Asset Protection Zone Engagement in Wye River and Separation Creek

Engagement activities held in July and August 2016

VICTORIA State Government | Environment, Land, Water and Planning

Executive Summary

This report outlines findings and analysis of engagement undertaken with the Wye River and Separation Creek Community in July/August 2016 about Asset Protection Zones (APZs) as a potential strategy to reduce BAL ratings for community members wishing to rebuild following the Wye River – Jamieson Track fire that impacted the towns on Christmas Day 2015.

APZs and other fuel management options were explored with the community, fire management agencies and subject matter experts through an engagement program which targeted people directly affected by the Wye River- Jamieson Track fire and the broader Wye River and Separation Creek community.

Analysis of the engagement process identified seven key themes which were the key drivers of participants' preferences for APZs in the settlement. Those themes are:

1. **Complex concepts, complex environment** – Considering APZ options required an understanding of complex information, and conversations took place in the complex context of a community disrupted by fire and ongoing recovery.
2. **Environment and amenity are very important** - It was evident that participants consider the local environment and amenity as very important, and this was a strong influence on the discussion.
3. **The community wants to get the best outcome for the most people** - It was apparent that participants wanted an outcome that is best for most people in the community.
4. **"I need the support the government can provide"** - Many community members do not feel they are able to manage risk and recovery without significant government support and intervention.
5. **"I accept and manage my own risk" –** Conversely, other community members moved into Wye River and Separation Creek aware of the inherent bushfire risk and chose to accept that risk.
6. **APZs seem to have minimal benefits or come at a high cost -** Many people were concerned that the costs of implementing APZs outweigh any benefits, or that benefits are minimal.
7. **People want to explore other options -** There was strong support for exploring alternative options which do not involve APZs.

This process demonstrated the willingness and tenacity of the Wye River and Separation Creek community to immerse themselves in a challenging and complex problem in an attempt to find the most effective solutions. Regardless of outcomes, the community, agency staff and experts participated in a productive and informative process which has strengthened relationships and improved understanding in all directions.

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Figure 1: Discussing environmental impacts of Asset Protection Zone options at Karingal Drive (Cluster 3), 9/7/2016.

Introduction

Following the Wye River-Jamieson Track fire, the Victorian government committed to working with the Wye River and Separation Creek community to assist in their recovery and resettlement. In the course of this process, community members wishing to rebuild in Flame Zone (FZ) areas requested an investigation to determine if Asset Protection Zones (APZs) could reduce their BAL rating from FZ to BAL 40.

To assist the community to understand and explore APZ and other vegetation management options that may be suitable for the settlement, DELWP collaborated with fire management agencies and fire experts to deliver a community engagement program throughout July and August 2016 including a field trip, on site meetings, an online survey and open house events. The engagement program aimed to support and involve the community in discussions about APZs and report back to the Victorian government on the community's views.

The engagement program connected the Community Resilience Committee (including the Building, Planning and Fire subcommittee), relevant agencies, independent experts and community members for the purposes of:

- Exploring community narratives about risk management options, their potential costs and benefits, likely trade-offs, and appetite for implementation
- Exploring options to maximise efficiency of the rebuilding process
- Supporting the community to work together at different spatial scales - settlement wide, in neighbourhood 'clusters' and at 'street' level
- Ensuring community had access to independent, trusted and credible information to support their collective decision making regarding rebuilding and resettlement
- Consulting the community to inform decision making on future bushfire risk management and investment by agencies.

In addition to a range of APZ options, other treatments to reduce BAL ratings were discussed, including re-siting of houses, installing fire bunkers, and updating methodology to undertake BAL assessments.

This report will outline the engagement approach (Section 1), report on engagement results and discussion (Section 2) and evaluate participant feedback from the engagement program (Section 3). Raw data from the engagement program and supporting information can be found in the appendices.

Section 1: Engagement Approach

The engagement approach employed the Diverge > Converge model of group decision making which helps groups diverge on an issue through identifying, generating and gathering data; and then converge, through discussion and processing of information, to generate understanding.

The program was designed to facilitate divergence by guiding participants through expert advice and information before asking them to provide and generate local information and input, and then facilitate convergence by reporting and discussing findings and analysis.

The engagement program was comprised of four main components:

1. APZ Field trip
2. Cluster Meetings
3. Online Survey
4. Open Houses

Significant efforts were made to ensure community members were aware of engagement opportunities, including advertising on the Wye Sep Connect website and the Community Recovery Newsletter; promoting events at community meetings; and providing information to the Community Resilience Committee (including the Planning, Building and Fire and Flora, Fauna and Beachscape sub-committees). Additionally, property owners located within or adjacent to potential APZs options were directly invited to cluster meetings.

1.1 APZ Field Trip

A community APZ Field trip was held on Sunday July 3 for interested community members to join agency staff and fire experts to visit existing asset protection zones in similar high risk coastal townships including Anglesea, Fairhaven and Lorne. Participants explored and discussed APZ functions, design options, effectiveness and impacts on adjacent communities, with a reference to landscape and township scales. 2 community members attended the field trip.

1.2 Cluster Meetings

A series of eight Cluster meetings were held over July 8th, 9th, 15th and 16th. Cluster meetings were designed to elicit rich and descriptive data from participants to build understanding of their values and needs relating to recovery and bushfire management in their landscape. The meetings were the core of the engagement process, allowing people to enter into deep discussion and consideration of options, supported by expert advice and resources.

For the purposes of engaging people in their local area and facilitating cooperation and understanding between neighbours, fire affected areas of Wye River and Separation Creek were divided into eight street scale ‘clusters’ based on location and shared challenges. All property owners affected by the fire were invited to participate in cluster meetings, including those whose properties are zoned as BAL FZ.

The cluster meetings gave participants access to independent experts and agency staff to explore rebuilding and risk management aspirations, ideas and narratives on site in light of the various APZ options. Each meeting was attended by a DELWP facilitator, Dr Kevin Tolhurst (bushfire behaviour and ecological expert), Anthony Miner (expert geotechnical consultant), two DELWP strategic fire planning staff, shire

planning staff, and shire fire management staff. Peer support was also available at cluster meetings, provided by Red Cross and Lorne Hospital.

Meeting attendees were presented with between 1 and 4 APZ options (based on local constraints and features) for consideration, set out in a Consequence Table which reported the performance of each option against decision making criteria. These criteria included potential to reduce BAL ratings, potential to support landscape fire management (firefighting, back burning, planned burning, etc.), biodiversity / ecological impacts, geotechnical risks, safety risks of implementation and maintenance, costs of implementation and maintenance and timeframes for APZ establishment. These discussions also explored other ways to reduce BAL ratings rather than just APZ's, eg: installing bunkers and re-siting houses.

Participants viewed virtual three dimensional visualisations developed for the APZ options which allowed them to envisage how the APZ options might look in the landscape. The visualisation work was a novel approach to engaging the community around the look and feel of the different options, and used local streets and landmarks to make them as 'real' as possible. The visualisation products were further supported by photos of existing APZs in other parts of the Otways.

Following the introduction of above information, a facilitator guided participants through in-depth discussions about their views on APZs and other options, including how those options would impact their use and enjoyment of the landscape. This allowed for the collection of rich qualitative data from which participant values, needs and ideas emerged.

Comments and discussions were recorded for analysis. Participants were also asked to rate each option against the criteria of landscape amenity impact, and indicate their level of support or opposition for each option. This quantitative data was incorporated into the consequence table. 51 people in total attended the 8 cluster meetings.

1.3 Online Survey

To capture the input of the broader Wye River and Separation Creek community (i.e. beyond people allocated to the eight clusters) an online survey was open to the public from July 22nd to Aug 2nd. The survey was designed to gauge broader community views on APZs, and understand the drivers of those views. The visualisation tool was also utilised in the online survey, to ensure that those that could not attend on-site cluster meetings were still able to get a feel for what an APZ in their landscape might look like.

Survey data was used to support data collected at cluster meetings, and provide an indication of preferences of the wider community. The online survey had 31 responses.

1.4 Open House events

Two open house events were held following the completion of data collection and analysis – one in Wye River on August 7th and one in Melbourne on August 10th . The purpose of the open houses was to achieve the convergence of ideas and understanding in the community by reporting back on input and analysis from cluster meetings and the online survey.

Open houses were hosted by DELWP staff who gave attendees the opportunity to discuss the process, results and analysis, aided by the completed consequence table and A1 sized posters describing key themes and results of the engagement. Approximately 30 people in total attended the two open house events.

Section 2: Engagement Results and Discussion

2.1 Cluster Meeting Results

In total, 51 people attended cluster meetings, providing qualitative input through their questions, comments and discussions and quantitative input by scoring against two criteria of the consequence table; support/opposition and impact to amenity. This section provides an overview of cluster meeting results overall – data sets from individual clusters can be seen in appendices 2-9.

APZ option support and opposition

The options presented at cluster meetings where participants were asked to identify their level of support of opposition were:

Option 1 – Status quo

Option 6 – Minimum distance APZ (to reduce BAL from FZ to 40) on moderate slopes

Option 7 – DELWP standard 40m APZ on moderate slopes

Option 8 – Minimum distance APZ (to reduce BAL from FZ to 40) in all areas, including steep slopes

Figure 2 below demonstrates that overall, cluster meeting participants strongly opposed the implementation of option 1, whereas options 6, 7, and 8 each received reasonably high levels of support. Option 8 received the highest level of overall support (77%), while options 7 and 8 were almost equally strongly supported (56% and 55% respectively).

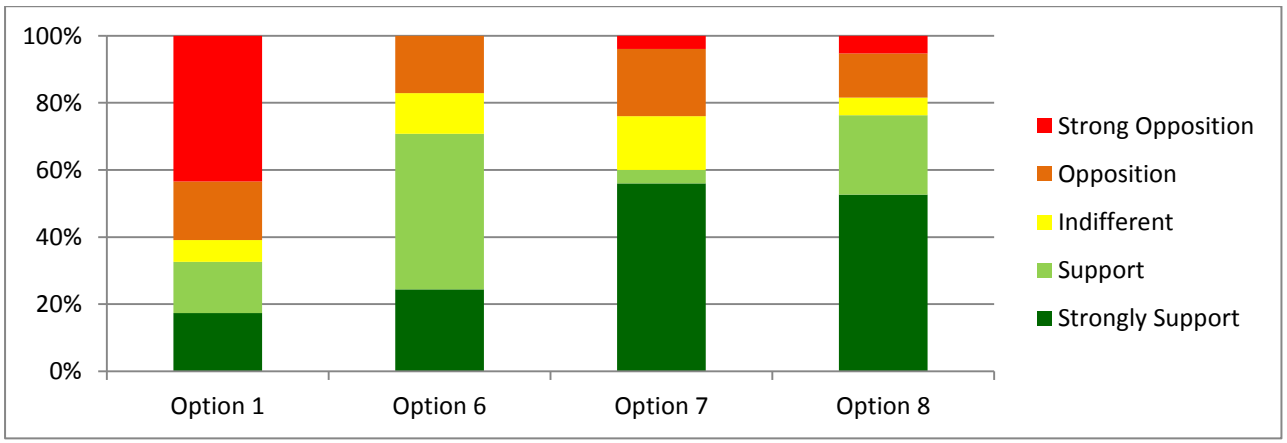


Figure 2: Overall support and opposition of APZ options at cluster meetings

Option 1 – Status Quo (Current BAL modelling, no APZ, no bunkers, no re-siting options)

Cluster meeting participants demonstrated significant opposition towards option 1 (61%), with 44% of respondents strongly opposed (figure 3). A total of 32% supported or strongly supported this option.

