = Structural Prune              | RF = Risk and Form                        |
| WR = Weight/Load Reduction         | HWR = Heavy Weight Reduction              |
| DW = Deadwood Removal              | R = Remove Tree                           |
| RS = Remove Tree (including stump) | RH = Remove Tree (leave log for habitat). |

#### 4.2.2 Removal/Reduction of Broad-area, Elevated and Surface Fuels

Roadsides generally have areas where large amounts of debris have accumulated over time, excess surface and elevated fuels on roadsides add considerably to the overall fuel load and in turn contribute to enhanced fire activity during a fire event, in particular the fire's rate of spread and flame height.

To enable passage along access routes to the NSP in comparative safety identified areas of broad area and excess surface and elevated vegetation adjacent to roadsides required modification to reduce potential radiant heat flux to below 10 kW/m<sup>2</sup>, in line with CFA guidelines for NSPs.



The methods used for determining set-back distances and the extent of vegetation modification required were based on contemporary and relevant bushfire assessment tools. The methodology is consistent with recent reforms to the Victorian Planning Scheme arising from outcomes of the Black Saturday Royal Commission.

For areas proposed for broad-area vegetation modification, an Inner- and Outer Zone was calculated based on the Bushfire Management Overlay (BMO), as outlined in the BMO Advisory Note 44 (Feb. 2012). Assessment was done by sampling fuel loads, slope and vegetation classes within areas highlighted for broad-area vegetation modification (and areas for removal/reduction of excess surface fuels). The Bushfire Management Overlay (BMO) methodology was then used to determine the optimal set-back distances to reduce the bushfire radiant heat impact along access roads to the desired levels. For fuel-hazard calculations, the highest slope value was used for calculations, and the highest measured fuel load was used as the overall representation of surface fuels and the overall fuel hazard. This input provides recommendations based on the worst-case scenario, in terms of bushfire behaviour. Actual measured values were employed rather than the BMO prescribed maximum fuel loads and slope categories so as to reflect site conditions. The following table provides a breakdown of the broad-area vegetation modification and excess surface and elevated fuels modification identified in the study area.

| Road Name              | Actions                | Inner Zone(ha) | Outer Zone (ha) | Total Area (ha) |
|------------------------|------------------------|----------------|-----------------|-----------------|
| Grant Street           | Mech, Ch, MR, RW, Chip | 0.36           | 0.15            | 0.51            |
| Colac – Forest Road    | Mech, Ch, MR, RW, Chip | 1.23           | 0.56            | 1.79            |
| <b>TOTAL Area (ha)</b> |                        | <b>1.59</b>    | <b>0.71</b>     | <b>2.30</b>     |

Table 2: Breakdown of broad-area vegetation modification required in the Forrest study area. Data extracted from the Neighbourhood Safer Places Vegetation Management Assessment and Works Report.

| Road Name              | Actions             | Area (ha)   |
|------------------------|---------------------|-------------|
| NSP Site               | SL, MR, RW, B, Mech | 2.34        |
| <b>TOTAL Area (ha)</b> |                     | <b>2.34</b> |

Table 3: Breakdown of excess surface and elevated fuel modification required in the Forrest study area. Data extracted from the Neighbourhood Safer Places Vegetation Management Assessment and Works Report.

**Legend for Actions:**

- MR = Manual Removal of excess surface fuel load
- RW = removal of woody weed biomass
- B = Burn Excess Fuel
- Ch = Chainsaw
- SL = Slash grasses
- Mech = Mechanical removal of excess woody biomass
- Chip = chip/shred coarse woody debris

**4.3 Cultural Heritage**

The following preliminary works have been undertaken:

- a review of the *Aboriginal Heritage Act* 2006, including the Aboriginal Heritage Regulations 2007;
- a check of the Aboriginal Affairs Victoria (AAV) heritage site and place records;
- a review of previous Aboriginal archaeological assessments;
- a review of Native Title stakeholders and Registered Aboriginal Parties (RAPs) to determine Aboriginal stakeholders with cultural heritage interests in the study area;1
- a review of the Heritage Inventory;

- a review of the Heritage Register;
- a review of the Australian Heritage Database (including the Commonwealth Heritage List, the National Heritage List, the Register of the National Estate, World Heritage List);
- a review of the National Trust Database;
- a review of local council planning scheme heritage overlays;
- a review of previous historical archaeological assessments; and
- a brief inspection of the study area.

#### 4.3.1 Aboriginal Cultural Heritage:

Through this review the opinion was formed that the proposed works associated with the proposed vegetation management and NSP creation do trigger the need for a Cultural Heritage Management Plan (CHMP) under the Aboriginal Heritage Regulations 2007 because:

- the works are considered a high impact activity;
- an area of Cultural Heritage Sensitivity as defined by the Regulations occurs within the study area; and
- a brief site inspection determined that the area of Cultural Heritage Sensitivity has not been subject to 'significant ground disturbance' as defined by the Aboriginal Heritage Regulations 2007.

Note that while the vegetation management works do not necessarily require a CHMP, as mentioned above, given the possibility of Aboriginal cultural heritage to occur within the study area it would be considered prudent to undertake a CHMP for the entire area (NSP and vegetation management areas) in order to best manage risk associated with the works.

It should be noted that Aboriginal places can only be harmed within the context of an approved CHMP or a Cultural Heritage Permit issued by Aboriginal Affairs Victoria. This brief review has determined that it is possible for as yet unidentified Aboriginal places to occur within the study area. Based on an analysis of cultural heritage places within the wider region, this cultural heritage is likely to take the form of isolated finds or low density diffuse stone artefact scatters and possible subsurface cultural deposits and scarred trees (note that while it is not considered likely that trees earmarked for impact will contain Aboriginal scarring it is possible for trees *neighbouring* these earmarked trees to contain such scarring and the potential for inadvertent harm as a result of the works).

#### 4.3.2 Non-Aboriginal Heritage:

No registered Historical sites/places occur within the study area. An abandoned 1948 timber mill, not currently registered on any databases, is located at the proposed NSP car park area. This complex (several structures and a cobbled area) would require further investigation and discussion with Heritage Victoria prior to the establishment of any management measures in regards to the construction of the car park.

#### 4.4 Offsets

Under the Planning and Environment Act the vegetation removed to establish the NSP would need to be offset to achieve an overall net gain.

Offset prices have been calculated using DSE BushBroker price history. Research indicated that the price per Habitat Hectare ranged between \$20,000 and \$380,000. However, the average of all Habitat Hectare transactions is \$139,857, but the Otway Plains Bioregion (from where the Habitat Hectares would need to be purchased) does not have an independent price history. Given that the information available relates to previous prices, it is reasonable to expect that today's prices should reflect current land values. Applying 10% to the aforementioned price (\$139,857 per Habitat Hectare); a value of \$153,843 per Habitat Hectare was arrived at. The total cost of offsets for Forrest has been calculated to be \$458,032.73

For more information on the calculation of offsets refer to the Vegetation Management Assessment and Works Report by Ecology Consultants.

#### **4.5 Flora and Fauna**

Permits under the *Flora and Fauna Guarantee Act 1988* will be required for the removal of native vegetation on public land as there is potential for the activities proposed to remove flora species and/or disturb habitat of FFG-listed fauna. Moreover, implementation of the vegetation-modification activities proposed along NSP access and egress roads *may* require an Environmental Effects Statement under the *Environmental Effects Act 1978*.

General Flora inspections were conducted initially from a vehicle and on foot to determine the position and extent of native vegetation occurring within the study areas. Coarse visual assessments of vegetation condition were undertaken at this time, with vegetation assigned to one of three categories. This information was drawn onto aerial photographs and subsequently digitised using GIS software.

The study areas were assessed for general fauna habitat values that may be important for rare or threatened fauna species identified during the desktop review. A record was taken of habitat quality, along with all species sightings and signs of occupation (e.g. scats, tracks, diggings, calls, etc.) encountered during site inspections.

#### **4.6 Geotechnical Assessments**

Scott Emmett, consultant geologist conducted a one-day site inspection (5 June 2012) of the study area to assess the potential impact of vegetation modification on the stability of road cuttings and to identify any potential geotechnical issues.

There was no evidence of current erosion or slope instability in the areas assessed. The area west of Grant Street proposed broad area veg modification, has natural slopes here of 15°. Given the slope angle, it is not anticipated that clearing of the slope will increase the risk of slope instability however erosion of the shallow soils may present if run off is not controlled. The road batter west of Grant Street is a fill batter, battered at 45°. There are 4 to 5 trees located along the base of this batter. Removal of these trees may impact on the road batter. It is possible to reduce the risk in this area by lowering the batter angle. This could be done by placing fill at the base of the slope or reinforcing the current slope with large boulders.

#### **4.7 Car Park**

To assist Council in identifying accurate costs and developing a car park design and layout plan for this component of work for the recommendation report Hyder Consulting Pty Ltd was engaged through Council's Tenderlink process to prepare a Car Park Design report, the project objectives and outcomes were as follows:

Project Objectives:

- Develop car park design and layout plans for each potential NSP site that considers community amenity, existing and future development and use of each site.
- Provide clear instructional plans for the construction of car parking at each of the three identified potential NSP sites.
- Provide clear and concise cost estimates (quotes) for the construction of each car park.
- Identify all permits and statutory approvals from relevant authorities required to be obtained to undertake the development and construction of each car park.
- Identify recommended maintenance regime and associated indicative costs for each car park.

Project Outcomes:

- Preparation of an Issues Analysis Paper early in the project.
- Development of three detailed car park design and layout concept plans for each potential NSP site which consider but are not limited to the following:
  - Existing use of the site
  - Potential future developments for each site
  - Amenity values
  - MNSPP criteria outlined in section 1.1
  - Existing assets and infrastructure on each site. i.e. well at Barwon Downs
- Preparation of documents, images, plans, reports and other communication materials to Council and the project steering committee that maximise understanding of the project and opportunities to be considered.
- Development of a recommended approach to implement the five stages identified in section 7 of this document.
- Preparation of a report identifying relevant exemptions available and all permits and statutory approvals required from relevant authorities.
- Identification of additional relevant material/assessments required for identified permits and statutory approvals.
- Development of a recommended approach to the implementation of each preferred car park design and layout plan.
- An Executive Summary that concisely summarises the work undertaken by the consultancy.
- A Final Report addressing all issues contained in the project brief with recommendations and options that respond to these issues. Importantly all recommendations responding to these issues must have adequate strategic justification to ensure they can be successfully implemented.

A methodology developed by CFA in 2009 was used to assist in determining the number of car parks that would be required for a potential NSP site. Using this methodology based on a population of 500 people at least 75 car parking spaces should be planned for at the Forrest potential NSP site. Capacity for Disability parking should be considered additional to this.

In May 2012, Hyder Consulting was commissioned by Colac Otway Shire to provide car park layout and design and tender documents for the proposed NSP Forrest. To assist with the design several preliminary activities were undertaken, including a site inspection of the site, geotechnical assessment of existing ground conditions for the purposes of pavement construction, feature survey of the proposed car park site (2d and 3d) and investigation of the presence and impact upon existing known utilities using the Dial-Before-You-Dig (DBYD) online system.

The findings of these activities indicated that the existing subgrade at the Forrest car park site was suitable for pavement construction and no preparatory works are likely to be required. There are a number of existing services at the proposed car park site, however the information received from the DBYD enquiry did not show any direct clashes that would require relocation or temporary diversion.

Hyder commissioned Surfcoast Survey & Drafting Services Pty. Ltd. to undertake 2D and 3D feature surveys of the NSP car park site in order to pick up all existing features and services. This work was undertaken between 3 – 9 July 2012.

Hyder commissioned NSP Geotechnics Pty Ltd to undertake the geotechnical investigation at the NSP site. The field work was carried out on 4 July 2012 and involved the drilling of 4no. boreholes to a depth of up

to 1.5 metres at each of the NSP sites. Dynamic Cone Penetrometer (DCP) testing was also carried out at each of the borehole locations.

The car park has been designed in accordance with Class 3 requirements outlined in S2890.1. It is recommended that the works be conducted during the drier months of the year and the site will take approximately 8 weeks to construct. The total construction cost will be \$235,296.00.

#### **4.8 Demolition and Landscaping**

The Action Plan developed by Taskforce 23 identified that the existing building structures at the potential NSP site in Forrest would be required to be removed and landscaping undertaken. To assist Council in identifying accurate costs for the Recommendation Reports, Geelong Environmental Occupational Hygiene and Digga Excavations and Demolition Pty Ltd were engaged to provide a Division 6 Asbestos Audit and demolition and landscaping plan and cost estimate. The total cost for demolition and landscaping will be \$99,000.00.

#### **4.9 Potential Soil Contamination**

GHD Pty Ltd were commissioned by council to undertake an Independent Third Party review of information in regards to potential contaminated land related issues for the NSP site at Forrest. The site has historically been used for industrial purposes, including sawmilling and as a railway station.

The objectives of the Third Party Review were to inform Colac Otway Shire in regards to the status of site characterisation works with respect to risk to human health, the environment and potential beneficial uses and develop a range of potential costs required to mitigate or manage environmental liabilities associated with potentially unacceptable risks.

The first stage (Stage 1) of the third Party Review entailed review of these reports and preparation of comments on the adequacy of the site characterisation and the identification of key contamination issues that could present a risk to human health and the environment or impact potential beneficial uses of soil, surface water and groundwater, consequently presenting the environmental liability.

The second stage (Stage 2) of the third Party Review entailed development of the potential cost range of mitigating the environmental liabilities identified and identifying what measures could be adopted to manage any unacceptable risks posed by the contamination (but would not achieve full mitigation), consequently retaining some environmental liability on site. Stage 2 also identified the potential additional site characterisation works required to better understand the potential environmental liabilities and thus reduce the uncertainty in the cost range.

The Stage 2 assessment has identified that further site characterisation/investigation is required; the cost range for this work is between \$50,000.00 and \$130,000.00.

### **5. Budget – Set up Costs**

The table below shows the confirmed estimated costs of establishing the NSP at Forrest based on the findings of the various reports commissioned by Council and other associated cost estimates (e.g. land acquisition costs). The table also shows the indicative funding identified by Taskforce 23.

The table shows that the cost of establishing the NSP is in excess of double the Taskforce 23 estimate, this is largely due to the amount of vegetation modification necessary and the corresponding offsets required. Investigation has been undertaken to identify potential exemptions for offsets and alternative ways of achieving the required offsets at a reduced cost. An option raised and discussed in the Vegetation Management Assessment and Works Report by Ecology Consultants is that of a property purchase by

Council. Ecology Consultants considered and indicatively costed this option assuming that all three NSPs identified by Taskforce 23 would go ahead collectively. This option would also bring with it additional workload for Council in managing and maintaining the land as an asset, this option has merit for future consideration, however for the purposes of this report the recommendation has been made using the known and reliable BushBroker figures.