This option was primarily opposed because people wanted to achieve some reduction to BAL ratings or bushfire risk. Therefore, simply maintain the status quo was not attractive to most. People argued that instead of maintaining the status quo they would prefer to:

- Implement an APZ option
- Explore alternative options
- Reduce fire risk on their own blocks

People who supported maintaining the status quo through this option did so because they did not believe APZs would be effective, would make people complacent, or would provide little benefit at a high cost (e.g. living in a significantly altered landscape year round for a small benefit on a couple days of the year).

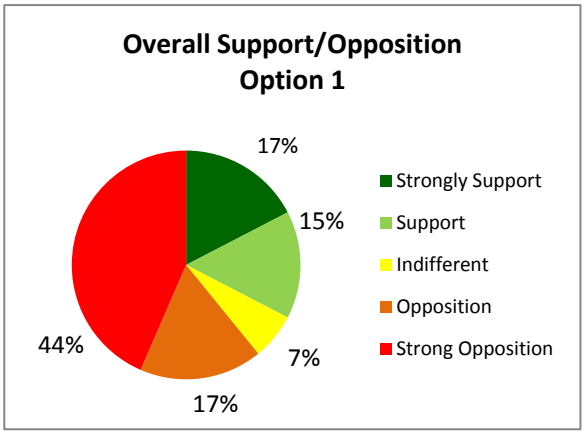


Figure 3: Overall Support/Opposition for option 1

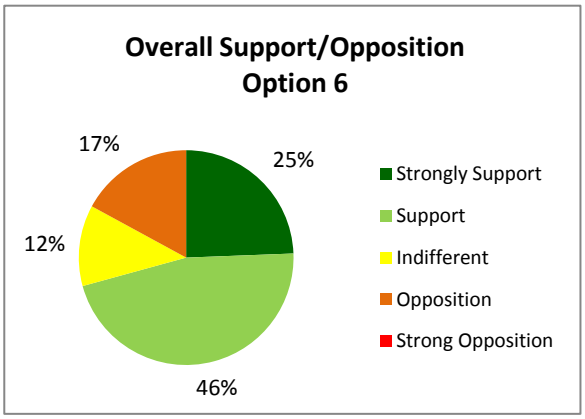


Figure 4: Overall Support/Opposition for option 6

Option 6 – Minimum distance APZ to achieve BAL rating reduction from Flame Zone to BAL 40 on slopes less than 25 degrees

Option 6 was supported by 71% of respondents and strongly supported by 25%, with 17% opposition but no strong opposition (figure 4).

Support for this option was primarily due to its ability to reduce BAL ratings and rebuilding costs. Those who opposed this option did so because they believed it would not provide additional firefighter access, and therefore would not be beneficial for most people. Others opposed the option because the lengthy wait for any APZ option to be implemented was too long and would not assist rebuilding in the short term.

Option 7 – DELWP Standard APZ to achieve all four purposes including fire-fighter access and BAL rating reduction on slopes less than 25 degrees

Option 7 was strongly supported by 56% of respondents, and supported by 60% overall. 24% opposed or strongly opposed this option (figure 5).

This option was supported primarily because it supports township risk reduction and firefighting efforts. It was also supported because it encourages shared responsibility and

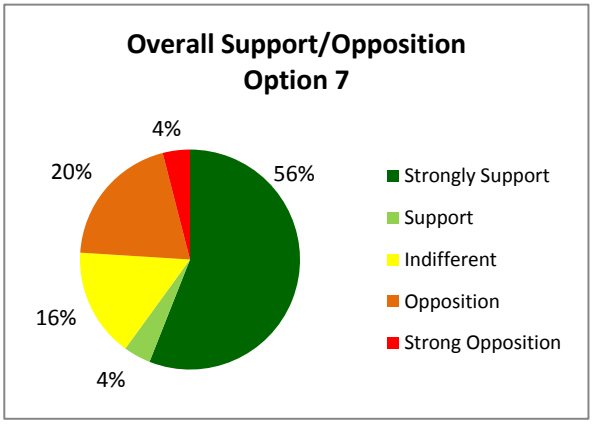


Figure 5: Overall Support/Opposition for option 7

partnership between agency and community. Opposition to option 7 was largely due to concern about how much vegetation would be removed and significant changes to the environment.

Option 8 – Minimum distance APZ to only achieve BAL rating reduction from Flame Zone to BAL 40 on all slopes including those requiring specialist works

Option 8 had the highest level of overall support (77%), with 55% strongly supportive. 18% of respondents indicated opposition or strong opposition to this option (figure 5).

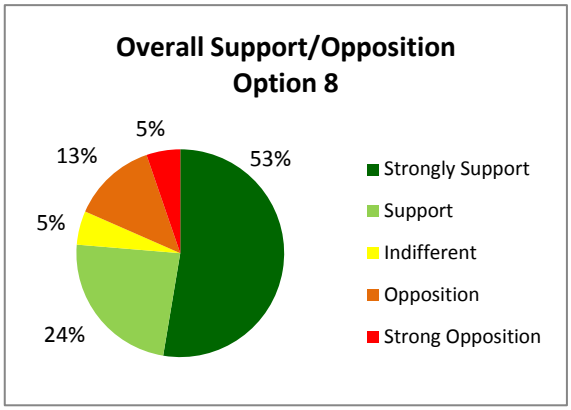


Figure 6: Overall Support/Opposition for option 8

This option was supported primarily because people believed that on steep areas most properties are too steep or small, or have the wrong shape, for heavy bunkers or re-siting options. They felt that in this case, APZs were the only option to reduce BAL ratings and rebuilding costs. Some people also liked the open areas which would be created by an APZ.

Opposition to option 8 was largely due to a range of risk factors including danger associated with implementing and maintaining APZs on these slopes, geotechnical and erosion risks of removing vegetation on steep slopes, and the risk of increasing the flammability of the gully below by exposing it.

2.2 Online Survey Results

The APZ online survey was developed to engage the broader Wye River/ Separation Creek community about their views on APZs. The purpose of the survey was to ascertain:

- Is the Wye River/ Separation Creek community supportive, opposed or indifferent to APZs;
- Why do they hold that view?

The survey asked respondents a series of questions about impacts of APZs including appearance, impacts to flora and fauna, BAL reduction and firefighting outcomes. Respondents were asked to rate the importance of these elements and indicate their opposition or support for various options. Finally, respondents were asked to select one option they would prefer for the community and briefly explain why that was the case.

31 people responded to the survey; 42% had attended a cluster meeting and 58% had not.

The key findings of the survey were that:

- The large majority of respondents found it more important to further investigate risk reduction options throughout the whole settlement area and to support firefighters with safer and easier access to conduct planned burning and fight bushfires, than to reduce BAL ratings for properties immediately adjacent to APZs.
- Firefighter access and safety was viewed as very important by 61% of respondents, compared to BAL reduction which was viewed as very important by 35% of respondents.
- There was division about the support or opposition of APZs. 55% of respondents indicated support for a form of APZ, while an average of 37% of respondents opposed APZs.

- This led to a wide spread of preferences for the preferred option to take at this time. 32% of respondents preferred 'Implement DELWP Standard 40m APZ', 29% preferred 'Maintain status quo', 26% preferred 'Implement Minimum Distance APZs', 13% preferred to do 'Something else'.
- Of those people who preferred to implement DELWP standard 40m APZs, 70% wanted this option for its ability to assist with bushfire safety and management. Only 10% wanted this option to reduce BAL ratings.
- Of those people who preferred to implement a minimum distance APZ, 62.5% wanted this option for its ability to assist with bushfire safety and management, indicating a high level of confusion about the usefulness of minimum distance APZs in this regard. Only 12.5% wanted this option to reduce BAL ratings.
- Of those people who preferred to maintain the status quo or do something else, the large majority were most concerned about the impact of APZs on environment and amenity.

See Appendix 11 for full APZ survey results.

2.3 APZ Engagement Discussion – Key Themes

Analysis of cluster meeting and survey data identified seven themes which describe the key drivers of participants' decision making and input to the engagement process. These themes are largely similar across cluster meeting and survey analysis, and are drawn from a combination of quantitative and qualitative data.

The seven themes are a reflection of overall responses and discussions, and therefore may not all reflect the experiences and views of every individual involved in APZ engagement.

1. Complex concepts, complex environment

Engagement participants were presented with a breadth of complex information and options which required them to grapple with nuances including function, risk reduction, BAL reduction, appearance, amenity, environmental impact, associated geotechnical and safety risks, feasibility and more. Additionally, deciding whether to support or oppose options involved considering values, needs and future plans for themselves, family, friends, neighbours and the broader community. This process was set in the complex context of a community disrupted by fire and ongoing recovery where many people are stressed and fatigued.

Given this, community members demonstrated enormous tenacity and willingness to participate fully in APZ discussions. However, challenges for some participants included difficulty in distinguishing between the Minimum Distance APZ and DELWP standard 40m APZ options in terms of their primary purpose and outcomes; and overcoming a belief that APZs would act as a barrier or 'buffer' to a future bushfire. The complexity of the concepts and context manifested in some confused responses and inability to fully consider all relevant trade-offs.

2. Environment and amenity are very important

It was evident that participants consider the local environment, including its look, feel, amenity and biodiversity values, as very important. People had different ideas of positive environment and amenity and broadly fell into categories - people who preferred the natural environment, and those who preferred a clearer landscape.

Many people stated that the natural appearance and feel of the forest and the ability to be close to trees, birds and other native animals was a key driver for being in Wye River and Separation Creek:

"The bush has a great natural feel; it's what attracted me here in the first place."

"Clearing the land would drastically change the township for the worse."

"I enjoy the koals and yellow-belly gliders directly out the back windows. Great habitat for lots of animals needing the thicker cover."

"Some of the wet gullies have significant biodiviersity values."

For these people, any significant mechanical modification to the environment would be viewed as a serious negative change to the township and their enjoyment of it. One respondent went so far as to say "the creation of the APZs would take away all incentive for us to rebuild".

For other people, APZs or other vegetation management options would improve amenity:

"It opens the area up so it is more accessible for walking and enjoying the bush more safely."

"Plants and animals preferring more sunlit open spaces will benefit."

"I enjoy a park-like area where kangaroos graze on grass cover."

"The way it was before looked too messy and overgrown."

3. The community wants to get the best outcome for the most people

During community interactions it was apparent that participants wanted an outcome that is best for most people in the community. This theme came through strongly where people opposed various options because they felt there was no benefit for the majority or the option would not protect the community from bushfire. Many people were particularly interested in realising firefighting benefits of DELWP standard 40m APZs so that the township would be safer and more homes might be able to be saved in a future bushfire. Survey respondents commented:

"Safety of fire fighters is more important than my BAL. Building to the highest BAL makes the whole town safer."

"40m APZ will reduce the risk for the whole community and assist firefighters."

"Some fuel reduction work is necessary. It may not be enough to lower my BAL, but it will help make things a bit safer for everyone and that's ok."

"They (APZs) allow earlier fire fighter access after a bushfire which may save more homes in the next bushfire."

4. "I need the support the government can provide"

Following the fire, community members are at different stages in their recovery. This, combined with differing values and needs, means that many community members do not feel they are able to manage risk and recovery without significant government support and intervention.

A key theme evident throughout was that many people were stressed and concerned about their ability to rebuild to a FZ (or BAL 40) rating. Consequently, some people were supportive of APZ options which are most likely to reduce their BAL rating and reduce their personal costs for rebuilding. People in a highly stressed state are less likely to be able to take in and weigh up

competing information and trade-offs, and it is understandable that these people were supportive of an option which appeared to be a solution to their most pressing problem, despite associated negative consequences or risks. Additionally, it is reasonable to expect that fatigued and stressed individuals would look to accept government support which appears to unburden the individual of some immediate and future responsibility and decision making.

Some comments in support of using APZs to reduce BAL ratings were:

> *"Thick bush up to my house increases my BAL and changes how I can rebuild and how much it will cost."*
>
> *"APZs drop ratings to BAL 40 without having to implement other more site specific options like bunkers, re-siting or refined modelling."*
>
> *"Dropping the BAL will significantly reduce the costs involved in rebuilding."*

5. "I accept and manage my own risk"

Many community members stated that they had moved into Wye River and Separation Creek aware of the inherent bushfire risk, and chose to accept that risk so they could enjoy the natural forest and wildlife setting. For these people proximity to nature and maintaining the natural environment are a clear priority. This value was almost always accompanied by a subsequent resolve to accept and manage bushfire risk:

> *"Bush and wildlife are the attraction here. I accept the risk of fire. It's my choice to be here and the risk of bushfire on hot days is just part of being here."*
>
> *"Flora and fauna make Wye a special place. Risk is attached to being in this coastal area; people must be adequately insured and maintain their vegetation and other risks – the visual impacts of APZ destroy what makes Wye unique."*

Several people in this category noted that they saw the benefits of rebuilding to the highest BAL rating:

> *"Building to the highest BAL makes the whole town safer without compromising the natural environment."*
>
> *"We have chosen to live at Sep Creek and have respected the environment by already building to the required standards…we want the bush left as it is."*

6. APZs seem to have minimal benefits or come at a high cost

Many people were concerned that the costs of implementing APZs outweigh any benefits, or that benefits are minimal. Concerns varied depending on individual values and primary needs, and ranged from aesthetic and environmental impacts and lack of sufficient firefighter benefits to economic and tourism costs. Some examples are:

> *"Many animal and plant species relying on the shrub layer and closed canopy for habitat will be worse off and disappear."*
>
> *"I think it would be an issue for erosion, land slip and maintenance. It reduces habitat and vital soil holding properties provided by natural undergrowth."*
>
> *"Doesn't provide any additional access to firefighters which would have provided a benefit to more of us. Not going to act as a fire barrier at all. Lots of work and cost to benefit a few."*

"Dangerous for construction and maintenance crews on really steep slopes. What if one of those big bits of machinery rolls down the hill into houses?"

"Most houses are burnt down from embers or house-to-house, not from the fire front.

"In a parkland environment, weed control and ongoing maintenance would be a huge cost."

"Need to leave it natural as changing the vegetation to be less flammable will turn visitors away. No-one will come to see an oak forest here."

7. People want to explore other options

During discussions at cluster meetings, there was strong support for exploring alternative options. Although only a small number of suggestions were offered, it was clear that there was a desire for 'something else' instead of the more extreme vegetation management options presented.

Some other options suggested at cluster meetings included:

"Focus on weed removal first as this will reduce bushfire fuel and create a more healthy ecosystem. This in turn will benefit flora and fauna as well as community members and tourism."

"Fence off the potential APZ areas and graze/browse with commercially viable animals. This will reduce bushfire fuels and create an economic benefit to the wider community."

"More support in cleaning up of individual properties (whether education, incentives, fines, local groups etc.). If everyone did their bit, everyone would benefit and be safer overall."

"Planting something around the town that is less flammable, such as orchards, oak trees, food crops, native grasses etc. See what survived the fire and plant more of that."

"Instead of funding an APZ, give the money to home owners to build to Flame Zone standards. Funding for APZ maintenance is not guaranteed into the future."

"Train and employ a local group to conduct weed management and general fuel reduction activities to improve the safety of the overall community while providing local business opportunities."

This theme was clearly demonstrated in the survey, where 71% of respondents said it was more important to them to 'further investigate risk reduction options throughout the whole settlement area' than 'reduce BAL ratings for properties immediately adjacent to APZs'. Additionally, 42% of survey respondents said they would rather maintain the status quo or implement 'something else' than implement an APZ at this time.

Section 3: Evaluation of APZ Engagement Program

To assist in evaluating this engagement process, participants of the APZ field trip and cluster meetings were asked to complete a feedback and evaluation form. The form was completed and returned by 100% of field trip participants and 75% of cluster meeting participants.

Participants were asked six questions (below) in order to provide feedback on their cluster session or field trip. Questions 1-5 were rated on a scale from strongly agree to strongly disagree. A space was also provided for further comments.

1. I now know more about APZs, their purpose, and their costs / benefits.
2. The information provided and discussion arising from today's cluster meeting/ field trip was useful for me.
3. Today's cluster meeting/ field trip helped improve my understanding of bushfire risk and the different options available to manage it.
4. Today's cluster meeting/ field trip helped improve my understanding of the various roles and responsibilities in bushfire management (agencies, departments, communities, etc.).
5. I felt I had opportunity to ask questions, express my point of view and discuss my thoughts and ideas.
6. What would you change about how the day was organised or run?

3.1 Field trip feedback

Both participants of the field trip strongly agreed or agreed with questions 1-5, demonstrating the field trip was informative, productive and provided opportunity for discussion and questions. This session was designed to provide pre-cluster meeting information to participants, and based on evaluations this was a successful event for those that attended.

3.2 Cluster meeting feedback

On average, cluster meeting participants agreed or strongly agreed with questions 1-5 (see figure 7). Questions 2 and 5 had the strongest responses, indicating that the information discussed at cluster meetings was very useful, and participants felt they were given ample opportunities to ask questions and express and discuss their point of view, thoughts and ideas.

While question 4 also received a positive response, it's slightly lower performance indicates that the cluster meetings did not fully address improved understanding of roles and responsibilities in bushfire management. This is positive feedback because while understanding of roles and responsibilities was not the focus of the sessions, it was improved for some participants. This is an area of understanding agency staff hope to build on with each community interaction.

Positive evaluation comments indicated that participants felt content was well presented, explained and logically applied, assisting them to learn more about fire management, fire complexities and the nature of the Wye River fire. Participants appreciated the chance to discuss various aspects of the fire including impact, environments, rebuilding and long term sustainability. One participant noted

that the opportunity to ask questions and express their point of view in discussions was very encouraging.

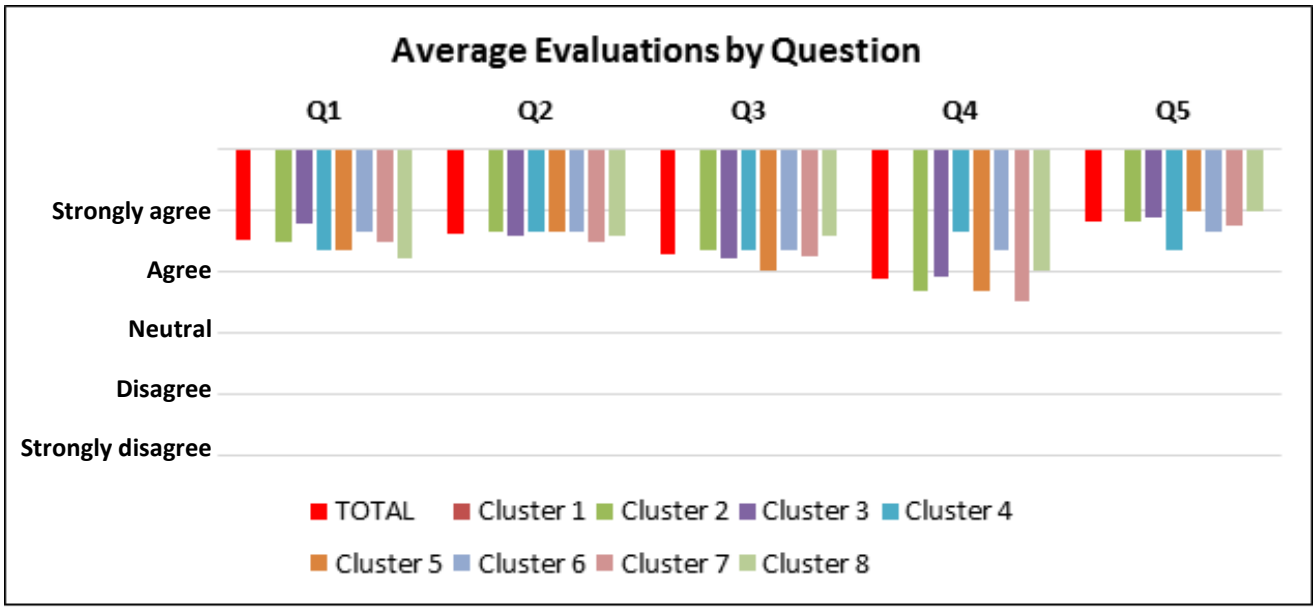


Figure 7: Average Responses by Question from all Cluster meetings

In general people felt the meetings were well run, managed and delivered, and were informative supportive of community needs. Participants were appreciative of the access to agency staff and subject matter experts, as well as on site visits and supporting tools including poster displays and virtual reality visualisation.

The effectiveness of the cluster meetings is demonstrated in figure 8, which is an unprompted drawing by a cluster meeting participant. The participant drew this on their feedback form to demonstrate that after the session, they were able to clearly and simply explain the difference between APZ options. Further the picture indicates an appreciation of the implication of those options. This is a positive result, demonstrating that the cluster meetings delivered informative and understandable information to help participants consider options in a meaningful way.