Flora and fauna surveys, cultural heritage, potential soil contamination and car parking are all additional items that were not considered by the Taskforce. Figures have not been provided for soil remediation works as these are not yet known, the recently completed draft Stage 2 assessment has identified that further site characterisation/investigation is required and that the cost range for this work may be between \$50,000.00 and \$130,000.00.

| Item   | Confirmed Establishment Costs (Ex GST) | Taskforce 23 Funding (Ex GST) |
|--|--|-------------------------------|
| <b>Achieving Offsets – DSE BushBroker</b>                                      | \$458,033                              | \$54,000                      |
| <b>Vegetation Modification</b>   | \$127,416                              | \$14,050                      |
| Lopping and removal of hazardous trees \$33,914                                |  |                               |
| Broad-area vegetation modification \$80,224                                    |  |                               |
| Reduction/removal of excess and elevated surface fuel along roadsides \$13,278 |  |                               |
| <b>Cultural Heritage</b>   | \$49,770                               |                               |
| <b>Flora and Fauna</b>   | \$9,909                                |                               |
| Targeted surveys (spring) \$3,091  |  |                               |
| Fauna salvage planning and operations \$2,273                                  |  |                               |
| Contingency \$4,545  |  |                               |
| <b>Signage</b>   | \$2,000                                | \$2,000                       |
| <b>Project Officer</b>   | \$40,484                               | \$40,484                      |
| <b>Deconstruction &amp; Landscaping</b>  | \$99,000                               | \$90,000                      |
| <b>Land Acquisition</b>  | \$260,000                              | \$400,000                     |
| <b>Soil Remediation – Contamination</b>  | Not known                              |                               |
| <b>Car Park Construction</b>   | \$235,296                              |                               |
| <b>Permits</b>   | \$2,000                                | Included in Offset Costs      |
| <b>Total Cost :</b>  | <b>\$1,283,908</b>                     | <b>\$600,534</b>              |
| <b>Establishment Funding Offered by State Government</b>                       | <b>\$600,534</b>                       |                               |
| <b>Cost Gap</b>  | <b>\$683,374</b>                       |                               |

## 6. Maintenance Costs

Maintenance costs have been estimated for the various ongoing activities as outlined below:

- Roadside vegetation management activities are estimated to be approximately \$21,064.00 per year.
- Car Park maintenance costs are estimated to be minimal for the first 15 years due to the pavement surface. A minimal cost of \$1,000.00.
- Site vegetation management – maintaining grass length at no more than 10cm in height over the declared fire danger period is estimated to cost approximately \$ 4,000.00.

The total conservative estimated cost of maintaining this site is approximately \$26,064.00 per year. It should be noted that there was no Taskforce 23 funding committed for maintenance.

## 7. Community Engagement

The community engagement strategy has followed the recommendations of the Colac Otway Shire Council Engagement Policy of January 2010, which details five levels of engagement – inform, consult, involve, collaborate and empower.

The community engagement method selected was to inform the general public and to involve and empower key stakeholders in the decision making process:

Two community information sessions were held in Forrest for residents, business owners and community groups. The focus of the first meeting held was to provide residents with an overview of the background behind NSPs in general and the three Taskforce 23 NSPs, residents were provided with information on the activities being undertaken at the time, in particular the Vegetation Management Assessment and Works Report contract. An aspect of this work, involved the physical marking of trees with spray paint and metal tags that were identified by an arborist as hazardous, requiring removal or lopping.

A key aim of the initial community information sessions and media releases was to assure residents that no trees would be removed without first consulting with the community and that the work being undertaken was investigative in nature and required in order for council to develop accurate costs for the Recommendation Report.

Council Officers returned to the community once the Vegetation Management Assessment and Works Report was completed, and presented on the progress to date in developing the Recommendation Report. A strong focus of the presentation was the work undertaken by Ecology Consultants through the Vegetation Management Assessment and Works Report Contract. Specific aspects of the report included an extensive series of maps that show:

- trees that have been identified as hazardous requiring removal;
- trees identified as requiring lopping;
- areas for broad scale surface and elevated vegetation modification required to meet the 10 kW/m<sup>2</sup> radiant heat as identified by Taskforce 23; and
- habitat zone and vegetation type within identified study areas.

This information was shared so that residents could fully appreciate which trees and roadside vegetation would be removed/modified if the potential NSPs were to be established.

There were a number of residents that felt passionately about retaining all trees and vegetation and were not supportive of any change to their environment while others were more concerned about the fire safety risks.

Attendance at these meetings was good with an overall positive response to the rigour of the work undertaken and an appreciation that the costs associated with implementation were very substantial.

The following lists identify all internal and external people who have been engaged with and/or contributed to this project:

### Internal:

- Councillors
- General Manager Sustainable Planning and Development
- General Manager Corporate and Community Services
- General Manager Infrastructure and Services
- Municipal Building Surveyor
- Manager Sustainable Assets

- Contract Administration Officer
- Manager Finance and Customer Service
- Manager Health and Community Services
- Statutory Planner
- Manager Organisational Support and Development
- Customer Service Staff
- Financial Operations Coordinator
- Manager Planning and Building
- Manger Cosworks
- GIS Coordinator
- Recreation Arts and Culture Manager
- Property Officer
- Corporate Services Executive Officer
- Risk Services Officer
- Municipal Emergency Management Coordinator
- Municipal Emergency (Fire) Management Coordinator
- Municipal Emergency Management Officer
- Business Development Officer
- Design Engineer
- Manager Capital Works
- Contracts Coordinator
- Environment Coordinator
- Development Engineer
- Revenue Coordinator
- Manager Environment and Community Safety
- Public Relations Coordinator

External:

- Municipal Emergency Management Planning Committee
- Municipal Fire Management Planning Committee
- Forrest residents, community groups and business owners
- Ecology Consultants Pty Ltd
- Hyder Consulting Pty Ltd
- GHD Pty Ltd
- Geelong Environmental Occupational Hygiene
- Digga Excavations
- Opteon Pty Ltd
- CFA
- DSE

## **8. Recommendation**

That the Forrest Neighbourhood Safer Place – Place of Last Resort **not** proceed to implementation, as the cost of establishing this site far exceeds the funding offered by the State Government.



**Appendix 1**  
**Taskforce 23 Action Plan**  
**35 Station Street Forrest**

# Taskforce 23 Action Plan – 35 Station Street Forrest

## Action Plan

|                           |   |                                   |  |
|---------------------------|---|-----------------------------------|--|
| High Hazard Risk Township | Forrest   | Shelter Options                   |  |
| Marketability             | Carer Dwelling  | Location of targeted Safer Places |  |
| Overcoming Factors        | NSP/PLR are not achieved if fire required works are undertaken and impediments overcome. Consideration should be given to the establishment of a purpose built fire refuge consistent with the revised QESG guidelines (proposed). This action plan should be supported by a bushfire evacuation plan developed by the CFA, DSE, Victoria Police and local council. | Order / Overlay Township          |  |

### Demographic Information

|             |     |   |     |
|-------------|-----|---|-----|
| Population  | 183 | Number of Dwellings                     | 63  |
| Average Age | 43  | Residents at carer address if years ago | 53% |

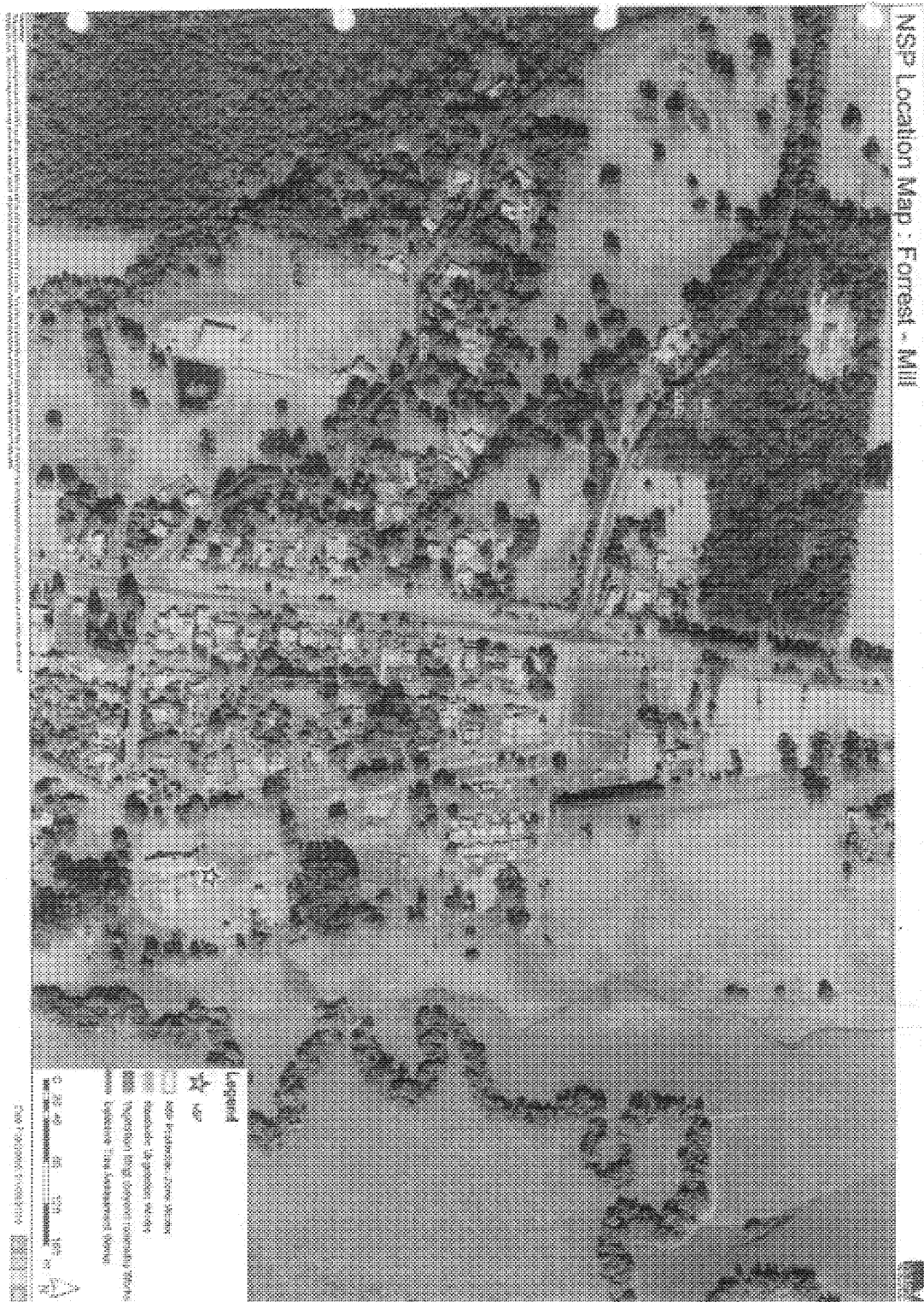
|                    |                       |  |              |
|--------------------|-----------------------|--|--------------|
| Site Name          | Forrest Hill          | NSP - PLR Establishment Recommended                      | YES          |
| Address            | Station Street        | Cost of all rectification works (other than)             | \$500,534.03 |
| Description of Use | One-Storey Timber RMH | Cost of complying with Planning and Building Legislation | \$54,000.00  |
| Site Type          | Open Space            | Total cost of establishing NSP/PLR (see paragraph)       | \$506,534.03 |
| Date of Inspection | 23 August 2010        | Indicate timeframe to complete all works                 | 3 - 8 Months |

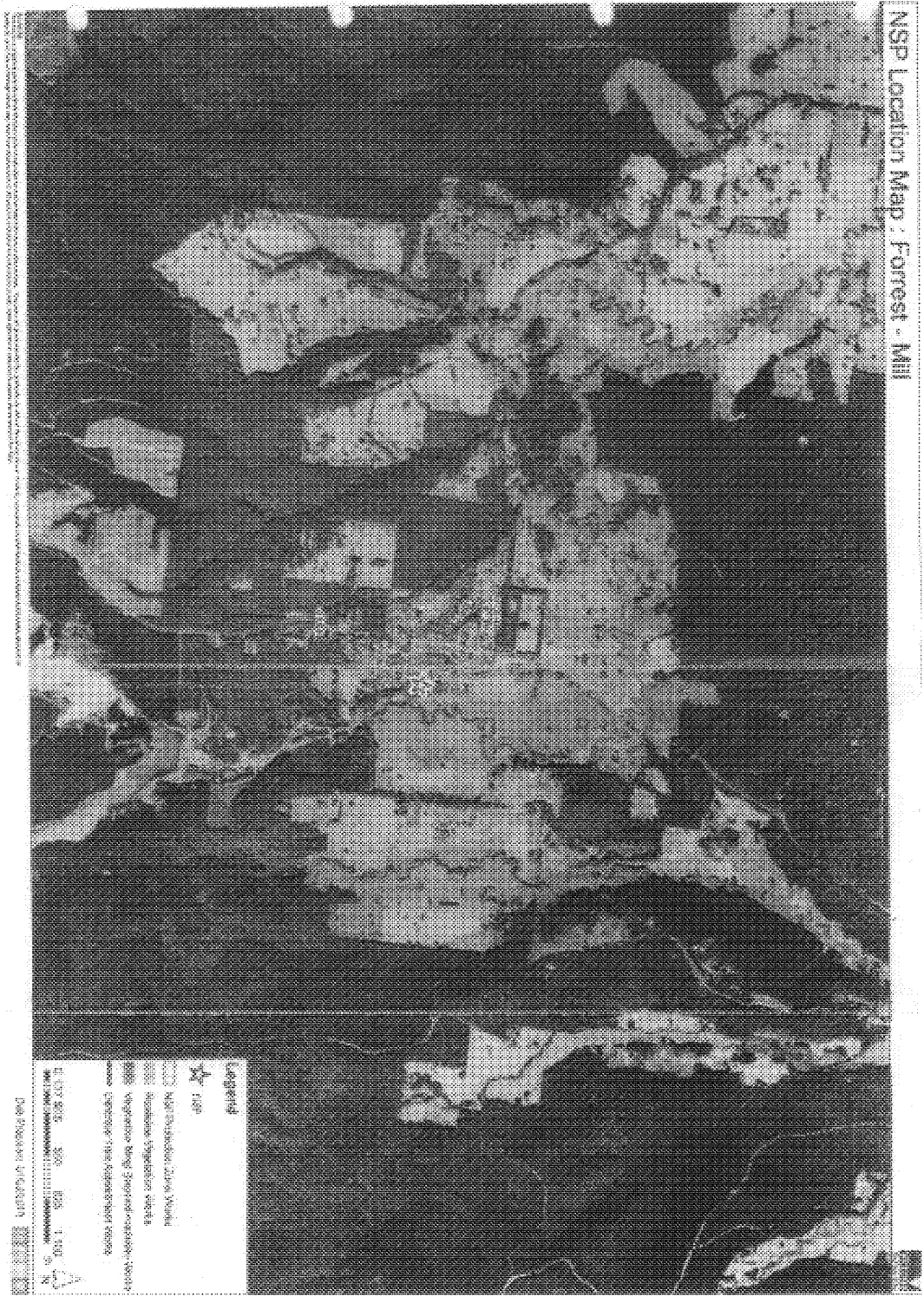
| Item  | Assessment Notes  | Required Works   | Estimated Cost | Estimated Timeframe |
|---|---|--|----------------|---------------------|
| 1. Bushfire impact assessment (potential fuel load) | Dis-used building remains in for removal from site  | Removal of structure + retain sub structure - (see notes) removal (\$50,000) and site preparation and restoration works (\$10,000) | \$60,000.00    | 2 months            |
| 2. Land / Building Issues                           | Land is in private ownership  | Land acquisition required  | \$400,000.00   | 3 months            |
| 3. Access and Egress                                | 2 fuel loads and dangerous trees along access roads will require residents to evacuate resident pets and possibly their tools | Removal of vegetation works / management (including mowing and mulching) as assessed in the NSP/PLR Township Map                   | \$2,250.00     | 2 months            |
| 4. Miscellaneous Issues                             | Dangerous trees along access roads will potentially block roads   | Declutter from assessment on owner on NSP/PLR Township Map   | \$10,800.00    | 2 months            |
| 5. Overlapping Issues                               | Rectification works identified above require completion with planning and building legislation                                | NSP/PLR Signage required   | \$2,000.00     | 2 weeks             |
| 6. Maintenance                                      | Ongoing maintenance of vegetation   | Regular management practices required to prevent works   | \$40,484.03    | 2 weeks             |
|   |   | Planning and building permits and native vegetation effects required   | \$54,000.00    | 1 month             |
|   |   | Site could be transferred to medium risk zone  | \$4,480.00     | Annually            |

Firefighting personnel required to address heritage and vegetation modification requirements.  
 Land specified for sale (Environmental Impact Statement)  
 Ongoing maintenance of vegetation

Amendment to VPP to exempt works associated with the establishment of an approved Neighbourhood Safer Place  
 Purchase Land (\$400,000)  
 Required works are referred to in the management plan and highlighted

Refer to page 18 for number of fire sensitive assessment notes and costs.

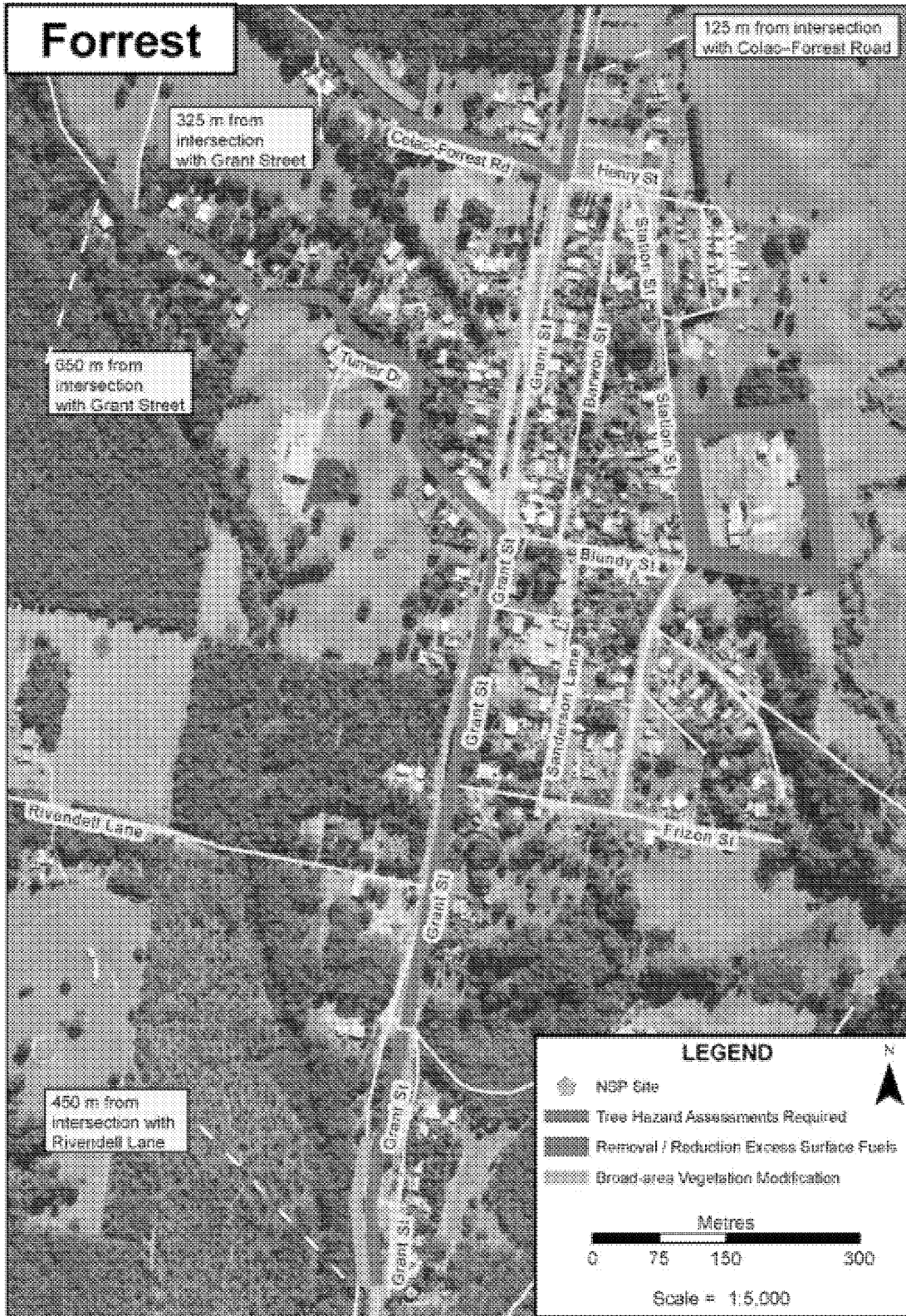




## **Appendix 2**

# **Hazardous Tree Identification and Vegetation Modification Areas Forrest**









**Colac Otway Shire**

**Taskforce 23 Neighbourhood Safer Places  
Recommendation Report – Barwon Downs**

**September 2012**



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## 1. Introduction

The purpose of this report is to provide a detailed explanation of the works associated with establishing a NSP in Barwon Downs and to make a recommendation on whether the works should be implemented.

## 2. Background and Context

The Interim Report of the 2009 Victorian Bushfires Royal Commission recommended that neighbourhood safer places, or NSPs, be identified and established to provide persons in bushfire affected areas with a place of last resort during a bushfire.<sup>1</sup>

In response to this recommendation, the Victorian Government introduced the *Emergency Services Legislation Amendment Act 2009* which amends the *Country Fire Authority Act 1958* and the *Emergency Management Act 1986*. The effect of these amendments requires the Country Fire Authority (CFA) to certify Neighbourhood Safer Places (NSPs) against the CFA Assessment Guidelines, and Councils within Victoria to identify, designate, establish, maintain and decommission NSPs in their municipal districts.

NSPs are not community fire refuges or emergency relief centres. NSPs are **places of last resort** during the passage of a bushfire, and are intended to be used by persons whose primary bushfire plans have failed. NSPs are places of relative safety only. They do not guarantee the survival of those who assemble there. Furthermore, there may be serious risks to safety encountered in travelling and seeking access to NSPs during bushfire events. Depending on the direction of a particular fire, it may not be 'a safer place' to assemble than other places within the municipal district.

Project Taskforce 23 was commissioned in 2010 to inspect and evaluate potential sites for NSPs in 23 of the previously identified 52 high bushfire risk locations throughout Victoria that had failed to meet compliance with CFA and municipal criteria. Taskforce 23's brief was to understand the reasons for non-compliance and investigate potential options that may enable designation or provide appropriate alternative bushfire safety solutions for the communities involved. It was hoped that with the potential for additional funding to undertake modifications, NSPs could be established within more of the high risk towns. The initiative was a "Whole of Government" review, to support the review with legislative powers, CFA lead the review for Government.

Upon completion of their work Taskforce 23 made recommendations to the State Government, supported by an Action Plan and indicative costing. A number of sites within Colac Otway Shire were identified by Project Taskforce 23 as potential NSPs requiring further investigation, included were Barwon Downs Common, Barwon Downs, Carlisle River Recreation Reserve, Carlisle River and 35 Station Street, Forrest.

In 2011 the Municipal Association Victoria (MAV) developed a staged process to guide the development of these potential NSPs. The four key steps in the MAV process are explained in brief below:

**Step 1: Conduct a Desktop Assessment** of the sites against the criteria in the Municipal Neighbourhood Safer Place Plan (MNSPP) and determine if the sites generally comply. Step 1 has been completed for the identified sites at Barwon Downs, Forrest and Carlisle River. The assessment was undertaken by the members of the Municipal Fire Management Planning Committee. The assessments found that the sites at Barwon Downs, Forrest and Carlisle River generally complied with the criteria in the MNSPP based on the assumption that State Government funding would be made available to carry out the significant and

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<sup>1</sup> Recommendation 8.5, 2009 Victorian Bushfires Royal Commission Interim Report

costly activities that are necessary. This information was presented to Council and the Fire Services Commissioner.

In May 2011 a report was submitted to Council (OM112505-12) in relation to the work undertaken to complete Step 1 as outlined above.

Following consideration of the Report Council resolved that it:

1. ***“Accepts the recommendation of the Municipal Fire Management Planning Committee as a sub-committee of the Municipal Emergency Management Planning Committee that the potential Neighbourhood Safer Places (NSP) sites at Barwon Downs, Forrest and Carlisle River generally complied with the criteria in the Municipal Neighbourhood Safer Places Plan.***
2. ***Accepts the recommendation of the Municipal Fire Management Planning Committee as a sub-committee of the Municipal Emergency Management Planning Committee that the potential NSP site at Wye River did not generally comply with the criteria in the Municipal Neighbourhood Safer Places Plan.***
3. ***Approves the drafting of a letter to the Fire Services Commissioner advising of the results of the desktop assessment as outlined in the above recommendations”***

**Step 2: Prepare an Implementation Plan** for the sites that generally comply. This plan identifies the costs involved in developing detailed works plans. Step 2 has been completed. Implementation Plans were developed for Carlisle River, Forrest and Barwon Downs and forwarded to the Fire Services Commissioner in 2011. The Implementation Plans were approved by the Fire Services Commissioner in October 2011, allowing Council to progress to Step 3.

**Step 3: Develop a Recommendation Report** for the sites that have approved Implementation Plans. Step 3 will be completed for the site at Barwon Downs on endorsement of this report by Council. This report identifies all activities including assessments, reports, permits, approvals, works and associated costs that would be required to establish the NSP and an indication of whether the NSP should be implemented. The Recommendation Report is being presented to Council for endorsement prior to being forwarded to the Fire Services Commissioner.

**Step 4: The Works Plan would be Implemented** if the Recommendation Report indicates that the NSP should be implemented and is endorsed by Council and the Fire Services Commissioner.

### 3. Site Assessment - Barwon Downs

The site was assessed by the Victorian Government Taskforce and the following advice was provided in the Action Plan developed by the Taskforce; *‘NSP-PLR can be achieved if the required works are undertaken and impediments overcome. Consideration should be given to the establishment of a purpose built fire refuge consistent with the revised OESC guidelines (proposed).’* A copy of the Action Plan as provided by the Taskforce can be found in Appendix 1

### 4. Scope of Works to be undertaken

The site is considered suitable subject to the following works being undertaken in line with current Federal, State and Local, Legislation and Policy:

- Identification and removal of hazardous trees;
- Removal/modification of identified excess surface and elevated vegetation;
- Removal of identified broad areas of excess fuel loads adjacent to roads; and

- Construction of designated car parking.

The following preliminary works have been undertaken and are discussed in more detail in the following sections:

- Arborist has identified marked and mapped all hazardous tree requiring removal or lopping on identified roads. Refer to Appendix 2 to view identified roads.
- Instructional plans developed for the removal and lopping of hazardous trees.
- Costing and development of instructional plans for the removal/modification of excess fuel hazards.
- Undertake fuel-hazard assessments in areas identified for fuel modification so as to advise on vegetation-modification requirements.
- Provision of alternative options and costing to avoid-, mitigate-, and manage the ecological and cultural/historical values in association with the above activities.
- Instructional plans developed to guide the removal of excess vegetation on identified sites.
- Undertake desktop due-diligence studies for flora, fauna, cultural and historical issues; including a review of databases held by State and National authorities.
- Cost estimates for recommended additional work, including:
  - Flora and fauna surveys;
  - Net Gain/offset arrangements;
  - Cultural and historical assessments; and
  - Geotechnical assessments.
- Identification of permit requirements and/or (possible) exemptions for the above activities, or alternatively, identify how the above activities would trigger legislative implications and the likely associated costs.
- Identification of whether the above activities create land instability and the likely costs to assess and control those risks (geotechnical assessment).
- Define legislation, standards and guidelines relevant to the removal and modification of flora, fauna, cultural and historical values.
- Identify and record quality scores (using the Habitat Hectares approach) for native vegetation within the three study areas.
- Assess fauna and flora habitat values for each native vegetation zone, focusing on the likelihood of occurrence of rare and threatened species.
- Undertake Aboriginal and historical archaeological sensitivity surveys in areas of proposed mechanical disturbance, including the inspection of mature native trees designated for removal/lopping for signs of Aboriginal cultural practices (bark removal, scars, toe-holds, etc.).
- A general geotechnical survey to assess any areas of land slip concern as a result of tree removal and vegetation modification.
- Development of a car park design and layout plan.
- Development of clear instructional plans for the construction of the car park.
- Provision of concise cost estimates for the construction of the car park.
- Identification of all permits and statutory approvals required to undertake development and construction of the car park.
- Identification of maintenance costs for car park.

#### **4.1 Document References**

A number of reports have been compiled as part the above work that has been undertaken, these reports are available for viewing upon request and include:

- Vegetation Management Assessment and Works Report – Ecology Consultants Pty Ltd; and
- Car Park Design – Hyder Consulting Pty Ltd.

#### **4.2 Vegetation Management Works**

The Action Plan developed by Taskforce 23 identified a number of roadsides as access routes to NSPs requiring vegetation modification works to be undertaken.

The works included defective tree assessment works (the identification and removal/lopping of hazardous trees) and broad area vegetation modification of surface and elevated fuels in order to enable passage along access routes to the NSP in comparative safety.

A subsequent on-site inspection by officers from CFA, Department of Sustainability, Parks Victoria, Council and VicRoads in October 2011 identified further fuel modification works required on the identified access routes to enable these roads to meet the Municipal Neighbourhood Safer Place Plan criteria relating to access and egress. The additional identified works involve the removal of excess surface and elevated fuel loads on roadsides.