Participants also provided comments about areas for improvement which will be a useful reference for future engagement activities. Several participants commented that they would have found pre-reading material useful, in order to better prepare themselves for the meeting. Some participants would have liked more time to consider the options before 'voting' on their support or opposition for those. Additionally some people would have preferred to vote privately rather than as a part of the cluster meetings. One participant raised the issue of 'voting' not being representative, due to a small turn out at their particular cluster. As part of the engagement plan and in light of voting concerns, we have placed strong value on qualitative data collected throughout the whole process, and have not relied on quantitative 'voting' data alone in our analysis.

Other areas for improvement related to logistical arrangements such as being clear about where to meet, providing bigger visual images, and having fewer Red Cross staff in attendance so their presence was more reflective of their need.

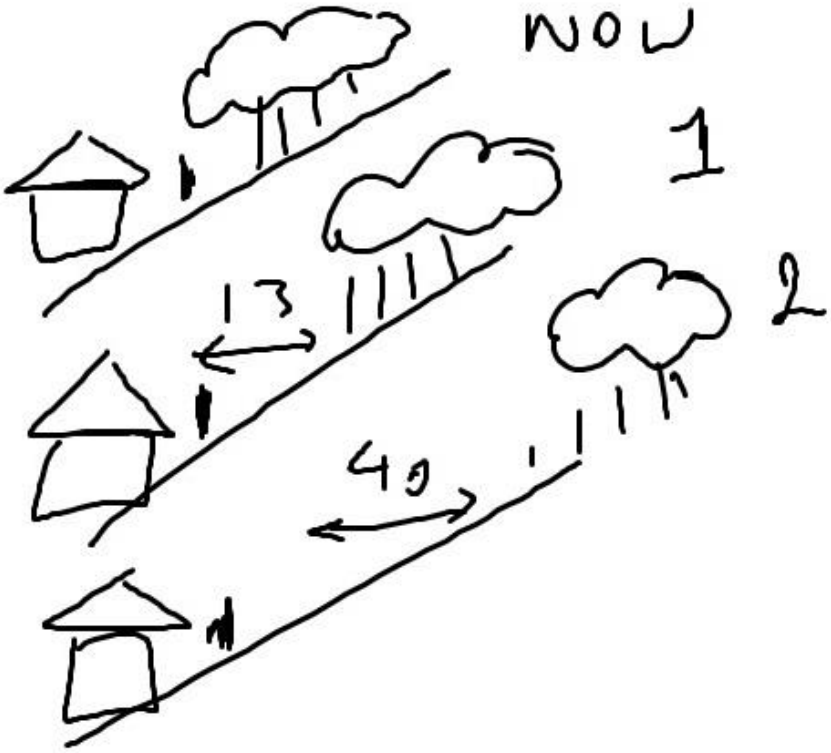


Figure 8: Drawing by a cluster meeting participant, indicating that they understood the difference between APZ options and were able to express that understanding. This drawing was unprompted; it was provided as part of feedback and evaluation to demonstrate the usefulness of the day.

Appendix 1 – Combined cluster meeting results

Landscape Amenity

How the landscape looks and will be used/ enjoyed.

Response to option	What does this feel like?
1) Best amenity	This option looks and feels great. I will be able to use and enjoy the area exactly the way I want to.
2) Good amenity	This option looks and feels pretty good. I will mostly enjoy and use the area the way I want to.
3) Indifferent	I don't have a strong opinion about how this option looks and feels – it seems fine.
4) Poor amenity	I don't like the look or feel of this option. I won't be able to use and enjoy the area the way I want to.
5) Worst amenity	I strongly dislike how this option looks and feels. It will have a serious negative impact on how I use and enjoy the area.

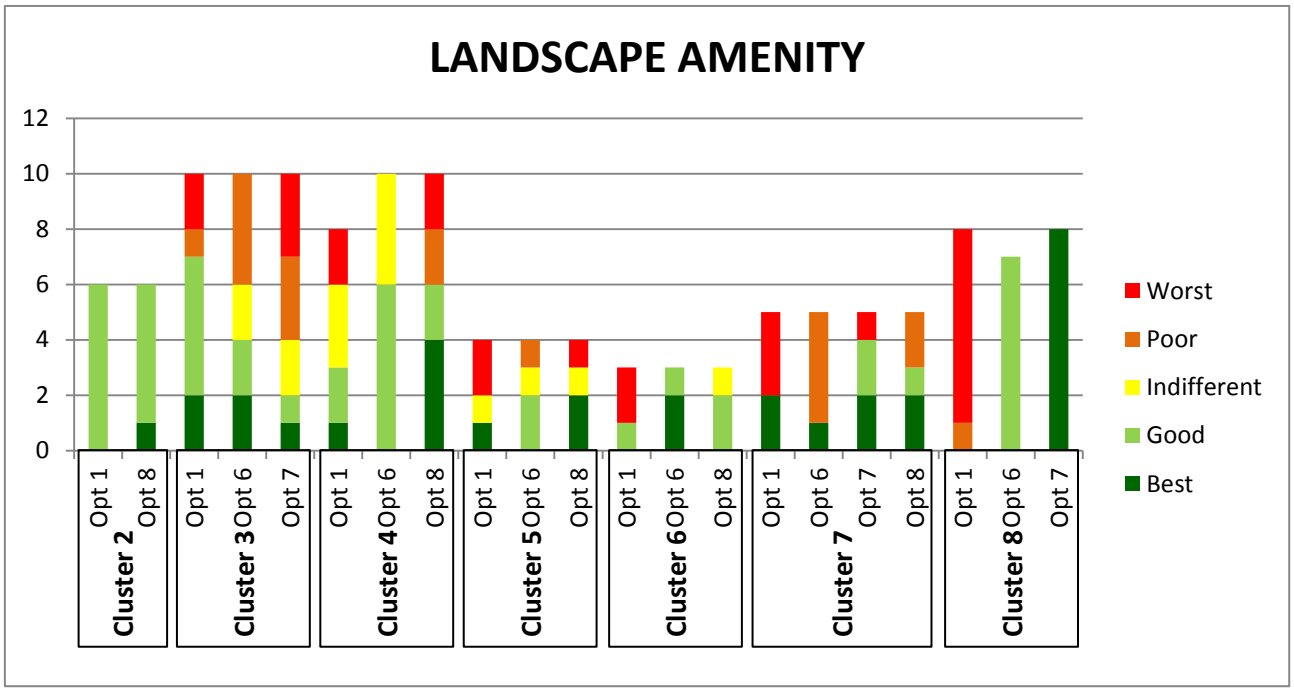


Figure 1 – Landscape Amenity votes across all Clusters and potential Options.

Cluster2 only had APZ Option 8 (minimum distance even on steep slopes) to explore. This group indicated positive impressions of Option 1 (status quo) and a slightly more favourable preference for Option 8.

Cluster 3 had APZ Option 6 (minimum distance on moderate slopes) and Option 7 (DELWP standard of 40m) to explore. This group indicated more of a preference towards Option 1 than either of the APZ Options (although there was a mix of extreme responses for this Option), with a stronger dislike of Option 7.

Cluster 4 had APZ Option 6 and Option 8 to explore. The group indicated a stronger preference for either APZ Options, however there was a mix of extreme responses for Option 8 (both for and against)

Cluster 5 had APZ Option 6 and Option 8 to explore. It would seem this group preferred either APZ Option; however there was a mix of extreme responses for Option 8 (both for and against).

Cluster 6 had APZ Option 6 and Option 8 to explore. This group indicated a strong overall preference for Option 6.

Cluster 7 had all APZ Options to explore. Of all the four Options discusses, Option 7 had much more support, followed by Option 8.

Cluster 8 had APZ Option 6 and 7 to explore. The group strongly indicated a dislike of Option 1, a support of Option 8 and a strong preference for Option 7.

Option 1 – Status Quo (Current BAL modelling, no APZ, no bunkers, no re-siting options)

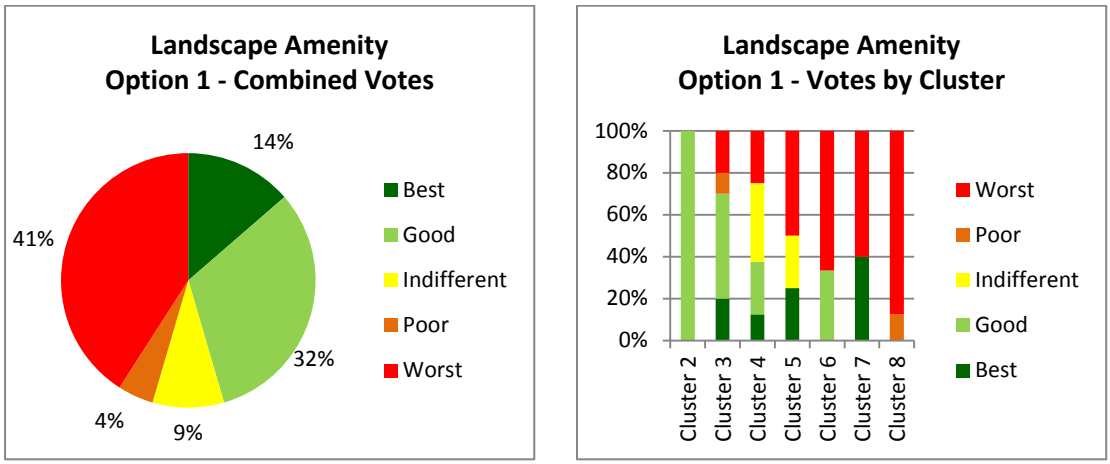


Figure 2 and 3 – Option 1 votes for Landscape Amenity

- Across all Clusters, 45% rated this Option negatively, with 41% rating it as the worst Option
- Across all Clusters, 46% rated this Option positively, with 14% rating it as the best Option
- Clusters 2 and 3 were much more favourable towards this option, Clusters 5, 6, 7 and 8 were much more opposed to this option
- Although the percentage viewing this Option more favourably and more negatively are quite even, the percentage voting this Option as the best is one third of the size of the percentage voting this option as the worst option.

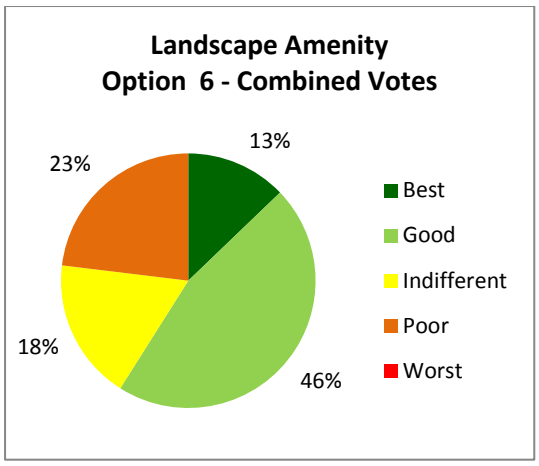
General discussion during one or more Cluster meetings:
Comments in support

- Enjoy koalas and yellow-bellied gliders directly out of the back windows in the thick growth. Great habitat for lots of animals needing the thicker cover.
- Great natural feel. It's what attracted me to here in the first place.
- Bush and wildlife are the attraction – I accept the fire risk.
- Tourists come to our town for the natural environment.