To assist Council in identifying accurate costs and developing works plans for this component of work for the recommendation report Ecology Consultants Pty Ltd were engaged through Council's Tender process to prepare a Vegetation Management Assessment and Works Report, the project objectives and outcomes were as follows:

##### **Project Objectives:**

- Identify all hazardous trees on identified roadsides, adjoining private property and the potential NSP sites that require removal or lopping.
- Provide clear instructional plans for the removal or lopping of identified hazardous trees and excess surface and elevated fuels.
- Provide clear and concise cost estimates (quotes) for the removal or lopping of hazardous trees and the removal of excess surface and elevated fuels.
- Provide all required detailed reports relating to flora and fauna assessments.
- Provide advice on recommended maintenance regime for all vegetation modification works.
- Identify all permits and statutory approvals from relevant authorities required to be obtained to undertake identified vegetation modification works.
- Provide clear and concise cost estimates (quotes) for the development of net gain/offsets, geotechnical and cultural heritage assessments as required.

##### **Project Outcomes:**

- Preparation of an Issues Analysis Paper early in the project.
- Development of a recommended approach to implement the six stages identified.
- Preparation of documents, images, plans, reports and other communication materials to Council and the project steering committee that maximise understanding of the project and opportunities to be considered.
- A Final Report addressing all issues contained in the project brief with recommendations and options that respond to these issues. Importantly all recommendations responding to these issues must have adequate strategic justification to ensure they can be successfully implemented.
- An Executive Summary that concisely summarises the work to be undertaken by the consultancy.

- Report of on ground assessment by an arborist to identify, mark and map all hazardous trees on identified roadsides, adjoining private property and potential NSP sites requiring removal or lopping.
- Development of a detailed work plan for the removal or lopping of arborist identified hazardous trees.
- Preparation of detailed cost estimate (quote) for the removal or lopping of arborist identified hazardous trees.
- Development of a detailed work plan for the removal of identified excess surface and elevated fuel loads.
- Preparation of detailed cost estimate (quote) for the removal of identified excess surface and elevated fuel loads.
- Development of a detailed maintenance program for identification of hazardous trees, including a detailed cost estimate.
- Preparation of the following reports:
  - Flora Assessment;
  - Fauna Assessment; and
  - Preliminary Cultural Heritage Assessment.
- Detailed explanatory report of all existing exemptions currently available for vegetation removal or lopping i.e. VicRoads.
- Preparation of report identifying relevant exemptions available and all permits and statutory approvals required from relevant authorities for removal or lopping of vegetation, including but not limited to the *Flora and Fauna Guarantee Act 1988* and the *Environment Protection and Biodiversity Conservation Act 1999*.
- Identify additional relevant material/assessments required for identified permits and statutory approvals.
- Preparation of detailed cost estimate (quote) for the preparation of the following reports/plans if identified as required after completion of above actions.
  - Historical Heritage Assessment;
  - Cultural Heritage Assessment;
  - Net Gain Assessment/Offset Plan; and
  - Geotechnical Assessment.

A copy of the Vegetation Management Assessment and Works Report prepared by Ecology Consultants Pty Ltd is available for viewing upon request. Appendix 2 contains a map that shows all areas identified for vegetation modification.

#### 4.2.1 Removal/Lopping of Hazardous Trees:

The following criteria originating from MAV was used to guide hazardous tree identification:

- Dead trees that are leaning towards or overhanging the road/NSP site and would likely block the road/NSP site and/or injure someone at the NSP site if they fell.
- Trees that are leaning significantly towards the road/NSP site and tree limbs that are overhanging the road/NSP site and are in immediate danger of falling on the road/NSP site.
- Diseased and/or infested trees that would likely block the road/NSP site if they fell.
- Trees at the top of cuttings, with exposed roots and/or partial support which are exposed to high winds making them highly susceptible to fall and blocking the road/NSP site.
- Trees that are clearly unstable due to poor root system making them highly susceptible to falling and blocking the road/NSP site.

All trees identified using the above criteria were assigned for lopping or removal. Trees recommended for lopping were marked with spray paint and an individually-numbered pink iodised aluminium tag, attached to the trunk (with an aluminium nail) at breast height (facing the road). For each tree identified the following information was recorded:

- a) the appropriate MAV criteria(s);
- b) diameter at breast height (over bark) of the largest trunk;
- c) species; and
- d) whether the tree was alive or dead.

Across the study area 12 trees were identified as requiring removal and 19 trees requiring lopping. The assessment for hazardous trees was undertaken by a qualified Arborist, supported by two additional staff. The following table provides a breakdown of the hazardous trees identified in the study area.

| Road Name             | Actions                | No. of Trees Removal | No of Trees Lopping | Total No. Trees |
|-----------------------|------------------------|----------------------|---------------------|-----------------|
| Birregurra-Forrest Rd | SP, RF, WR, HWR, DW, R | 5                    | 10                  | 15              |
| Mahers Rd             | R                      | 4                    | -                   | 4               |
| Wallaces Rd           | SP, RF, WR, HWR, DW, R | 2                    | 5                   | 7               |
| Loves Rd              | SP, RF, WR, HWR, DW    | 1                    | 4                   | 5               |
| <b>TOTAL</b>          |                        | <b>12</b>            | <b>19</b>           | <b>31</b>       |

Table 1: Breakdown of identified hazardous trees in the Barwon Downs study area. Data extracted from the Neighbourhood Safer Places Vegetation Management Assessment and Works Report.

**Legend for Actions:**

- |                                    |   |
|------------------------------------|---|
| SP = Structural Prune              | RF = Risk and Form                        |
| WR = Weight/Load Reduction         | HWR = Heavy Weight Reduction              |
| DW = Deadwood Removal              | R = Remove Tree                           |
| RS = Remove Tree (including stump) | RH = Remove Tree (leave log for habitat). |

**4.2.2 Removal/Reduction of Broad-area, Elevated and Surface Fuels**

Roadsides generally have areas where large amounts of debris have accumulated over time, excess surface and elevated fuels on roadsides add considerably to the overall fuel load and in turn contribute to enhanced fire activity during a fire event, in particular the fire’s rate of spread and flame height.

To enable passage along access routes to the NSP in comparative safety identified areas of broad area and excess surface and elevated vegetation adjacent to roadsides required modification to reduce potential radiant heat flux to below 10 kW/m<sup>2</sup>, in line with CFA guidelines for NSPs.

The methods used for determining set-back distances and the extent of vegetation modification required were based on contemporary and relevant bushfire assessment tools. The methodology is consistent with recent reforms to the Victorian Planning Scheme arising from outcomes of the Black Saturday Royal Commission.

For areas proposed for broad-area vegetation modification, an Inner- and Outer Zone was calculated based on the Bushfire Management Overlay (BMO), as outlined in the BMO Advisory Note 44 (Feb. 2012). Assessment was done by sampling fuel loads, slope and vegetation classes within areas highlighted for broad-area vegetation modification (and areas for removal/reduction of excess surface fuels).

The Bushfire Management Overlay (BMO) methodology was then used to determine the optimal set-back distances to reduce the bushfire radiant heat impact along access roads to the desired levels. For fuel-hazard calculations, the highest slope value was used for calculations, and the highest measured fuel load

was used as the overall representation of surface fuels and the overall fuel hazard. This input provides recommendations based on the worst-case scenario, in terms of bushfire behaviour. Actual measured values were employed rather than the BMO prescribed maximum fuel loads and slope categories so as to reflect site conditions. The following table provides a breakdown of the broad-area vegetation modification and excess surface and elevated fuels modification identified in the study area.

| Road Name              | Actions                | Inner Zone(ha) | Outer Zone (ha) | Total Area (ha) |
|------------------------|------------------------|----------------|-----------------|-----------------|
| Birregurra-Forrest Rd  | Mech, Ch, MR, RW, Chip | 0.69           | 0.44            | 1.13            |
| <b>TOTAL Area (ha)</b> |                        | <b>0.69</b>    | <b>0.44</b>     | <b>1.13</b>     |

Table 2: Breakdown of broad-ore vegetation modification required in the Barwon Downs study area. Data extracted from the Neighbourhood Safer Places Vegetation Management Assessment and Works Report.

| Road Name                        | Actions   | Area (ha)   |
|----------------------------------|-----------|-------------|
| Mahers Rd, Birregurra-Forrest Rd | MR, RW, B | 0.15        |
| Birregurra-Forrest Road          | MR, RW, B | 0.21        |
| NSP                              | SL, MR, B | 0.62        |
| <b>TOTAL Area (ha)</b>           |           | <b>0.62</b> |

Table 3: Breakdown of excess surface and elevated fuel modification required in the Barwon Downs study area. Data extracted from the Neighbourhood Safer Places Vegetation Management Assessment and Works Report.

**Legend for Actions:**

- MR = Manual Removal of excess surface fuel load
- RW = removal of woody weed biomass
- B = Burn Excess Fuel
- Ch = Chainsaw
- SL = Slash grasses
- Mech = Mechanical removal of excess woody biomass
- Chip = chip/shred coarse woody debris

**4.3 Cultural Heritage**

The following preliminary works have been undertaken:

- a review of the *Aboriginal Heritage Act* 2006, including the Aboriginal Heritage Regulations 2007;
- a check of the Aboriginal Affairs Victoria (AAV) heritage site and place records;
- a review of previous Aboriginal archaeological assessments;
- a review of Native Title stakeholders and Registered Aboriginal Parties (RAPs) to determine Aboriginal stakeholders with cultural heritage interests in the study area;<sup>1</sup>
- a review of the Heritage Inventory;
- a review of the Heritage Register;
- a review of the Australian Heritage Database (including the Commonwealth Heritage List, the National Heritage List, the Register of the National Estate, World Heritage List);
- a review of the National Trust Database;
- a review of local council planning scheme heritage overlays;
- a review of previous historical archaeological assessments; and
- a brief inspection of the study area.

**4.3.1 Aboriginal Cultural Heritage:**

Through this review the opinion was formed that the proposed works associated with the proposed vegetation management and NSP creation do not trigger the need for a Cultural Heritage Management Plan (CHMP) under the Aboriginal Heritage Regulations 2007.



Note that while the vegetation management works do not necessarily require a CHMP, as mentioned above, given the possibility of Aboriginal cultural heritage to occur within the study area it would be considered prudent to undertake a CHMP for the entire area (NSP and vegetation management areas) in order to best manage risk associated with the works.

#### **4.3.2 Non-Aboriginal Heritage:**

No registered Historical sites/places occur within the study area and no historical structures were noted during the site inspection. No further European heritage assessment is deemed necessary prior to the initiation of the development.

#### **4.4 Offsets**

Under the Planning and Environment Act the vegetation removed to establish the NSP would need to be offset to achieve an overall net gain.

Offset prices have been calculated using DSE BushBroker price history. Research indicated that the price per Habitat Hectare ranged between \$20,000 and \$380,000. However, the average of all Habitat Hectare transactions is \$139,857, but the Otway Plains Bioregion (from where the Habitat Hectares would need to be purchased) does not have an independent price history. Given that the information available relates to previous prices, it is reasonable to expect that today's prices should reflect current land values. Applying 10% to the aforementioned price (\$139,857 per Habitat Hectare); a value of \$153,843 per Habitat Hectare was arrived at. The total cost of offsets for Barwon Downs has been calculated to be \$67,830.91.

For more information on the calculation of offsets refer to the Vegetation Management Assessment and Works Report by Ecology Consultants.

#### **4.5 Flora and Fauna**

Permits under the *Flora and Fauna Guarantee Act 1988* will be required for the removal of native vegetation on public land as there is potential for the activities proposed to remove flora species and/or disturb habitat of FFG-listed fauna. Moreover, implementation of the vegetation-modification activities proposed along NSP access and egress roads *may* require an Environmental Effects Statement under the *Environmental Effects Act 1978*.

General Flora inspections were conducted initially from a vehicle and on foot to determine the position and extent of native vegetation occurring within the study areas. Coarse visual assessments of vegetation condition were undertaken at this time, with vegetation assigned to one of three categories. This information was drawn onto aerial photographs and subsequently digitised using GIS software.

The study areas were assessed for general fauna habitat values that may be important for rare or threatened fauna species identified during the desktop review. A record was taken of habitat quality, along with all species sightings and signs of occupation (e.g. scats, tracks, diggings, calls, etc.) encountered during site inspections.

#### **4.6 Geotechnical Assessments**

Scott Emmett, consultant geologist conducted a one-day site inspection (5 June 2012) of the study area to assess the potential impact of vegetation modification on the stability of road cuttings and to identify any potential geotechnical issues.

There are no cuttings or batters located within this area that would be affected by the proposed tree removal.

#### **4.7 Car Park**

To assist Council in identifying accurate costs and developing a car park design and layout plan for this component of work for the recommendation report Hyder Consulting Pty Ltd was engaged through Council's Tenderlink process to prepare a Car Park Design report, the project objectives and outcomes were as follows:

##### Project Objectives:

- Develop car park design and layout plans for each potential NSP site that considers community amenity, existing and future development and use of each site.
- Provide clear instructional plans for the construction of car parking at each of the three identified potential NSP sites.
- Provide clear and concise cost estimates (quotes) for the construction of each car park.
- Identify all permits and statutory approvals from relevant authorities required to be obtained to undertake the development and construction of each car park.
- Identify recommended maintenance regime and associated indicative costs for each car park.

##### Project Outcomes:

- Preparation of an Issues Analysis Paper early in the project.
- Development of three detailed car park design and layout concept plans for each potential NSP site which consider but are not limited to the following:
  - Existing use of the site
  - Potential future developments for each site
  - Amenity values
  - MNSPP criteria outlined in section 1.1
  - Existing assets and infrastructure on each site. i.e. well at Barwon Downs
- Preparation of documents, images, plans, reports and other communication materials to Council and the project steering committee that maximise understanding of the project and opportunities to be considered.
- Development of a recommended approach to implement the five stages identified in section 7 of this document.
- Preparation of a report identifying relevant exemptions available and all permits and statutory approvals required from relevant authorities.
- Identification of additional relevant material/assessments required for identified permits and statutory approvals.
- Development of a recommended approach to the implementation of each preferred car park design and layout plan.
- An Executive Summary that concisely summarises the work undertaken by the consultancy.
- A Final Report addressing all issues contained in the project brief with recommendations and options that respond to these issues. Importantly all recommendations responding to these issues must have adequate strategic justification to ensure they can be successfully implemented.

A methodology developed by CFA in 2009 was to assist in determining the number of car parks that would be required for a potential NSP site. Using this methodology based on a population of 167 people at least 25 car parking spaces should be planned for at the Barwon Downs potential NSP site. Capacity for Disability parking should be considered additional to this.

In May 2012, Hyder Consulting was commissioned by Colac Otway Shire to provide car park layout and design and tender documents for the proposed NSP Barwon Downs. To assist with the design several preliminary activities were undertaken, including a site inspection of the site, geotechnical assessment of existing ground conditions for the purposes of pavement construction, feature survey of the proposed car park site (2d and 3d) and investigation of the presence and impact upon existing known utilities using the Dial-Before-You-Dig (DBYD) online system.

The findings of these activities indicated that the existing subgrade at the Barwon Downs site is extremely moisture sensitive and it is likely that replacement with suitable fill will be required to provide a sound base for pavement construction. There are a number of existing services at the proposed car park site, however the information received from the DBYD enquiry did not show any direct clashes that would require relocation or temporary diversion.

Hyder commissioned Surfcoast Survey & Drafting Services Pty. Ltd. to undertake 2D and 3D feature surveys of the NSP car park site in order to pick up all existing features and services. This work was undertaken between 3 – 9 July 2012.

Hyder commissioned NSP Geotechnics Pty Ltd to undertake the geotechnical investigation at the NSP site. The field work was carried out on 4 July 2012 and involved the drilling of 4no. boreholes to a depth of up to 1.5 metres at each of the NSP sites. Dynamic Cone Penetrometer (DCP) testing was also carried out at each of the borehole locations.

The car park has been designed in accordance with Class 3 requirements outlined in S2890.1. It is recommended that the works be conducted during the drier months of the year and the site will take approximately 8 weeks to construct. The total cost of construction will be \$155,953.00.

## **5. Budget Set up Costs**

The table below shows the confirmed estimated costs of establishing the NSP at Barwon Downs based on the findings of the various reports commissioned by Council and other associated cost estimates. The table also shows the indicative funding identified by Taskforce 23.

The table shows that the cost of establishing the NSP is in excess of double the Taskforce 23 estimate, this is largely due to the amount of vegetation modification necessary and the corresponding offsets required. Investigation has been undertaken to identify potential exemptions for offsets and alternative ways of achieving the required offsets at a reduced cost. An option raised and discussed in the Vegetation Management Assessment and Works Report by Ecology Consultants is that of a property purchase by Council. Ecology Consultants considered and indicatively costed this option assuming that all three NSPs identified in the Taskforce 23 would go ahead collectively. This option would also bring with it additional workload for Council in managing and maintaining the land as an asset, this option has merit, however for the purposes of this report the recommendation has been made using the known and reliable BushBroker figures.

Flora and fauna surveys, cultural heritage and car parking are all additional items that were not considered by the Taskforce.

| Item  | Confirmed Establishment Costs (Ex GST) | Taskforce 23 Funding (Ex GST) |
|---|--|-------------------------------|
| <b>Achieving Offsets – DSE BushBroker</b>                             | \$67,830                               | \$58,500                      |
| <b>Vegetation Modification</b>  | \$47,507                               | \$31,520                      |
| Lopping and removal of hazardous trees                                | \$26,924.00                            |                               |
| Broad-area vegetation modification                                    | \$15,422.00                            |                               |
| Reduction/removal of excess and elevated surface fuel along roadsides | \$5,161.00<br><u>\$47,507.27</u>       |                               |
| <b>Cultural Heritage</b>  | \$36,770                               |                               |
| <b>Flora and Fauna</b>  | \$9,181                                |                               |
| Targeted surveys (spring)   | \$2,364.00                             |                               |
| Fauna salvage planning and operations                                 | \$2,272.00                             |                               |
| Contingency   | \$4,545.00<br><u>\$9,181.00</u>        |                               |
| <b>Signage</b>  | \$2,000                                | \$2,000                       |
| <b>Project Officer</b>  | \$9,517                                | \$2,681                       |
| <b>Car Park Construction</b>  | \$155,953                              |                               |
| <b>Permits</b>  | \$1,000                                | Included in Offset Costs      |
| <b>Total Cost :</b>   | <b>\$329,758</b>                       | <b>\$94,701</b>               |
| <b>Establishment Funding Offered by State Government</b>              | <b>\$94,701</b>                        |                               |
| <b>Cost Gap</b>   | <b>\$235,057</b>                       |                               |

## 6. Maintenance Costs

Maintenance costs have been estimated for the various ongoing activities as outlined below:

- Roadside vegetation management activities are estimated to be approximately \$17,051.00 per year.
- Car Park maintenance costs are estimated to be minimal for the first 15 years due to the pavement surface. A minimal cost of \$1,000.00.
- Site vegetation management – maintaining grass length at no more than 10cm in height over the declared fire danger period is estimated to cost approximately \$ 2,500.00.

The total conservative estimated cost of maintaining this site is approximately \$20,551.00 per year. It should be noted that there was no Taskforce 23 funding committed for maintenance.

## 7. Community Engagement

The community engagement strategy has followed the recommendations of the Colac Otway Shire Council Engagement Policy of January 2010, which details five levels of engagement – inform, consult, involve, collaborate and empower.

The community engagement method selected was to inform the general public and to involve and empower key stakeholders in the decision making process:

Two community information sessions were held for residents, business owners and community groups. The focus of the first meeting held was to provide residents with an overview of the background behind NSPs in general and the three Taskforce 23 NSPs, residents were provided with information on the activities being undertaken at the time, in particular the Vegetation Management Assessment and Works Report contract. An aspect of this work, involved the physical marking of trees with spray paint and metal tags that were identified by an arborist as hazardous, requiring removal or lopping.

A key aim of the initial community information sessions and media releases was to assure residents that no trees would be removed without first consulting with the community and that the work being undertaken was investigative in nature and required in order for council to develop accurate costs for the Recommendation Report.

Council Officers returned to the community once the Vegetation Management Assessment and Works Report was completed, and presented on the progress to date in developing the Recommendation Report. A strong focus of the presentation was the work undertaken by Ecology Consultants through the Vegetation Management Assessment and Works Report Contract. Specific aspects of the report included an extensive series of maps that show:

- trees that have been identified as hazardous requiring removal;
- trees identified as requiring lopping;
- areas for broad scale surface and elevated vegetation modification required to meet the 10 kW/m<sup>2</sup> radiant heat as identified by Taskforce 23; and
- habitat zone and vegetation type within identified study areas.

This information was shared so that residents could fully appreciate which trees and roadside vegetation would be removed/modified if the potential NSPs were to be established.

There were a number of residents that felt passionately about retaining all trees and vegetation and were not supportive of any change to their environment while others were more concerned about the fire safety risks.

Attendance at these meetings was good with an overall positive response to the rigour of the work undertaken and an appreciation that the costs associated with implementation were very substantial.

The following lists identify all internal and external people who have been engaged with and/or contributed to this project:

Internal:

- Councillors
- General Manager Sustainable Planning and Development
- General Manager Corporate and Community Services
- General Manager Infrastructure and Services
- Municipal Building Surveyor
- Manager Sustainable Assets
- Contract Administration Officer
- Manager Finance and Customer Service
- Manager Health and Community Services
- Statutory Planner
- Manager Organisational Support and Development
- Customer Service Staff
- Financial Operations Coordinator
- Manager Planning and Building
- Manger Cosworks
- GIS Coordinator
- Recreation Arts and Culture Manager
- Property Officer
- Corporate Services Executive Officer
- Risk Services Officer
- Municipal Emergency Management Coordinator

- Municipal Emergency (Fire) Management Coordinator
- Municipal Emergency Management Officer
- Business Development Officer
- Design Engineer
- Manager Capital Works
- Contracts Coordinator
- Environment Coordinator
- Development Engineer
- Revenue Coordinator
- Manager Environment and Community Safety
- Public Relations Coordinator

External:

- Municipal Emergency Management Planning Committee
- Municipal Fire Management Planning Committee
- Barwon Downs residents, community groups and business owners
- Ecology Consultants Pty Ltd
- Hyder Consulting Pty Ltd
- GHD Pty Ltd
- Geelong Environmental Occupational Hygiene
- Digga Excavations
- Opteon Pty Ltd
- CFA
- DSE

## **8. Recommendation**

That the Barwon Downs Neighbourhood Safer Place – Place of Last Resort **not** proceed to implementation, as the cost of establishing this site far exceeds the funding offered by the State Government.

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# **Appendix 1**

## **Taskforce 23 Action Plan**

### **Barwon Downs**



# Taskforce 23 Action Plan – Barwon Downs

## Action Plan

High Hazard Risk Township: **Barwon Downs**  
Municipality: **Colac Otway**

Shelter Options: **Location of suggested Shelter Facilities**

Cost of Creating Township: **Cost of Creating Township**

Overlapping Factors: **NSP-PLR can be achieved if the required works are undertaken and implemented over time. Consideration should be given to the establishment of a program plan for ongoing assessment with the revised OEDC guidelines (ongoing). The action plan should be supported by a further evacuation plan developed by the CFA, DSE, Victoria Police and local council.**

Population: **136**  
Average Age: **48**

Number of Dwellings: **66**  
Residents at same address 5 years ago: **64%**

### Emergency Evacuation

Site Name: **Barwon Downs Fire Station**  
Address: **Barwon Downs Fire Station**  
Description of Use: **Open Space surrounding Fire Station**  
Site Type: **Open Space**  
Date of Inspection: **25 August 2010**

NSP - PLR Establishment Recommended: **Cost of 36 roadblock works (refer below)**  
Cost of complying with Planning and Building Legislation: **Total cost of establishing NSP-PLR (see comments)**  
Indicative timeframe to complete all works: **3 - 8 months**

YES: **\$36,204.00**  
NO: **\$38,799.00**

### Assessment Notes

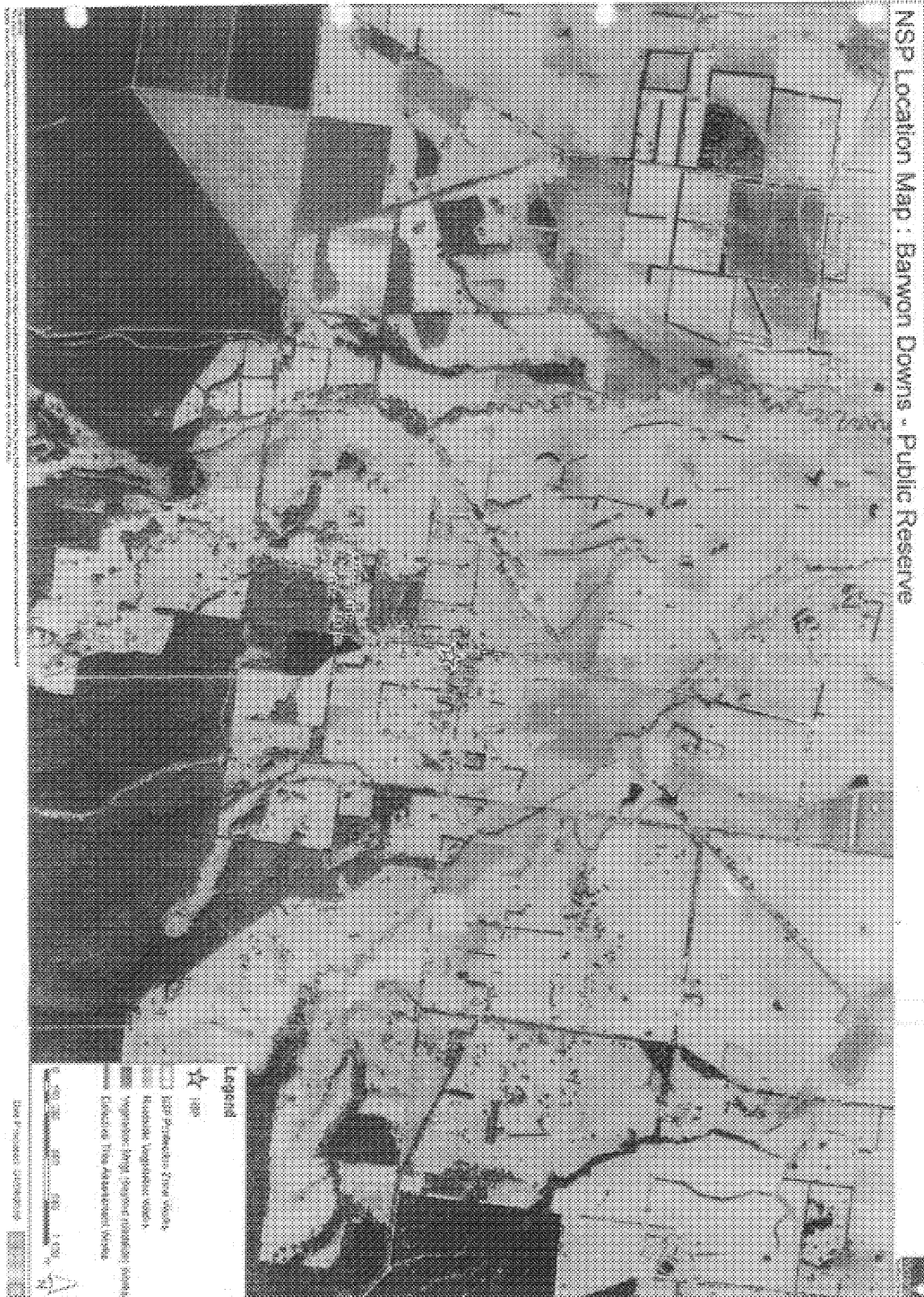
| Issue                          | Assessment Notes  | Required Works  | Estimated Cost | Estimated Timeframe |
|--------------------------------|---|---|----------------|---------------------|
| 1. Structure impact assessment | No concerns identified, dependent on grass being maintained for 2 years   | Vegetation modification within NSP-PLR Protection Zone to maintain surrounding trees to intended levels                     | \$2,000.00     | 2 months            |
| 2. Level / Standing Issues     | No concerns identified  | Nil works   | \$0.00         |                     |
| 3. Access and Egress           | Fuel loads and dangerous trees along access roads will expose residents to excessive radiant heat and potentially block roads | Practical vegetation works / management (including mulching and selective tree assessment) as shown on NSP-PLR Township Map | \$24,200.00    | 2 months            |
|                                | Dangerous trees along access roads will potentially block roads   | Required to enhance safety along access roads   | \$3,000.00     | 2 months            |
|                                | Significant fuel loads exist along some access roads affecting ability of residents to reach NSP-PLR                          | Vegetation management beyond roadside as shown on NSP-PLR Township Map; required to enhance safety along access roads       | \$2,270.00     | 2 months            |
| 4. Miscellaneous Issues        |   | NSP-PLR signage required  | \$2,000.00     | 2 weeks             |
|                                |   | Project management, insurance, required to oversee works  | \$2,681.00     |                     |
| 5. Compliance Issues           | Vegetation works identified above require compliance with planning and building legislation                                   | Planning and building permits and native vegetation offsets required  | \$65,500.00    | 1 month             |
| 6. Maintenance                 | Ongoing maintenance of vegetation   | Site must be maintained to maintain fuel loads  | \$3,490.00     | Annually            |

Planning permit required to address heritage and vegetation modification requirements. Amendment in 2009 to exempt works associated with the establishment of an approved Neighbourhood Safer Place