Comments against

- Overgrown bush creates a Flame Zone right up to property boundaries
- Looks messy and overgrown. Would grow back even bushier if it goes back to how it was managed before the fire
- Getting used to it being open and more accessible now.

Option 6 – Minimum distance APZ to only achieve BAL rating reduction from Flame Zone to BAL 40 on slopes less than 25 degrees



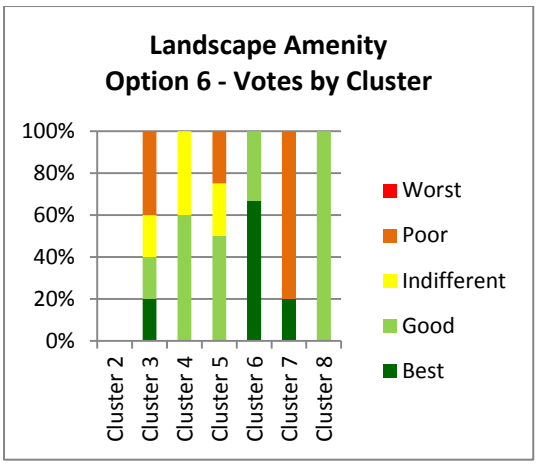


Figure 4 and 5 – Option 6 votes for Landscape Amenity

- Across all Clusters, 23% rated this Option negatively, however no-one considered it as the worst Option
- Across all Clusters, 59% rated this Option positively, with 13% rating it as the best Option
- Clusters 4, 5, 6 and 8 were much more supportive of this option, Cluster 7 was much more opposed to this option

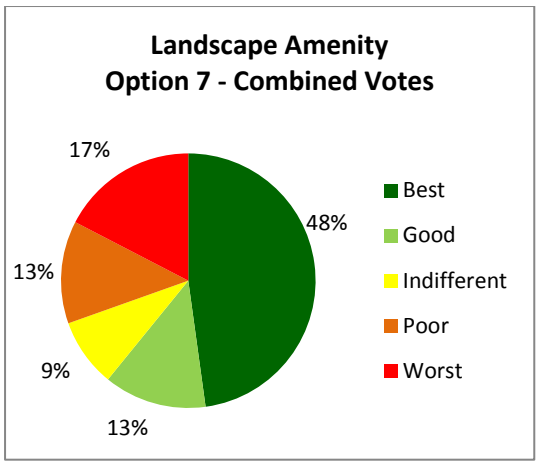
General discussion during one or more Cluster meetings:
Comments in support (of this Option and APZs in general)

- It already is open up with many trees and most shrubs removed from the fire and clean-up, so would only be one more step to make the areas actual minimum distance APZs
- Opening up the area allows for additional recreational benefits such as walking
- plants and animals preferring more sunlit open spaces will benefit
- I enjoy a more open park-like area where kangaroos graze on grass cover
- Drops BAL ratings from Flame Zone to BAL 40 for the all homes to be rebuilt without them having to implement other options (such as bunkers, re-siting, refined BAL modelling)
- The cost of dropping the BAL rating on adjacent blocks falls to government rather than the individuals that are rebuilding
- Dropping the BAL rating from Flame Zone will significantly reduce the costs involved in rebuilding

Comments against (this Option and APZs in general)

- If it's only going to benefit the ones rebuilding in the Flame Zone, what's the benefit to me if I'm not one of those? I'd be losing my view for no personal gain.
- Many animal and plant species relying on the shrub layer and closer canopy for habitat will be worse off and disappear
- It looks really bare on the ground with just mulch. It could take years for the grass and herbs to grow to make it look nicer
- Potential for less desirable recreational activities if it becomes more open and accessible such as trailbikes or 4WDs
- During the construction and maintenance phases, community in the area will experience reduced amenity due to onsite works, noise, machinery and large vehicles in the area

Option 7 – DELWP Standard APZ to achieve all four purposes including fire-fighter access and BAL rating reduction on slopes less than 25 degrees



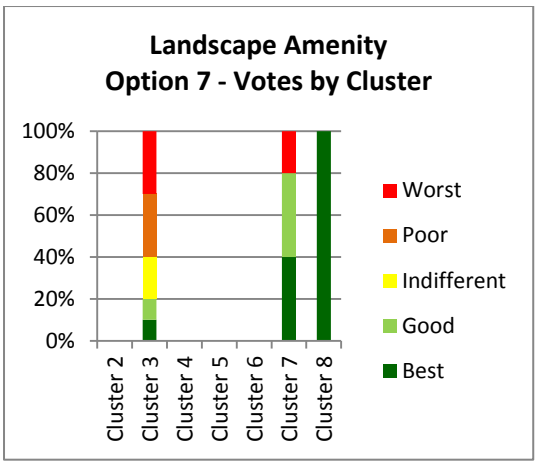


Figure 6 and 7 – Option 7 votes for Landscape Amenity

- Across all Clusters, 33% rated this Option negatively, with 17% rating it as the worst Option
- Across all Clusters, 62% rated this Option positively, with 48% rating it as the best Option
- Clusters 7 and 8 were much more supportive of this option, Cluster 3 was much more opposed to this Option
- This Option is only a potential in three Clusters. Cluster 3 are mostly not supportive, Cluster 7 mostly supportive and Cluster 8 completely supportive.

General discussion during one or more Cluster meetings:
Comments in support of this specific Option

- Allows earlier fire fighter access after a bushfire which may save more homes in the next bushfire
- Allows better access for maintenance crews, locals and recreation users if there was a track that goes right around the outer settlement.
- Provides a good buffer to reduce a bushfire from an intense forest fire to a more manageable grass fire travelling on the ground because all the middle layer and bark hazards are gone for a sizeable stretch

Comments against this specific Option

- Too big an area to go all at once - too much of a shock to people and the animals.
- Flora and fauna make Wye a special place – the visual impacts of an APZ will destroy what makes Wye unique.
- Clearing of land would drastically change the township for the worse.

Option 8 – Minimum distance APZ to only achieve BAL rating reduction from Flame Zone to BAL 40 on all slopes including those requiring specialist works

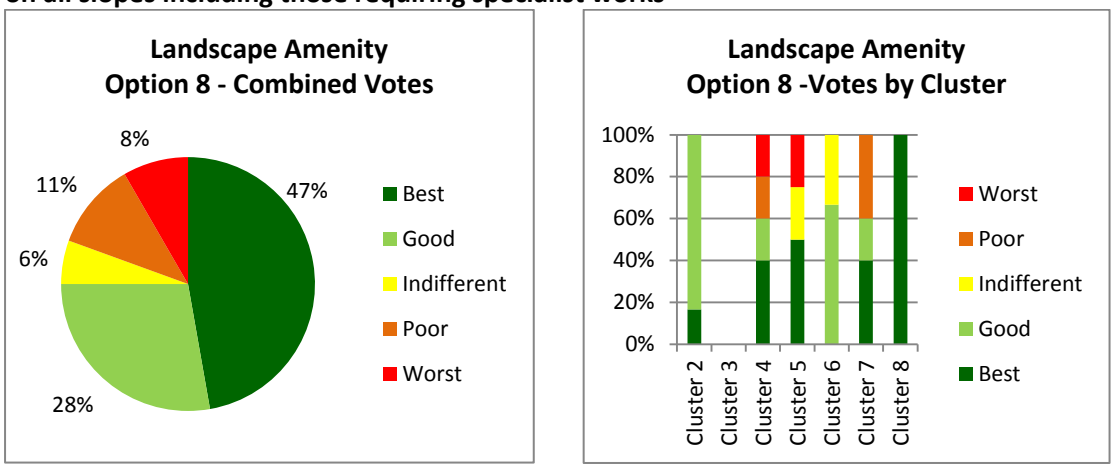


Figure 8 and 9 – Option 8 votes for Landscape Amenity

- Across all Clusters, 19% rated this Option negatively, with 8% rating it as the worst Option
- Across all Clusters, 75% rated this Option positively, with 47% rating it as the best Option
- Clusters 2, 4, 6, 7 and 8 were much more supportive of this option
- Clusters 2 and 8 are completely supportive, Cluster 6 is not opposed, and Clusters 4 and 7 have no more than 40% opposition.

General discussion during one or more Cluster meetings:
Comments in support of this specific Option

- BAL rating reduction for the majority of people rebuilding in the Flame Zone, even on the really steep areas

Comments against this specific Option

- Upper gully in Cluster 4 is a wet dense ecosystem that is very different to the more open and drier forest types elsewhere in the area. It is important to preserve in its own right for its biodiversity and difference. Many species live there that can't survive in the more open areas.
- Dangerous for construction and maintenance crews on really steep slopes. What if one of those big bits of machinery rolls down the hill into houses?

Overall Support/ Opposition

Support or opposition to each option after consideration of ALL consequences, not just Landscape Amenity.

Response to option	What does this feel like?
1) Strongly support	This is my favourite option and it will meet my needs. I will be really pleased if it is implemented.
2) Support	This option is pretty good, it will meet my needs reasonably well.
3) Indifferent	I am neither happy or unhappy about this option – it is okay.
4) Oppose	This option will not really meet my needs and I will feel disgruntled if it is implemented.
5) Strongly oppose	If this option is implemented I will feel very unhappy. My needs will not be met at all.

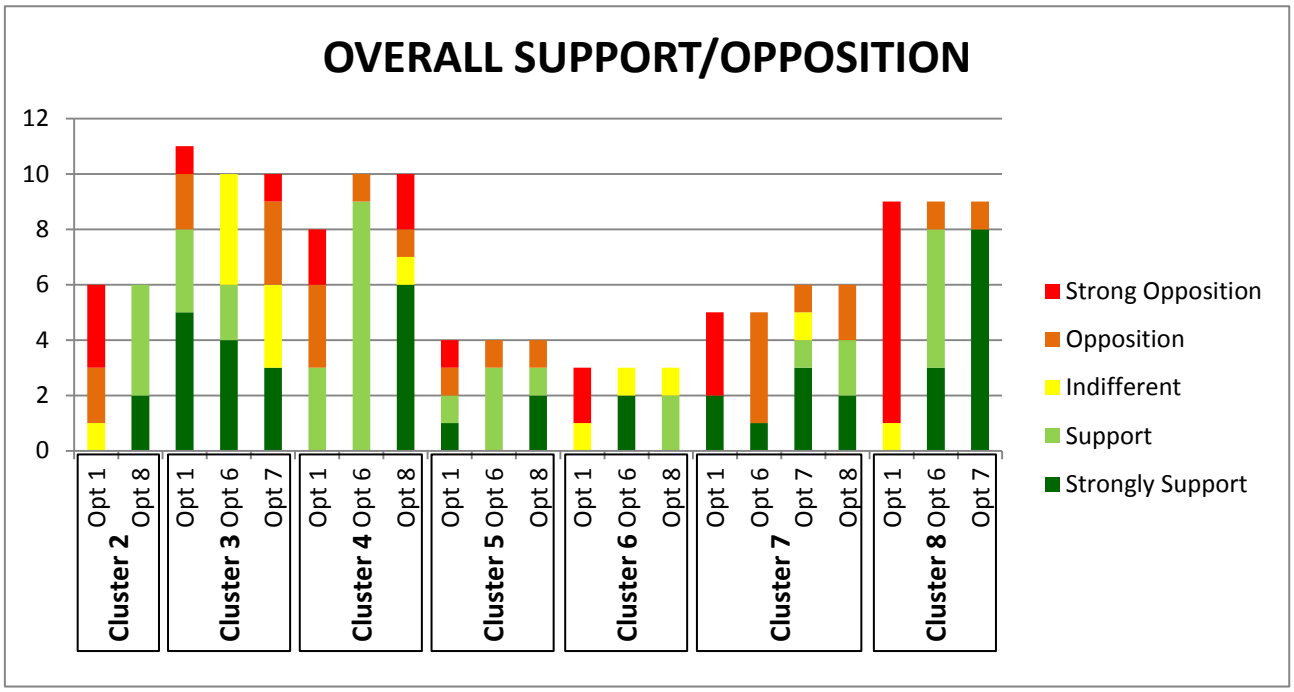


Figure 10 – Overall support/opposition across all Clusters and potential Options.