Ongoing maintenance of vegetation

Refer to also the annex 2 to detailed assessment notes and outputs

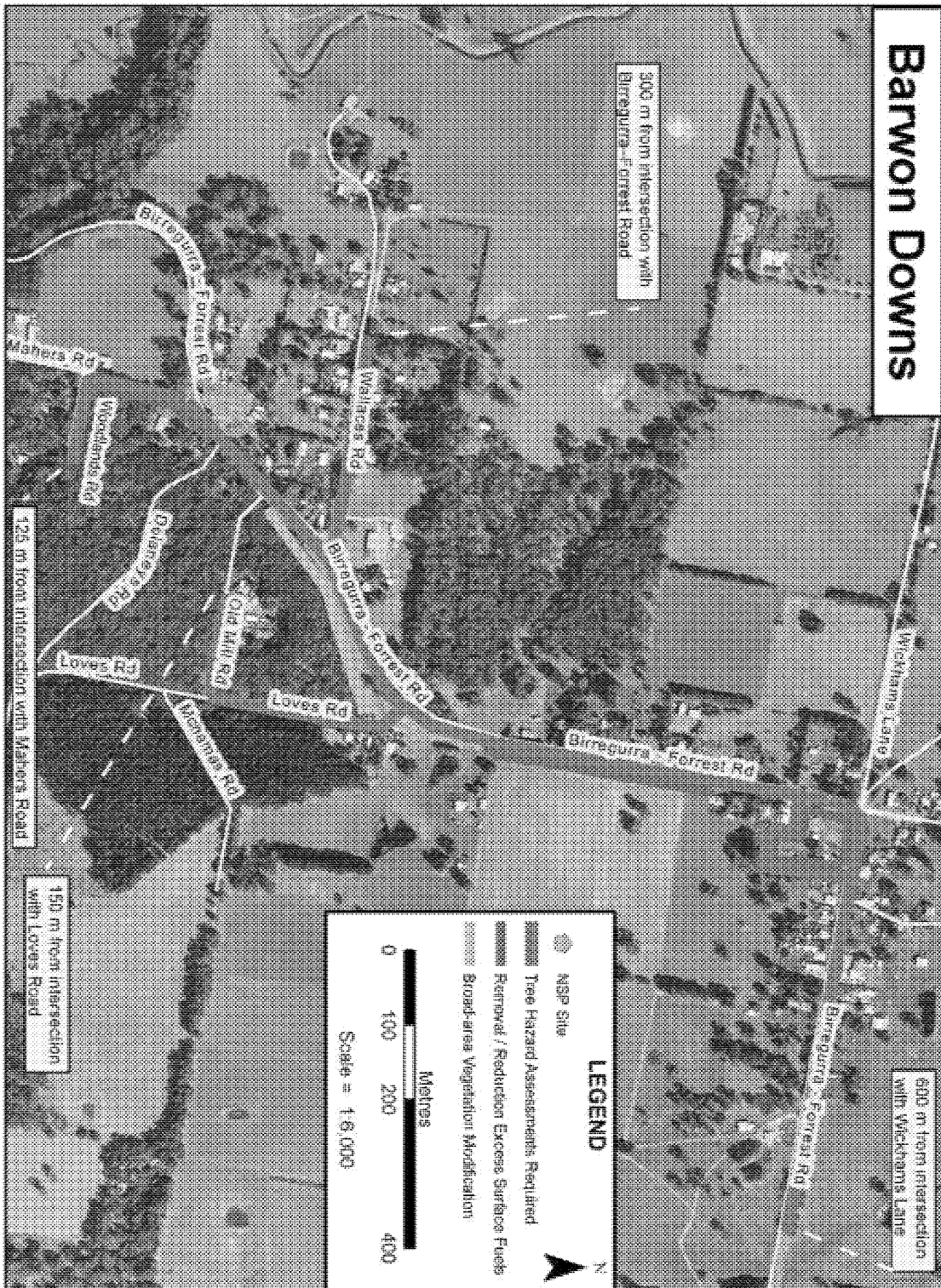




## **Appendix 2**

# **Hazardous Tree Identification and Vegetation Modification Areas Barwon Downs**









**Colac Otway Shire**

**Taskforce 23 Neighbourhood Safer Places  
Recommendation Report – Carlisle River  
September 2012**

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## 1. Introduction

The purpose of this report is to provide a detailed explanation of the works associated with establishing a Neighbourhood Safer Place in Carlisle River and to make a recommendation on whether the works should be implemented.

## 2. Background and Context

The Interim Report of the 2009 Victorian Bushfires Royal Commission recommended that neighbourhood safer places, or NSPs, be identified and established to provide persons in bushfire affected areas with a place of last resort during a bushfire.<sup>1</sup>

In response to this recommendation, the Victorian Government introduced the *Emergency Services Legislation Amendment Act 2009* which amends the *Country Fire Authority Act 1958* and the *Emergency Management Act 1986*. The effect of these amendments requires the Country Fire Authority (CFA) to certify Neighbourhood Safer Places (NSPs) against the CFA Assessment Guidelines, and Councils within Victoria to identify, designate, establish, maintain and decommission NSPs in their municipal districts.

NSPs are not community fire refuges or emergency relief centres. NSPs are **places of last resort** during the passage of a bushfire, and are intended to be used by persons whose primary bushfire plans have failed. NSPs are places of relative safety only. They do not guarantee the survival of those who assemble there. Furthermore, there may be serious risks to safety encountered in travelling and seeking access to NSPs during bushfire events. Depending on the direction of a particular fire, it may not be 'a safer place' to assemble than other places within the municipal district.

Project Taskforce 23 was commissioned in 2010 to inspect and evaluate potential sites for NSPs in 23 of the previously identified 52 high bushfire risk locations throughout Victoria that had failed to meet compliance with CFA and municipal criteria. Taskforce 23's brief was to understand the reasons for non-compliance and investigate potential options that may enable designation or provide appropriate alternative bushfire safety solutions for the communities involved. It was hoped that with the potential for additional funding to undertake modifications, NSP's could be established within more of the high risk towns. The initiative was a "Whole of Government" review, to support the review with legislative powers, CFA lead the review for Government.

Upon completion of their work Taskforce 23 made recommendations to the State Government, supported by an Action Plan and indicative costing. A number of sites within Colac Otway Shire were identified by Project Taskforce 23 as potential NSPs requiring further investigation, included were Barwon Downs Common, Barwon Downs, Carlisle River Recreation Reserve, Carlisle River and 35 Station Street, Forrest.

In 2011 the Municipal Association Victoria (MAV) developed a staged process to guide the development of these potential NSPs. The four key steps in the MAV process are explained in brief below:

**Step 1: Conduct a Desktop Assessment** of the sites against the criteria in the Municipal Neighbourhood Safer Place Plan (MNSPP) and determine if the sites generally comply. Step 1 has been completed for the identified sites at Barwon Downs, Forrest and Carlisle River. The assessment was undertaken by the members of the Municipal Fire Management Planning Committee. The assessments found that the sites at Barwon Downs, Forrest and Carlisle River generally complied with the criteria in the MNSPP based on the assumption that State Government funding would be made available to carry out the significant and

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<sup>1</sup> Recommendation 8.5, 2009 Victorian Bushfires Royal Commission Interim Report

costly activities that are necessary. This information was presented to Council and the Fire Services Commissioner.

In May 2011 a report was submitted to Council (OM112505-12) in relation to the work undertaken to complete Step 1 as outlined above.

Following consideration of the Report Council resolved that it:

- 1. "Accepts the recommendation of the Municipal Fire Management Planning Committee as a sub-committee of the Municipal Emergency Management Planning Committee that the potential Neighbourhood Safer Places (NSP) sites at Barwon Downs, Forrest and Carlisle River generally complied with the criteria in the Municipal Neighbourhood Safer Places Plan.**
- 2. Accepts the recommendation of the Municipal Fire Management Planning Committee as a sub-committee of the Municipal Emergency Management Planning Committee that the potential NSP site at Wye River did not generally comply with the criteria in the Municipal Neighbourhood Safer Places Plan.**
- 3. Approves the drafting of a letter to the Fire Services Commissioner advising of the results of the desktop assessment as outlined in the above recommendations"**

**Step 2: Prepare an Implementation Plan** for the sites that generally comply. This plan identifies the costs involved in developing detailed works plans. Step 2 has been completed. Implementation Plans were developed for Carlisle River, Forrest and Barwon Downs and forwarded to the Fire Services Commissioner in 2011. The Implementation Plans were approved by the Fire Services Commissioner in October 2011, allowing Council to progress to Step 3.

**Step 3: Develop a Recommendation Report** for the sites that have approved Implementation Plans. Step 3 will be completed for the site at Carlisle River on endorsement of this report by Council. This report identifies all activities including assessments, reports, permits, approvals, works and associated costs that would be required to establish the NSP and an indication of whether the NSP should be implemented. The Recommendation Report is being presented to Council for endorsement prior to being forwarded to the Fire Services Commissioner.

**Step 4: The Works Plan would be Implemented** if the Recommendation Report indicates that the NSP should be implemented and is endorsed by Council and the Fire Services Commissioner.

### **3. Site Assessment – Carlisle River Recreation Reserve**

The site was assessed by the Victorian Government Taskforce and the following advice was provided in the Action Plan developed by the Taskforce; *'NSP-PLR can be achieved if the required works are undertaken and impediments overcome. Consideration should be given to the establishment of a purpose built fire refuge consistent with the revised OESC guidelines (proposed).'* A copy of the Action Plan as provided by the Taskforce can be found in Appendix 1

### **4. Scope of Works to be undertaken**

The site is considered suitable subject to the following works being undertaken in line with current Federal, State and Local, Legislation and Policy:

- Identification and removal of hazardous trees;
- Removal/modification of identified excess surface and elevated vegetation;
- Removal of identified broad areas of excess fuel loads adjacent to roads; and

- Construction of designated car parking.

The following preliminary works have been undertaken and are discussed in more detail in the following sections:

- Arborist has identified marked and mapped all hazardous tree requiring removal or lopping on identified roads. Refer to Appendix 2 to view identified roads.
- Instructional plans developed for the removal and lopping of hazardous trees.
- Costing and development of instructional plans for the removal/modification of excess fuel hazards.
- Undertake fuel-hazard assessments in areas identified for fuel modification so as to advise on vegetation-modification requirements.
- Provision of alternative options and costing to avoid-, mitigate-, and manage the ecological and cultural/historical values in association with the above activities.
- Instructional plans developed to guide the removal of excess vegetation on identified sites.
- Undertake desktop due-diligence studies for flora, fauna, cultural and historical issues; including a review of databases held by State and National authorities.
- Cost estimates for recommended additional work, including:
  - Flora and fauna surveys;
  - Net Gain/offset arrangements;
  - Cultural and historical assessments; and
  - Geotechnical assessments.
- Identification of permit requirements and/or (possible) exemptions for the above activities, or alternatively, identify how the above activities would trigger legislative implications and the likely associated costs.
- Identification of whether the above activities create land instability and the likely costs to assess and control those risks (geotechnical assessment).
- Define legislation, standards and guidelines relevant to the removal and modification of flora, fauna, cultural and historical values.
- Identify and record quality scores (using the Habitat Hectares approach) for native vegetation within the three study areas.
- Assess fauna and flora habitat values for each native vegetation zone, focusing on the likelihood of occurrence of rare and threatened species.
- Undertake Aboriginal and historical archaeological sensitivity surveys in areas of proposed mechanical disturbance, including the inspection of mature native trees designated for removal/lopping for signs of Aboriginal cultural practices (bark removal, scars, toe-holds, etc.).
- A general geotechnical survey to assess any areas of land slip concern as a result of tree removal and vegetation modification.
- Development of a car park design and layout plan.
- Development of clear instructional plans for the construction of the car park.
- Provision of concise cost estimates for the construction of the car park.
- Identification of all permits and statutory approvals required to undertake development and construction of the car park.
- Identification of maintenance costs for car park.

#### **4.1 Document References**

A number of reports have been compiled as part the above work that has been undertaken, these reports are available for viewing upon request and include:

- Vegetation Management Assessment and Works Report – Ecology Consultants Pty Ltd; and

- Car Park Design – Hyder Consulting Pty Ltd.

## **4.2 Vegetation Management Works**

The Action Plan developed by Taskforce 23 identified a number of roadsides as access routes to NSPs requiring vegetation modification works to be undertaken.

The works included defective tree assessment works (the identification and removal/lopping of hazardous trees) and broad area vegetation modification of surface and elevated fuels in order to enable passage along access routes to the NSP in comparative safety.

A subsequent on-site inspection by officers from CFA, Department of Sustainability, Parks Victoria, Council and VicRoads in October 2011 identified further fuel modification works required on the identified access routes to enable these roads to meet the Municipal Neighbourhood Safer Places Plan criteria relating to access and egress. The additional identified works involve the removal of excess surface and elevated fuel loads on roadsides.

To assist Council in identifying accurate costs and developing works plans for this component of work for the recommendation report Ecology Consultants Pty Ltd were engaged through Council's Tender process to prepare a Vegetation Management Assessment and Works Report, the project objectives and outcomes were as follows:

### **Project Objectives:**

- Identify all hazardous trees on identified roadsides, adjoining private property and the potential NSP site that require removal or lopping.
- Provide clear instructional plans for the removal or lopping of identified hazardous trees and excess surface and elevated fuels.
- Provide clear and concise cost estimates (quotes) for the removal or lopping of hazardous trees and the removal of excess surface and elevated fuels.
- Provide all required detailed reports relating to flora and fauna assessments.
- Provide advice on recommended maintenance regime for all vegetation modification works.
- Identify all permits and statutory approvals from relevant authorities required to be obtained to undertake identified vegetation modification works.
- Provide clear and concise cost estimates (quotes) for the development of net gain/offsets, geotechnical and cultural heritage assessments as required.

### **Project Outcomes:**

- Preparation of an Issues Analysis Paper early in the project.
- Development of a recommended approach to implement the six stages.
- Preparation of documents, images, plans, reports and other communication materials to Council and the project steering committee that maximise understanding of the project and opportunities to be considered.
- A Final Report addressing all issues contained in the project brief with recommendations and options that respond to these issues. Importantly all recommendations responding to these issues must have adequate strategic justification to ensure they can be successfully implemented.
- An Executive Summary that concisely summarises the work to be undertaken by the consultancy.
- Report of on ground assessment by an arborist to identify, mark and map all hazardous trees on identified roadsides, adjoining private property and potential NSP sites requiring removal or lopping.

- Development of a detailed work plan for the removal or lopping of arborist identified hazardous trees.
- Preparation of detailed cost estimate (quote) for the removal or lopping of arborist identified hazardous trees.
- Development of a detailed work plan for the removal of identified excess surface and elevated fuel loads.
- Preparation of detailed cost estimate (quote) for the removal of identified excess surface and elevated fuel loads.
- Development of a detailed maintenance program for identification of hazardous trees, including a detailed cost estimate.
- Preparation of the following reports:
  - Flora Assessment;
  - Fauna Assessment; and
  - Preliminary Cultural Heritage Assessment.
- Detailed explanatory report of all existing exemptions currently available for vegetation removal or lopping i.e. VicRoads.
- Preparation of report identifying relevant exemptions available and all permits and statutory approvals required from relevant authorities for removal or lopping of vegetation, including but not limited to the *Flora and Fauna Guarantee Act 1988* and the *Environment Protection and Biodiversity Conservation Act 1999*.
- Identify additional relevant material/assessments required for identified permits and statutory approvals.
- Preparation of detailed cost estimate (quote) for the preparation of the following reports/plans if identified as required after completion of above actions:
  - Historical Heritage Assessment;
  - Cultural Heritage Assessment;
  - Net Gain Assessment/Offset Plan; and
  - Geotechnical Assessment.