Cluster 2 demonstrated a strong preference for Option 8 and strong overall dislike for Option 1
Cluster 3 demonstrated a preference for Option 1, no opposition to Option 7 and a mixed response to Option 7.
Cluster 4 demonstrated a preference for Option 6 followed by Option 8 (although Option 8 generated extreme responses for and against).
Cluster 5 demonstrated a stronger preference for Option 8 than Option 6, and less support of Option 1.
Cluster 6 demonstrated a stronger preference for Option 6 than Option 8, and limited support of Option 1
Cluster 7 demonstrated a stronger preference to Option 7 than Option 8, with limited support of Option 1 and Option 6.
Cluster 8 demonstrated a stronger preference to Option 7 than Option 6, with limited support of Option 1.

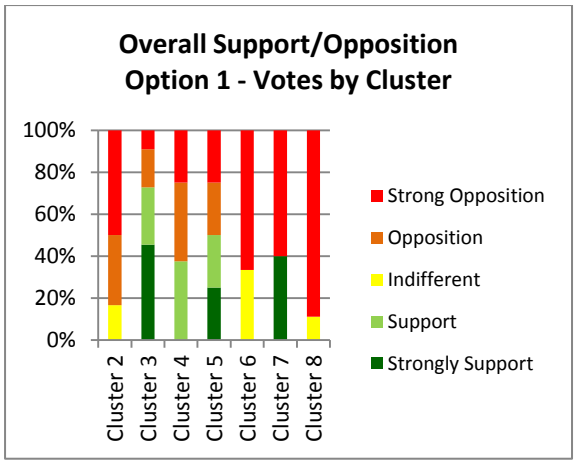


Figure 11 – Overall support/opposition across all Clusters for Option 1

Cluster 3 was much more positive of this Option, Cluster 5 was equal for and against, Clusters 2, 4, 6, 7 and 8 were much more opposed to this Option. Other than one Cluster, it was generally indicated that Status Quo was not the preferred Option.

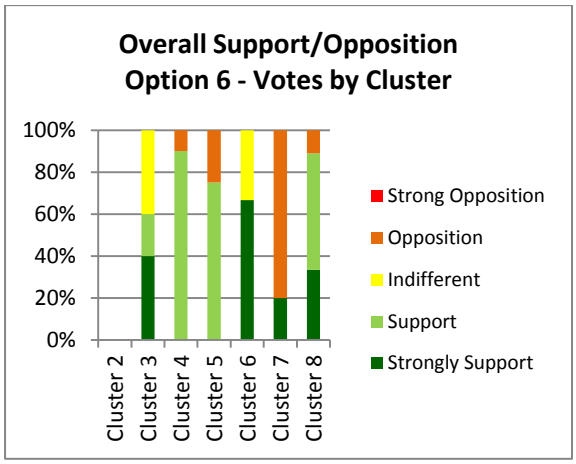


Figure 12 – Overall support/opposition across all Clusters for Option 6

Clusters 3, 4, 5, 6, and 8 were much more supportive of this option, Cluster 7 was much more opposed to this option. Other than for one Cluster, Option 6 is a generally well-supported Option.

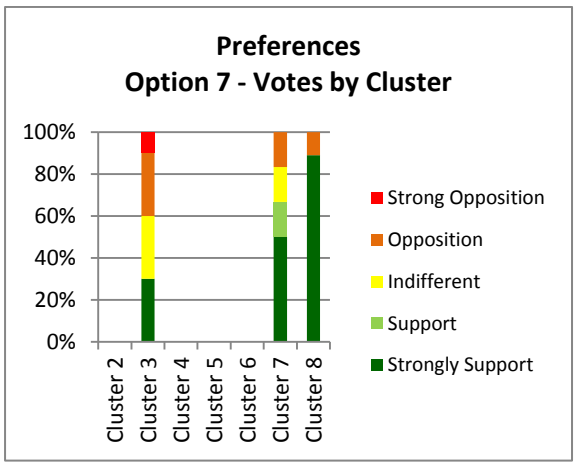


Figure 13 – Overall support/opposition across all Clusters for Option 7

Clusters 7 and 8 were much more supportive of this option, Cluster 3 was much more opposed to this option. Other than for one Cluster, Option 7 is generally a well-supported Option.

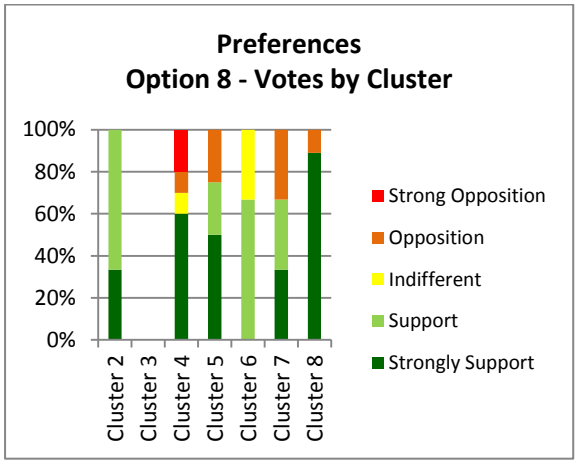


Figure 14 – Overall support/opposition across all Clusters for Option 8

All clusters were generally supportive of this option. Other than one cluster where some strong opposition was expressed, Option 8 is generally a well-supported Option.

Suggested Alternative Options

- Could we split the mapped cluster into 2 for not possible and accessible/possible in the flatter areas as another Option to explore later? Option 9/10?? Do patch maintenance to improve around those properties together? Perhaps achieving most houses reduced from Flame Zone (instead of all) is something we could cope with here?
- The blue gums take a long time to get that tall, would it help to plant some indigenous faster growing trees to help bind the soil? Planting fast growing trees, shrubs and grasses will help in the short and long term. The new COS plant book will be out soon to help make some choices on plant species.
- Replant with more fire retardant plants? May help reduce erosion and slippage while providing something harder to burn, or doesn't burn as intensely for as long (less of a hazard to things around it). Look at what survived around town for some ideas, ie fruit trees
- Potential for Cluster 4 and Cluster 8 gullies to be maintained through local partnerships and networks using different vegetation management methods instead of an APZ approach. This will improve the health of the gullies, make them more valued by the surrounding communities, reduce some of the risks; however are not likely to achieve a result if looking at them only to achieve a BAL reduction
- If everyone did more maintenance on their own properties, and helped each other out to make sure in and around houses are cleaned up (the main cause that the houses burned down), we can make a real difference in reducing the fire risk right across the whole settlement. Whether an APZ is put in or not, it will still make a huge difference to all of us because the APZ is never going to be a barrier for embers blowing in from another bushfire.
- Perhaps interested locals can work with DELWP to conduct flora/fauna activities to better identify and document the range of native and introduced species in different areas, how they are responding after the fire and how they are coping if APZs are introduced.
- Fence off the potential APZ area and introduce animals to browse it to reduce the fuel and create a break, while providing a commercial opportunity (ie goats or alpacas).
- Instead of funding an APZ, give the money to home owners to build to Flame Zone standard. Funding for maintenance is not guaranteed.

Appendix 2 – Cluster 2 additional notes

Section 1 – Introductions and Overview – Patrick

Agencies – Patrick (Facilitator), Peter Galvin (DELWP), Tim Gazzard (DELWP), Peter Ashton (COS), Ben Cooke (COS), Tony Miner (Geotech), Kevin Tolhurst (Melb Uni), Sally Baines (EPA)

Community – Meredith and Ron McInnes, Doug and Sue Brighton, Helen and John Trudinger

Section 2 - Community Values – Peter Galvin

low key holiday destination is important including the grandkids / koalas right near the house

added they are still there and will return

Sue and Doug are part of a group investment – very quiet/in the bush, new it was a risk (involved in Ash Wednesday) but still liked it. Liked near the beach. Had built it with friends and made extensions.

combination of bush and forest and have been coming here since he was a kids. Grandkids do little nippers until it had been cancelled this summer

tranquil and peaceful

Section 3 - Overview of APZ/ Reduce BAL ratings project – Peter Galvin

What about the 40m "standard" DELWP have for the APZ – thought it would be difficult to achieve here and would that be recommended? PG said that it would not necessarily be recommended. Slope may increase difficulty and determine options that are available.

Who is going to make the decision? A - DELWP will compile and put to the executive leadership group who will make the decision.

What's going to be there? A - 50% of trees would remain roughly and mulch understorey

What about privately owned sections up to their houses – is APZ behind them? PG - Breaks would start at the back of houses – and would need to negotiate and work with privately owned land – may be a difficulty.

Expression of displeasure at management of the privately owned land behind them.

PG stated that any APZ would need to have ongoing management and agreement would need to be had with the privately owned property.

Expression of anger at lack of action by Council towards these landowners.

Section 4 – Consequence Table – Tim Gazzard

if there is an APZ will that mean that firefighters actually go up into the area/houses? A – not necessarily due to risks but may make it easier to get in for burning / backburning or to go in more quickly after the fire which may save some houses.

Does Option 3 mean can you reduce the flame zone by remodelling? A – yes by using more detailed and site specific information which usually reduces the extent of the flame zone.

Option 4 who's house is still in flame zone?

Tim highlighted that APZ options assume management of your own property otherwise risk still remains.

general nodding and agreement of steep slopes and risks to workers and erosion/geotech risk.

understanding and agreement that process will take 2-4 years.

are you saying that if there is rebuilding – should we rebuild 12m from neighbours? In an ideal world. A - the planning says 3m from boundary therefore its 6m

ridiculous narrow blocks makes this very hard

also the 8m limit makes it harder to build away from neighbour. A – there is some flexibility with this but this is about limiting the size of developments to retain character.

Section 5 – Visualisation Tool – Peter Galvin

who would maintain it? A – probably DELWP but this would need to be worked through.

would it be better to look at actual APZs? PG indicated this had been done / was the intent of last week. But the locations can be given for people to do it themselves.

What are people's views of them when the live beside them? A – different people have different views. A community member shared her views last week and although she didn't want to many trees to be taken and concerned about pedestrians always walking past but the area has grown on her and she is comfortable with it.

people use the area behind them as a walkway now anyway.

looks very bare/risk of erosion. (Looking at the visual of an APZ.)

Section 6 – Field Trip

fire did not burn on way thru' but wind changed and it did. would that be usual? A – not unusual northerly coming in – southerly pushes it back – we model 100's of fires for the APZ.

worried about private land such as the Donlevy Estate. A - APZ on private land

comments of poor practises of some landowners or electricity people – chopping trees and discarding down slope… will APZ be managed better?

is all this work just for this area or the whole of Victoria? If just here may not be worth it as many people may not rebuild. A – hopeful learning will be useful elsewhere.

timeframe of 2/4 years is probably a problem for planning approvals now. A – we are looking at these now – decisions about three weeks away.

can we share a bunker between houses? A – no not being considered. Safety issues/ongoing management issues etc…

most sites too small for bunkers. Tony discussed the fact bunkers really are not an option for most sites in Wye River due to slope and size.

Section 7 – Voting and Wrap up

Will it reduce ratings? A – that is one of reasons for an APZ.

When would rating change? Still working thru whether changes would need to happen first.

How would you rate each option discussed today for IMPACTS TO LANDSCAPE AMENITY?

Option	Option Description	Best	Good	Indifferent	Poor	Worst
Option 1: Status Quo	No APZ and no change to vegetation management adjacent to the township. Could include bunkers, house re-siting, veg m'ment of private blocks at owner discretion		6			

Option 8: Minimum Distance APZ (all)	Minimum distance APZ to achieve BAL 40 in ALL areas (including steep slopes requiring specialist works)	1	5			

How would you rate each option discussed today in terms of YOUR PREFERENCES (support or opposition)?

Option	Option Description	Strongly Support	Support	Indifferent	Opposition	Strong Opposition
Option 1: Status Quo	No APZ and no change to vegetation management adjacent to the township. Could include bunkers, house re-siting, veg m'ment of private blocks at owner discretion			1	2	3
Option 8: Minimum Distance APZ (all)	Minimum distance APZ to achieve BAL 40 in ALL areas (including steep slopes requiring specialist works)	2	4			

Appendix 3 – Cluster 3 additional notes

Saturday 9 July, 9:30am

Section 1 – Introductions and Overview – Patrick

Agencies – Patrick (Facilitator), Peter Galvin (DELWP), Tim Gazzard (DELWP), Kim Stanley (DEWLP), Peter Ashton (COS), Ben Cooke (COS), Tony Miner (Geotech), Kevin Tolhurst (Melb Uni), Ampara (DELWP)

Community – Rex, Yvonne, Joanne, Doug, Jennifer, Sibylle, Joan, Rob, John, Lyn, Shane

Section 2 - Community Values – Peter Galvin

Nil additional

Section 3 - Overview of APZ/ Reduce BAL ratings project – Peter Galvin

what does it look like?

Karingal Dve drainage area/gully – is that part of the APZ area?

Will the community be asked to pay for this?

How big would the APZ need to be to protect us from a more serious fire than the last?

How will they be maintained?

What type of vegetation would be planted?

What is involved, what parts are we talking about, the extent?

What does the APZ mean for individual blocks?

If the APZ doesn't go right around the town, does that change its effectiveness?

Is there a way to improve the management of the Donlevy Estate?

How effective are different APZs to protect against different types of fires?

What is the purpose of the APZ?

Can it be done in such a way to provide suitable habitat for fauna?

Can we manage the veg and landslip risk at the same time?

Could APZs be used for other purposes – ie recreation (walking, bikes etc)?

What would APZs influence individual properties? What are the timeframes involved?

would the APZ you're talking about have had any impact on the fire we had? A – most houses were lost from other things than direct flame contact from the bush. Most from house to house, embers, materials around homes etc. The difference would be the reduction of risk to powerlines, trees down on houses and over roads etc.

Section 4 – Consequence Table – Tim Gazzard

Out of the 29 destroyed or damaged in this cluster area, 9 had a footprint in the flame zone. The rest are in Bal 40. Discussion of how the flame zone is mapped. The further away from the flame zone you can build, the better.

	Opt 1	Opt 2	Opt 3	Opt 4	Opt 5	Opt 6	Opt 7	Opt 8
Homes still in Flame Zone	9	5	5	8	5	0	0	N/A

If the decision was to put in an APZ and it took 2-4 years, does that mean that that we would have a delay in planning permits until it's done? If it will change the rating, would we have to wait for it to be completed before it would change the planning permit requirements from flame zone to Bal 40? Good question and unsure of the answers at this stage

If I move my house out of flame zone and my neighbours don't, will that influence my house? No – it's a house by house basis. Some insurance companies aren't allowing the footprint to be moved

By doing the work required to minimise fuel around the house, will that change the BAL rating? And if the neighbour doesn't clean up their place (on the Donlevy Estate especially), what is the point of doing it on my place or putting in an APZ? A – any clean up you do will have a direct influence on your risk but won't change the BAL ratings as it can't be guaranteed in perpetuity. The APZs would start at the back boundaries of the adjacent houses (including the Donlevy Estate).

Section 5 – Visualisation Tool – Peter Galvin

After the fire and the loss of trees, how would an APZ look that is different to what there is right now? Would it be a good opportunity to take the trees out now? A – trees are useful to reduce and lift the wind and cool the ground, so are important to retain in APZs.

Section 6 – Field Trip

Arborist report from Grocon to 'remove' a tree – is that at ground level or grubbed out? Kevin – ground level to retain roots. The more we remove the more at risk the ones that are left are of falling over – taller trees with shallow roots.

Would we get a crown fire? A – the slopes are not necessarily enough to provide run up to allow a crown fire. So much of the area would not get a crown fire.

What are the plans for the retaining walls in Karingal? A – Looking at replacing any retaining walls that had existed. Some slopes didn't have a wall and have been fire affected, so may need one to reduce future risk to the public.

The blue gums take a long time to get that tall, would it help to plant some indigenous faster growing trees to help bind the soil? A – one of the biggest risks is erosion. Planting fast growing trees, shrubs and grasses will help in the short and long term. Ben – the new COS plant book will be out soon.

Could bunkers help? A – Many small blocks to try and fit everything they need in. Bunker options are limited due to siting issues and specific bunker requirements.

Climate change – has this been taken into account in the modelling? A – we are still building up to a fire index to 100, even though Black Saturday was 180. Buildings to the best standards are still untested at highest ratings.

Peter Galvin and Tim explained the local flora/fauna chart to show how different species may by impacted. Some worse off, others may benefit from a more open forest/woodland.

Section 7 – Voting and Wrap up

Will the APZ construction affect the amenity of the area for permanent residents? A – yes, trucks, chainsaws etc will be seen and heard for some time.

It's going to be difficult to take it all in to vote today. Lots of information to understand and make sense of. Many people couldn't be here today. A – Not going to be able to please everyone regarding opportunities to participate. Options for emailing your thoughts in to the central email address for anything you think of later. Also Open Houses for further feedback. Potential for conducting a survey, but that will miss the conversations and clarifications we've had today with the detail of background and discussions

Answers to some of above questions –

CFA Act says Council can enforce vegetation clean up on private land, usually for grass but very hard to do in forest. Is forcing compliance the only option Shared responsibility.

Opening up the area for recreation may attract 4WD, motorbikes etc

Timeframes – hoping to have all the information written up and sent to government for decisions by the end of August. Unknown when the gov will decide after that, but expected to be by the end of the year.

Closing reflections:

Lots to process. Would have liked more time to process / think about

Very beneficial to attend

Would have been good to see the flora/fauna chart earlier. Perhaps some pre-reading material.

Great to be listed to! Good to see the experts here

Could not have dreamed to have this much detail and expertise available to us.

Was difficult to understand the numbers in the tables. Need a bit more time to process

Excellent presentations. Appreciate the huge amount of work that has gone into this!

Thought the visuals helped me understand what it would look and feel like. Really helped me make my decisions.

Would like some pre-reading

How would you rate each option discussed today for IMPACTS TO LANDSCAPE AMENITY?

Option	Option Description	Best	Good	Indifferent	Poor	Worst
Option 1: Status Quo	No APZ and no change to vegetation management adjacent to the township. Could include bunkers, house re-siting, veg m'ment of private blocks at owner discretion	2	5		1	2
Option 6: Minimum Distance APZ (13m)	Minimum distance APZ to achieve BAL 40 in areas with moderate slope (standard works)	2	2	2	4	
Option 7: DELWP Standard	DELWP standard APZs in areas with moderate slope (standard works)	1	1	2	3	3

How would you rate each option discussed today in terms of YOUR PREFERENCES (support or opposition)?

Option	Option Description	Strongly Support	Support	Indifferent	Opposition	Strong Opposition
Option 1: Status Quo	No APZ and no change to vegetation management adjacent to the township. Could include	5	3		2	1

	bunkers, house re-siting, veg m'ment of private blocks at owner discretion					
Option 6: Minimum Distance APZ (13m)	Minimum distance APZ to achieve BAL 40 in areas with moderate slope (standard works)	4	2	4		
Option 7: DELWP Standard	DELWP standard APZs in areas with moderate slope (standard works)	3		3	3	1

Appendix 4 – Cluster 4 additional notes

Saturday 9 July, 1:30pm

Section 1 – Introductions and Overview – Patrick

Agencies – Patrick (Facilitator), Peter Galvin (DELWP), Tim Gazzard (DELWP), Kim Stanley (DEWLP), Peter Ashton (COS), Ben Cooke (COS), Tony Miner (Geotech), Kevin Tolhurst (Melb Uni)

Community – Yvonne, Joanne, Stella Keith, Phillip, Sonya, Duncan (plus 3 at end of session)

Email voting and comments returned by email after meeting – Rex and Sybille, Mark and Maree, Phillip and Sonya

Section 2 - Community Values – Peter Galvin

Stella (owned a house here for 32 years) has been hand-weeding parts of the gully for 18 years and that area remained unburned. She is the surviving house in The Boulevard area surrounded by lost homes. Is strongly against any heavy veg management of the gully and has being staying around watching to ensure that the trees aren't taken out while she was away. The values are very different across the community. Had tried for years to get holiday neighbours involved to no avail, they didn't have any understanding of the natural bush or care about the environment while they were here. No appreciation of the natural values. The people that are here today are already converted to the cause, but the ones that are not here are the ones that need to be involved most.

Section 3 - Overview of APZ/ Reduce BAL ratings project – Peter Galvin

Nil additional

Section 4 – Consequence Table – Tim Gazzard

Of the 6 houses were lost or damaged in this cluster area, 5 were in the flame zone.