A copy of the Vegetation Management Assessment and Works Report prepared by Ecology Consultants Pty Ltd is available for viewing upon request. Appendix 2 contains a map that shows all areas identified for vegetation modification.

#### 4.2.1 Removal/Lopping of Hazardous Trees:

The following criteria originating from MAV was used to guide hazardous tree identification:

- Dead trees that are leaning towards or overhanging the road/NSP site and would likely block the road/NSP site and/or injure someone at the NSP site if they fell.
- Trees that are leaning significantly towards the road/NSP site and tree limbs that are overhanging the road/NSP site and are in immediate danger of falling on the road/NSP site.
- Diseased and/or infested trees that would likely block the road/NSP site if they fell.
- Trees at the top of cuttings, with exposed roots and/or partial support which are exposed to high winds making them highly susceptible to fall and blocking the road/NSP site.
- Trees that are clearly unstable due to poor root system making them highly susceptible to falling and blocking the road/NSP site.

All trees identified using the above criteria were assigned for lopping or removal. Trees recommended for lopping were marked with spray paint and an individually-numbered pink iodised aluminium tag,

attached to the trunk (with an aluminium nail) at breast height (facing the road). For each tree identified the following information was recorded:

- a) the appropriate MAV criteria(s);
- b) diameter at breast height (over bark) of the largest trunk;
- c) species; and
- d) whether the tree was alive or dead.

Across the study area 115 trees were identified as requiring removal and 97 trees requiring lopping. The assessment for hazardous trees was undertaken by a qualified Arborist, supported by two additional staff. The following table provides a breakdown of the hazardous trees identified in the study area.

| Road Name           | Actions                    | No. of Trees Removal | No of Trees Lopping | Total No. Trees |
|---------------------|----------------------------|----------------------|---------------------|-----------------|
| NSP                 | SP, RF, WR, HWR, DW, R, RS | 7                    | 26                  | 33              |
| Gellibrand River Rd | SP, RF, WR, HWR, DW, R, RH | 51                   | 31                  | 82              |
| Larsons Rd          | SP, RF, WR, HWR, DW, R     | 8                    | 4                   | 12              |
| Carlisle Rd         | SP, RF, WR, HWR, DW, R     | 7                    | -                   | 7               |
| Tuckers Orchard Rd  | SP, RF, WR, HWR, DW, R     | 8                    | 13                  | 21              |
| Moomowroong Rd      | SP, RF, WR, HWR, DW, R     | 15                   | 15                  | 30              |
| Lucas Rd            | SP, RF, WR, HWR, DW, R     | 19                   | 5                   | 24              |
| Lyness Rd           | SP, RF, WR, HWR, DW        | -                    | 3                   | 3               |
| <b>TOTAL</b>        |                            | <b>115</b>           | <b>97</b>           | <b>212</b>      |

Table 1: Breakdown of identified hazardous trees in the Carlisle River study area. Data extracted from the Neighbourhood Safer Places Vegetation Management Assessment and Works Report.

**Legend for Actions:**

- SP = Structural Prune
- WR = Weight/Load Reduction
- DW = Deadwood Removal
- RS = Remove Tree (including stump)
- RF = Risk and Form
- HWR = Heavy Weight Reduction
- R = Remove Tree
- RH = Remove Tree (leave log for habitat).

**4.2.2 Removal/Reduction of Broad-area, Elevated and Surface Fuels**

Roadsides generally have areas where large amounts of debris have accumulated over time, excess surface and elevated fuels on roadsides add considerably to the overall fuel load and in turn contribute to enhanced fire activity during a fire event, in particular the fire’s rate of spread and flame height.

To enable passage along access routes to the NSP in comparative safety identified areas of broad area and excess surface and elevated vegetation adjacent to roadsides required modification to reduce potential radiant heat flux to below 10 kW/m<sup>2</sup>, in line with CFA guidelines for NSPs.

The methods used for determining set-back distances and the extent of vegetation modification required were based on contemporary and relevant bushfire assessment tools. The methodology is consistent with recent reforms to the Victorian Planning Scheme arising from outcomes of the Black Saturday Royal Commission.

For areas proposed for broad-area vegetation modification, an Inner- and Outer Zone was calculated based on the Bushfire Management Overlay (BMO), as outlined in the BMO Advisory Note 44 (Feb. 2012). Assessment was done by sampling fuel loads, slope and vegetation classes within areas highlighted for broad-area vegetation modification (and areas for removal/reduction of excess surface fuels). The Bushfire Management Overlay (BMO) methodology was then used to determine the optimal set-back distances to reduce the bushfire radiant heat impact along access roads to the desired levels. For fuel-

hazard calculations, the highest slope value was used for calculations, and the highest measured fuel load was used as the overall representation of surface fuels and the overall fuel hazard. This input provides recommendations based on the worst-case scenario, in terms of bushfire behaviour. Actual measured values were employed rather than the BMO prescribed maximum fuel loads and slope categories so as to reflect site conditions. The following table provides a breakdown of the broad-area vegetation modification and excess surface and elevated fuels modification identified in the study area.

| Road Name                  | Actions                | Inner Zone(ha) | Outer Zone (ha) | Total Area (ha) |
|----------------------------|------------------------|----------------|-----------------|-----------------|
| Tuckers Orchard Rd (north) | Mech, Ch, MR, RW, Chip | 1.89           | 1.02            | 2.91            |
| Tuckers Orchard Rd (south) | Mech, Ch, MR, RW, Chip | 0.94           | 0.47            | 1.41            |
| Moomowroong Rd             | Mech, Ch, MR, RW, Chip | 0.38           | 0.18            | 0.56            |
| Moomowroong Rd             | Mech, Ch, MR, RW, Chip | 0.68           | 0.35            | 1.03            |
| Gellibrand River Rd        | Mech, Ch, MR, RW, Chip | 1.37           | 0.64            | 2.01            |
| <b>TOTAL Area (ha)</b>     |                        | <b>5.26</b>    | <b>2.66</b>     | <b>7.92</b>     |

Table 2: Breakdown of broad-area vegetation modification required in the Carlisle River study area. Data extracted from the Neighbourhood Safer Places Vegetation Management Assessment and Works Report.

| Road Name                          | Actions       | Area (ha)   |
|------------------------------------|---------------|-------------|
| Gellibrand River Rd (west cutting) | MR, RW, B     | 0.53        |
| Gellibrand River Rd (east cutting) | MR, RW, B     | 0.51        |
| NSP                                | SL, MR, RW, B | 3.71        |
| Gellibrand River Rd                | MR, RW, B     | 0.48        |
| Lucas Rd                           | MR, RW, B     | 0.38        |
| Moomowroong Rd                     | MR, RW, B     | 0.08        |
| <b>TOTAL Area (ha)</b>             |               | <b>5.69</b> |

Table 3: Breakdown of excess surface and elevated fuel modification required in the Carlisle River study area. Data extracted from the Neighbourhood Safer Places Vegetation Management Assessment and Works Report.

#### Legend for Actions:

- MR = Manual Removal of excess surface fuel load
- RW = removal of woody weed biomass
- B = Burn Excess Fuel
- Ch = Chainsaw
- SL = Slash grasses
- Mech = Mechanical removal of excess woody biomass
- Chip = chip/shred coarse woody debris

### 4.3 Cultural Heritage

The following preliminary works have been undertaken:

- a review of the *Aboriginal Heritage Act* 2006, including the Aboriginal Heritage Regulations 2007;
- a check of the Aboriginal Affairs Victoria (AAV) heritage site and place records;
- a review of previous Aboriginal archaeological assessments;
- a review of Native Title stakeholders and Registered Aboriginal Parties (RAPs) to determine Aboriginal stakeholders with cultural heritage interests in the study area;<sup>1</sup>
- a review of the Heritage Inventory;
- a review of the Heritage Register;
- a review of the Australian Heritage Database (including the Commonwealth Heritage List, the National Heritage List, the Register of the National Estate, World Heritage List);
- a review of the National Trust Database;
- a review of local council planning scheme heritage overlays;

- a review of previous historical archaeological assessments; and
- a brief inspection of the study area.

#### 4.3.1 Aboriginal Cultural Heritage:

Through this review the opinion was formed that the proposed works associated with the proposed vegetation management and NSP creation do not trigger the need for a Cultural Heritage Management Plan (CHMP) under the Aboriginal Heritage Regulations 2007.

Note that while the vegetation management works do not necessarily require a CHMP, as mentioned above, given the possibility of Aboriginal cultural heritage to occur within the study area it would be considered prudent to undertake a CHMP for the entire area (NSP and vegetation management areas) in order to best manage risk associated with the works.

#### 4.3.2 Non-Aboriginal Heritage:

No registered Historical sites/places occur within the study area and no historical structures were noted during the site inspection. No further European heritage assessment is deemed necessary prior to the initiation of the development.

### 4.4 Offsets

Under the Planning and Environment Act the vegetation removed to establish the NSP would need to be offset to achieve an overall net gain.

Offset prices have been calculated using DSE BushBroker price history. Research indicated that the price per Habitat Hectare ranged between \$20,000 and \$380,000. However, the average of all Habitat Hectare transactions is \$139,857, but the Otway Plains Bioregion (from where the Habitat Hectares would need to be purchased) does not have an independent price history. Given that the information available relates to previous prices, it is reasonable to expect that today's prices should reflect current land values. Applying 10% to the aforementioned price (\$139,857 per Habitat Hectare); a value of \$153,843 per Habitat Hectare was arrived at. The total cost of offsets for Carlisle River has been calculated to be \$1,790,909.00

For more information on the calculation of offsets refer to the Vegetation Management Assessment and Works Report by Ecology Consultants.

### 4.5 Flora and Fauna

In the Carlisle River study area, broad-area vegetation modification will reduce considerably the structural diversity of vegetation classified as Heathy Woodland EVC (i.e. Habitat Zones 121, 161, 163–165). These areas were assessed as having Very High Conservation Significance due to the likely presence of *Environment Protection Biodiversity Conservation Act 1999* (EPBC) listed species; the Southern Brown Bandicoot and Long-nosed Potoroo. Consequently, it is considered necessary to refer this matter to the Australian Government for consideration under the EPBC Act.

Permits under the *Flora and Fauna Guarantee Act 1988* will be required for the removal of native vegetation on public land as there is potential for the activities proposed to remove flora species and/or disturb habitat of FFG-listed fauna. Moreover, implementation of the vegetation-modification activities proposed along NSP access and egress roads *may* require an Environmental Effects Statement under the *Environmental Effects Act 1978*.

General Flora inspections were conducted initially from a vehicle and on foot to determine the position and extent of native vegetation occurring within the study areas. Coarse visual assessments of vegetation condition were undertaken at this time, with vegetation assigned to one of three categories. This information was drawn onto aerial photographs and subsequently digitised using GIS software.



The study areas were assessed for general fauna habitat values that may be important for rare or threatened fauna species identified during the desktop review. A record was taken of habitat quality, along with all species sightings and signs of occupation (e.g. scats, tracks, diggings, calls, etc.) encountered during site inspections.

#### **4.6 Geotechnical Assessments**

Scott Emmett, consultant geologist conducted a one-day site inspection (5 June 2012) of the study area to assess the potential impact of vegetation modification on the stability of road cuttings and to identify any potential geotechnical issues.

The batter angles are regarded as overly steep in Carlisle River and this would primarily reduce the current factor of safety (with respect to slope stability) of the batter. However in saying this, there is only limited evidence of deep seated failures over the full height of the batters. In most instances these batters have only deteriorated near the crest of the slope where clean sand soils are present, therefore the impacts of tree and leaf litter removal will not impact on the batters' stability, however it will potentially increase the recession of the crest of the slope.

#### **4.7 Car Park**

To assist Council in identifying accurate costs and developing a car park design and layout plan for this component of work for the recommendation report Hyder Consulting Pty Ltd was engaged through Council's Tenderlink process to prepare a Car Park Design report, the project objectives and outcomes were as follows:

##### Project Objectives:

- Develop car park design and layout plans for each potential NSP site that considers community amenity, existing and future development and use of each site.
- Provide clear instructional plans for the construction of car parking at each of the three identified potential NSP sites.
- Provide clear and concise cost estimates (quotes) for the construction of each car park.
- Identify all permits and statutory approvals from relevant authorities required to be obtained to undertake the development and construction of each car park.
- Identify recommended maintenance regime and associated indicative costs for each car park.

##### Project Outcomes:

- Preparation of an Issues Analysis Paper early in the project.
- Development of three detailed car park design and layout concept plans for each potential NSP site which consider but are not limited to the following:
  - Existing use of the site
  - Potential future developments for each site
  - Amenity values
  - MNSPP criteria outlined in section 1.1
  - Existing assets and infrastructure on each site. i.e. well at Barwon Downs
- Preparation of documents, images, plans, reports and other communication materials to Council and the project steering committee that maximise understanding of the project and opportunities to be considered.
- Development of a recommended approach to implement the five stages identified in section 7 of this document.

- Preparation of a report identifying relevant exemptions available and all permits and statutory approvals required from relevant authorities.
- Identification of additional relevant material/assessments required for identified permits and statutory approvals.
- Development of a recommended approach to the implementation of each preferred car park design and layout plan.
- An Executive Summary that concisely summarises the work undertaken by the consultancy.
- A Final Report addressing all issues contained in the project brief with recommendations and options that respond to these issues. Importantly all recommendations responding to these issues must have adequate strategic justification to ensure they can be successfully implemented.

A methodology developed by CFA in 2009 was used to assist in determining the number of car parks that would be required for a potential NSP site. Using this methodology based on a population of 105 people at least 16 car parking spaces should be planned for at the Carlisle River potential NSP site. Capacity for Disability parking should be considered additional to this.

In May 2012, Hyder Consulting was commissioned by Colac Otway Shire to provide car park layout and design and tender documents for the proposed NSP Carlisle River. To assist with the design several preliminary activities were undertaken, including a site inspection of the site, geotechnical assessment of existing ground conditions for the purposes of pavement construction, feature survey of the proposed car park site (2d and 3d) and investigation of the presence and impact upon existing known utilities using the Dial-Before-You-Dig (DBYD) online system.

The findings of these activities indicated that the existing subgrade at Carlisle River is extremely moisture sensitive and it is likely that replacement with suitable fill will be required to provide a sound base for pavement construction. There are a number of existing services at the proposed car park site, however the information received from the DBYD enquiry did not show any direct clashes that would require relocation or temporary diversion.

Hyder commissioned Surfcoast Survey & Drafting Services Pty. Ltd. to undertake 2D and 3D feature surveys of the NSP car park site in order to pick up all existing features and services. This work was undertaken between 3 – 9 July 2012. The Carlisle River survey was aligned to an arbitrary datum as the surveyor was unable to achieve a GPS signal on site. This is not expected to cause any issues with respect to construction set out.

Hyder commissioned NSP Geotechnics Pty Ltd to undertake the geotechnical investigation at the NSP site. The field work was carried out on 4 July 2012 and involved the drilling of 4no. boreholes to a depth of up to 1.5 metres at each of the NSP sites. Dynamic Cone Penetrometer (DCP) testing was also carried out at each of the borehole locations.

The car park has been designed in accordance with Class 3 requirements outlined in S2890.1. It is recommended that the works be conducted during the drier months of the year and the site will take approximately 8 weeks to construct. The total construction cost will be \$186,497.00

## **5. Budget – Set up Costs**

The table below shows the confirmed estimated costs of establishing the NSP at Carlisle River based on the findings of the various reports commissioned by Council and other associated cost estimates. The table also shows the indicative funding identified by Taskforce 23.

The table shows that the cost of establishing the NSP is in excess of double the Taskforce 23 estimate, this is largely due to the amount of vegetation modification necessary and the corresponding offsets required. Investigation has been undertaken to identify potential exemptions for offsets and alternative ways of achieving the required offsets at a reduced cost. An option raised and discussed in the Vegetation Management Assessment and Works Report by Ecology Consultants is that of a property purchase by Council. Ecology Consultants considered and indicatively costed this option assuming that all three NSPs identified by Taskforce 23 would go ahead collectively. This option would also bring with it additional workload for Council in managing and maintaining the land as an asset, this option has merit, however for the purposes of this report the recommendation has been made using the known and reliable BushBroker figures.

Flora and fauna surveys, cultural heritage and car parking are all additional items that were not considered by the Taskforce.

| Item  | Confirmed Establishment Costs (Ex GST) | Taskforce 23 Funding (Ex GST) |
|---|--|-------------------------------|
| <b>Achieving Offsets – DSE BushBroker</b>                             | \$1,790,909.00                         | \$495,000.00                  |
| <b>Vegetation Modification</b>  | \$527,416.00                           | \$205,100.00                  |
| Lopping and removal of hazardous trees                                | \$193,240.00                           |                               |
| Broad-area vegetation modification                                    | \$295,484.00                           |                               |
| Reduction/removal of excess and elevated surface fuel along roadsides | \$38,692.00                            |                               |
|   | \$527,416.00                           |                               |
| <b>Cultural Heritage</b>  | \$51,400.00                            |                               |
| <b>Flora and Fauna</b>  | \$67,322.00                            |                               |
| EPBC Referral and survey  | \$45,686.00                            |                               |
| Targeted surveys (spring)   | \$9,818.00                             |                               |
| Fauna salvage planning and operations                                 | \$7,273.00                             |                               |
| Contingency   | \$4,545.00                             |                               |
|   | \$67,322.00                            |                               |
| <b>Signage</b>  | \$2,000.00                             | \$2,000.00                    |
| <b>Project Officer</b>  | \$16,568.00                            | \$16,568.00                   |
| <b>Car Park Construction</b>  | \$186,497.00                           |                               |
| <b>Permits</b>  | \$2000.00                              | Included in Offset Costs      |
| <b>Total Cost :</b>   | <b>\$2,644,112.00</b>                  | <b>\$718,668.00</b>           |
| <b>Establishment Funding Offered by State Government</b>              | <b>\$718,668.00</b>                    |                               |
| <b>Cost Gap</b>   | <b>\$1,925,444.00</b>                  |                               |

## 6. Maintenance Costs

Maintenance costs have been estimated for the various ongoing activities as outlined below:

- Roadside vegetation management activities are estimated to be approximately \$50,737.00 per year.
- Car Park maintenance costs are estimated to be minimal for the first 15 years due to the pavement surface. A minimal cost of \$1,000.00.
- Site vegetation management – maintaining grass length at no more than 10cm in height over the declared fire danger period is estimated to cost approximately \$3,200.00.

The total conservative estimated cost of maintaining this site is approximately \$54,937.00 per year. It should be noted that there was no Taskforce 23 funding committed for maintenance.

## 7. Community Engagement

The community engagement strategy has followed the recommendations of the Colac Otway Shire Council Engagement Policy of January 2010, which details five levels of engagement – inform, consult, involve, collaborate and empower.

The community engagement method selected was to inform the general public and to involve and empower key stakeholders in the decision making process:

Two community information sessions were held in Carlisle River for residents, business owners and community groups. The focus of the first meeting held was to provide residents with an overview of the background behind NSPs in general and the three Taskforce 23 NSPs, residents were provided with information on the activities being undertaken at the time, in particular the Vegetation Management Assessment and Works Report contract. An aspect of this work, involved the physical marking of trees with spray paint and metal tags that were identified by an arborist as hazardous, requiring removal or lopping.

A key aim of the initial community information sessions and media releases was to assure residents that no trees would be removed without first consulting with the community and that the work being undertaken was investigative in nature and required in order for council to develop accurate costs for the Recommendation Report.

Council Officers returned to the community once the Vegetation Management Assessment and Works Report was completed, and presented on the progress to date in developing the Recommendation Report. A strong focus of the presentation was the work undertaken by Ecology Consultants through the Vegetation Management Assessment and Works Report Contract. Specific aspects of the report included an extensive series of maps that show:

- trees that have been identified as hazardous requiring removal;
- trees identified as requiring lopping;
- areas for broad scale surface and elevated vegetation modification required to meet the 10 kW/m<sup>2</sup> radiant heat as identified by Taskforce 23; and
- habitat zone and vegetation type within identified study areas.

This information was shared so that residents could fully appreciate which trees and roadside vegetation would be removed/modified if the potential NSPs were to be established.

There were a number of residents that felt passionately about retaining all trees and vegetation and were not supportive of any change to their environment while others were more concerned about the fire safety risks.

Attendance at these meetings was good with an overall positive response to the rigour of the work undertaken and an appreciation that the costs associated with implementation were very substantial.

The following lists identify all internal and external people who have been engaged with and/or contributed to this project:

### Internal:

- Councillors
- General Manager Sustainable Planning and Development
- General Manager Corporate and Community Services
- General Manager Infrastructure and Services

- Municipal Building Surveyor
- Manager Sustainable Assets
- Contract Administration Officer
- Manager Finance and Customer Service
- Manager Health and Community Services
- Statutory Planner
- Manager Organisational Support and Development
- Customer Service Staff
- Financial Operations Coordinator
- Manager Planning and Building
- Manger Cosworks
- GIS Coordinator
- Recreation Arts and Culture Manager
- Property Officer
- Corporate Services Executive Officer
- Risk Services Officer
- Municipal Emergency Management Coordinator
- Municipal Emergency (Fire) Management Coordinator
- Municipal Emergency Management Officer
- Business Development Officer
- Design Engineer
- Manager Capital Works
- Contracts Coordinator
- Environment Coordinator
- Development Engineer
- Revenue Coordinator
- Manager Environment and Community Safety
- Public Relations Coordinator

External:

- Municipal Emergency Management Planning Committee
- Municipal Fire Management Planning Committee
- Carlisle River residents, community groups and business owners
- Ecology Consultants Pty Ltd
- Hyder Consulting Pty Ltd
- GHD Pty Ltd
- Geelong Environmental Occupational Hygiene
- Digga Excavations
- Opteon Pty Ltd
- CFA
- DSE

## **8. Recommendation**

That the Carlisle River Neighbourhood Safer Place – Place of Last Resort **not** proceed to implementation, as the cost of establishing this site far exceeds the funding offered by the State Government.

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**Appendix 1**  
**Taskforce 23 Action Plan**  
**Carlisle River**

# Taskforce 23 Action Plan – Carlisle River

## ACTION PLAN

| High Baseline Risk Township | Carlisle River  | Shelter Options | Location of suggested Safer Products | Costs Township |
|-----------------------------|---|-----------------|--------------------------------------|----------------|
| Municipality                | Colac River<br>Colac District   |                 |                                      |                |
| Underpinning Factors        | NSP-PUR can be achieved if the required works are undertaken and impediments overcome. Consideration should be given to the establishment of a purpose built fire refuge consistent with the revised OESD guidelines (proposed). The action plan should be developed by a written evaluation plan developed by the CFA, DSE, Victoria Police and local council. |                 |                                      |                |

| Population  | 315 | Number of Dwellings                   | 134 |
|-------------|-----|---------------------------------------|-----|
| Average Age | 42  | Residents at same address 3 years ago | 67% |

| Site Name          | Carlisle River Recreation Reserve   | NSP - PUR Establishment Recommended                      | YES          |
|--------------------|-------------------------------------|--|--------------|
| Address            | Carlisle River Road, Carlisle River | Cost of establishment works (other than NSP)             | \$223,600.00 |
| Description of Use | Recreation Reserve                  | Cost of complying with Planning and Building Legislation | \$795,000.00 |
| Site Type          | Open Space                          | Total cost of establishing NSP-PUR (see savings)         | \$771,400.00 |
| Date of inspection | 28 August 2010                      | Inclusive structures to complete all works               | 3 - 4 Months |

| Issue                         | Assessment Notes  | Required Works   | Estimated Cost | Estimated Timeframe |
|-------------------------------|---|--|----------------|---------------------|
| 1. Suitable impact assessment | Small area of vegetation on perimeter of NSP-PUR requires clean up  | Vegetation modification where NSP-PUR Protective Zone as shown on attached NSP-PUR Location Map required to reduce radiant heat and ember effect to acceptable levels  | \$6,000.00     | 2 months            |
| 2. Land / Building Issues     | No concerns identified  | Nil works  | \$0.00         |                     |
| 3. Access and Egress          | Fire roads and dangerous trees along access roads will expose residents to excessive radiant heat and potentially block roads | roadside vegetation works / management (including mowing and herbicide tree assessment) as shown on NSP-PUR Township Map required to enhance safety along access roads | \$104,500.00   | 2 months            |
|                               | NSP and potentially block roads   | Herbicide tree assessment as shown on NSP-PUR Township Map required to enhance safety along access roads   | \$65,200.00    | 2 months            |
|                               | Block roads   | Vegetation management required to enhance safety along access roads  | \$7,000.00     | 2 months            |
|                               | Significant tree issues along access roads  | Township Map required to enhance safety along access roads   |                |                     |
|                               | Routes showing ability to reach NSP-PUR   |  |                |                     |
| 4. Interfering Issues         | None  | NSP-PUR signage required   | \$2,000.00     | 2 weeks             |
|                               |   | Speed management structures required to enhance works  | \$16,500.00    |                     |
| 5. Compliance Issues          | Recreation works identified above require compliance with planning and building legislation                                   | Planning and building permits and native vegetation offset required  | \$450,000.00   | 1 month             |
| 6. Maintenance                | Ongoing maintenance of vegetation   | Site must be maintained to maintain fuel levels  | \$21,400.00    | Annually            |

**Notes**

Planning permit required to address heritage and vegetation modification requirements

Ongoing maintenance of vegetation

**Recommendation**

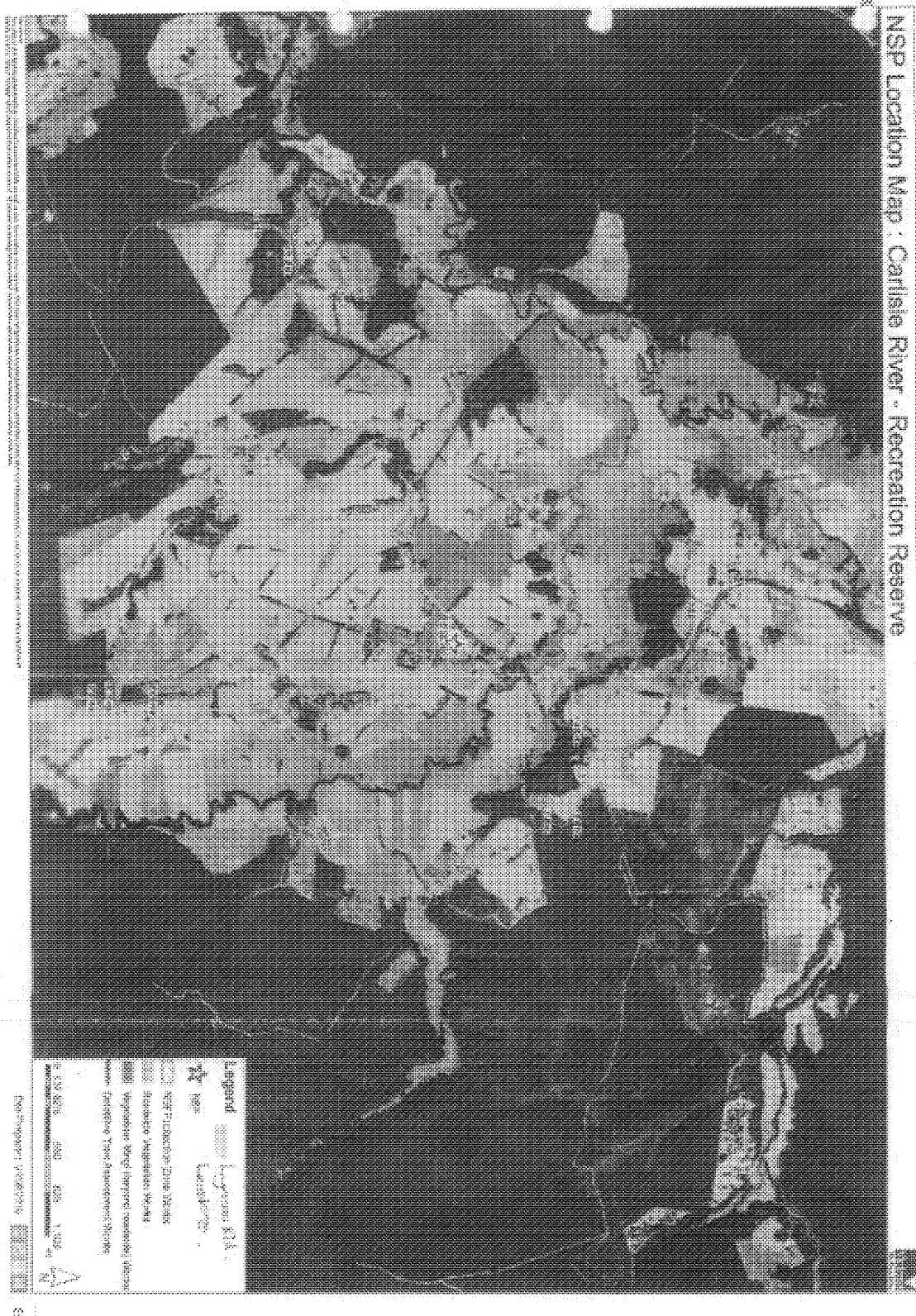
Assessment to VPP's to exempt works associated with the establishment of an approved Neighbourhood Safer Place

Required works are included in the management plan and budgeted

Rater to site per number 3 for detailed assessment notes and works







## **Appendix 2**

# **Hazardous Tree Identification and Vegetation Modification Areas Carlisle River**