	Opt 1	Opt 2	Opt 3	Opt 4	Opt 5	Opt 6	Opt 7	Opt 8
Homes still in Flame Zone	5	5	4	5	4	5	N/A	0

Timeframes – even if the APZs were approved, it could take 2-4 years to implement, which may not have an impact on anyone going for a planning permit in the meantime.

Section 5 – Visualisation Tool – Peter Galvin

Nil additional

Section 6 – Field Trip

the upper gully is so closely grown that it is wetter and less flammable by nature. To open it up as an APZ may dry it up and make it more flammable in the future. Not necessarily conducive to an effective APZ.

The roots are very important to stabilise the steeper slopes as are the water uptaking capacity of them. If they are removed, then they must be replaced with something that can do the same roles. Difficult in these steep slopes.

Don't want a nett loss of root density and function. Phased process required. Replacement species.

Section 7 – Voting and Wrap up

Could the APZ maintenance costs be reduced if local people could do much of the work? Partnerships? Some will require specialist equipment and skills.

Only half of Wye/Sep was fire affected. Is there anything in the pipeline that is engaging with the non-fire affected community? A – there is a larger resilience focus that is occurring for an across the settlement perspective.

Closing reflections –

Thanks for making it understandable

Useful thing to make me sit down and think about the details

The gully is a community asset for all to enjoy and needs to be looked after for its natural values

How would you rate each option discussed today for IMPACTS TO LANDSCAPE AMENITY?

Option	Option Description	Best	Good	Indifferent	Poor	Worst
Option 1: Status Quo	No APZ and no change to vegetation management adjacent to the township. Could include bunkers, house re-siting, veg m'ment of private blocks at owner discretion	1	2 Could be better	3		
Option 6: Minimum Distance APZ (part)	Minimum distance APZ to achieve BAL 40 in areas with moderate slope (standard works)		6	4		
Option 8: Minimum Distance APZ (all)	Minimum distance APZ to achieve BAL 40 in ALL areas (including steep slopes requiring specialist works)	4	2		2	2

How would you rate each option discussed today in terms of YOUR PREFERENCES (support or opposition)?

Option	Option Description	Strongly Support	Support	Indifferent	Opposition	Strong Opposition
Option 1: Status Quo	No APZ and no change to vegetation management adjacent to the township. Could include bunkers, house re-siting, veg m'ment of private blocks at owner discretion		3		3	
Option 6: Minimum Distance APZ (part)	Minimum distance APZ to achieve BAL 40 in areas with moderate slope (standard works)		9		1	
Option 8: Minimum Distance APZ (all)	Minimum distance APZ to achieve BAL 40 in ALL areas (including steep slopes requiring specialist works)	6		1	1	2

Appendix 5 – Cluster 5 additional notes

Friday 15 July, 9:30am

Section 1 – Introductions and Overview – Patrick

Agencies – David Griffin (Facilitator), Peter Galvin (DELWP), Tim Gazzard (DELWP), Kim Stanley (DEWLP), Peter Ashton (COS), Tony Miner (Geotech), Kevin Tolhurst (Melb Uni), Rachel (COS Planning), Lyn and Alice (Red Cross)

Community – Roy, Diane, Pasquale, Chris, John

Section 2 - Community Values – Peter Galvin

Nil additional

Section 3 - Overview of APZ/ Reduce BAL ratings project – Peter Galvin

When doing a cost benefit analysis, are you taking into consideration all of the purposes or just some? Looking at all options/criteria individually and then balancing them up together. A - Will be discussed during the day. Many considerations, not just the 4 purposes.

Purpose 4 – to get the benefits for BAL ratings it looks like it may need 40 metres, but some areas are not able to have that much, and some areas may need more?

Is the acquisition of the land behind required for APZ construction mandated? How would APZs be made to happen if they were deemed appropriate? A – that's another process that may follow this one.

What could they look like? Is there a way for us to work out how they may look? A – yes – today will have a variety of ways to help you understand and decide.

Would the APZs open up the areas to motorbikes and 4WD issues? A – haven't had a huge problem with other areas. Slope may also impact on vehicles using the areas. A consideration for amenity as well. Some people think the amenity is improved, and others feel it has worsened due to extra recreation use. Personal values.

Section 4 – Consequence Table – Tim Gazzard

Option 6 – Current BAL modelling, DELWP standard APZ, no bunkers, no re-siting

Option 8 – Current BAL modelling, minimum distance APZ, no bunkers, no re-siting

11 were fire affected in Cluster 5. Out of the 11, 10 were in the flame zone. Need to also consider risk to construction and maintenance teams for the duration of the APZ life. Chances are very high there will be a serious injury or death. Low benefit to fire fighters re access/use. Timeframe is 2-4 years as a phased process to hold the roots as much as possible. Lots of cost – about 20% of the entire Otways budget to maintain just these APZs around Wye/Sep. Biodiversity impact (state-wide habitat score 100), this area is already around 40 (pre fire) and APZ would take it to around 20 (make it more open to predators and pest animals, but also wildflowers, many birds and grazing species. Not as good for small animals requiring cover as habitat)

	Opt 1	Opt 2	Opt 3	Opt 4	Opt 5	Opt 6	Opt 7	Opt 8
Homes still in Flame Zone	10	10	10	9	9	N/A	N/A	0

BAL ratings – are they about house safety? A – no, they are actually about protecting human life, not about house survivability/buildings

Why do bunkers only drop the BAL rating level down 1 level instead of more? A – using the Australian Standard (very high level up decision making and not something we can easily influence)

Are bunkers not more of an option because of slope? A – yes, specification for the siting of bunkers mean that there are few options to fit a house and bunker on most properties. Site specifics may mean they could squeeze it all in, but more unlikely in this area due to property size, shapes and slopes.

What about this process is looking at the flame zone area only, not the ones already in BAL 40 where other options may work.

Is it uniformly steep or is there variation re safety? A – yes it's variable, but the cut-off used here was 25 degrees (dangerous slope to work on) and so that standard was used as a base across the brown mapped area of steep slope.

Haven't a lot of trees already died? If you take the dead trees out isn't it already like an APZ? A – considerations for slope retention, slippage etc – taking dead trees out may not be strategically the right way of establishing an APZ here.

Implementation costs will be high even tho many of the trees are already gone or dead. Unlikely that removal of dead/dangerous trees will meet APZ required standards, and so more/other works will need to occur to meet the purposes and stability requirements

Why would the area have a state-wide habitat score of 40? A – it is scored in isolation of what was there not how it's linked. Averaged across the site – not pristine at all. Very weedy (asparagus fern, pittosporum etc). Having it more open may help access for weed removal but may not improve its biodiversity value due to changes in overall ecological structure.

Would it be safe to say that the area in the APZ area would be similar to the blocks? A – yes to an extent.

Can you replant plants that don't burn? A – no such thing really. Some are more flammable than others and grow up faster after fire. Wouldn't necessarily replant a standard APZ for an environmental or aesthetics point of view, but may for an erosion/stability point of view. Introduction of more fire retardant non-native plantings as an option to consider (ie fruit trees). Have a look at some of the things that survived the fire around the town, and that may have burnt but didn't contribute much to the fire intensity.

Where is the modified flame zone line now? Has it changed much? A – it has not changed much in this particular Cluster due to the slope and average property sizes. Terramatrix is working on a more refined site map for BAL ratings, however it is not expected to change this Cluster much.

How is Option 8 that reaches a score of 0 homes in the flame zone measured? It looks at the house footprints that were in that area and calculates where the flame zone can be moved to with the APZ option implemented.

Section 5 – Visualisation Tool – Peter Galvin

Nil additional

Section 6 – Field Trip

Much of the slope here is private land and gives a false representation of the steepness of APZ. The bottom part may be accessible to machinery and so be able to be maintained easily. A – but that's relative – it's still steep for a machinery driver for the most part. The effectiveness of the APZ in actually a partnership between the APZ area and the private property maintenance, so the effectiveness will depend on the combined area that can be/ is maintained to a good standard (both public and private land, neighbours etc)

Is there enough accessible land in a grouping to make any sort of effective APZ zone to make a difference?

Q – is sharing bunkers an option? A – standards say that a bunker must be attached to a house, not a shared resource. You may share them during a fire in reality, but only the house they are associated with will achieve a reduction in the BAL rating. The standard does not allow for shared bunkers. The bunker must be on the property of the house it is attached to. Also, can't install bunkers where there is a potential for tree fall. Not something most of Wye can guarantee.

Pete – reminder that the purpose of this is to try and reduce from Flame Zone to BAL 40. If you can only do little patches of veg modification/APZ (not the continuous area identified in the brown mapped area regardless if it's accessible or too steep) then it won't have the desired reduction across the whole area. It will have localised benefit to the properties immediately adjacent to the areas that can be treated in patches, but others won't achieve any real BAL rating reductions and may remain in Flame Zone.

Q – could we split the mapped cluster into 2 for not possible and accessible/possible in the flatter areas as another Option to explore later? Option 9/10?? Do patch maintenance to improve around those properties together? Perhaps achieving most houses reduced from Flame Zone (instead of all) is something we could cope with here?

Q – What about the properties that did not have a home on them that are still intending to build? That may add more houses that may be built in the Flame Zone to the tally in addition to the ones that were lost. Have they been included in the conversations? That could change numbers across the area.

Some homes may have to have different ratings on different walls due to where the Flame Zone / BAL 40 / BAL 29 lines are drawn.

Section 7 – Voting and Wrap up

Nil additional

How would you rate each option discussed today for IMPACTS TO LANDSCAPE AMENITY?

Option	Option Description	Best	Good	Indifferent	Poor	Worst
Option 1: Status Quo	No APZ and no change to vegetation management adjacent to the township. Could include bunkers, house re-siting, veg m'ment of private blocks at owner discretion	1		1		2
Option 6: Minimum Distance (Stanway Dve)	Minimum distance APZ to achieve BAL 40 in areas with moderate slope (standard works)		2	1	1	
Option 8: Minimum Distance APZ (all)	Minimum distance APZ to achieve BAL 40 in ALL areas (including steep slopes requiring specialist works)	2		1		1

How would you rate each option discussed today in terms of YOUR PREFERENCES (support or opposition)?

Option	Option Description	Strongly Support	Support	Indifferent	Opposition	Strong Opposition
Option 1: Status Quo	No APZ and no change to vegetation management adjacent to the township. Could include bunkers, house re-siting, veg m'ment of private blocks at owner discretion	1	1		1	1
Option 6: Minimum Distance (Stanway Dve)	Minimum distance APZ to achieve BAL 40 in areas with moderate slope (standard works)		3		1	
Option 8: Minimum Distance APZ (all)	Minimum distance APZ to achieve BAL 40 in ALL areas (including steep slopes requiring specialist works)	2	1		1	

Appendix 6 – Cluster 6 additional notes

Friday 15 July, 1:30pm

Section 1 – Introductions and Overview – Patrick

Agencies – Dave Griffin (Facilitator), Peter Galvin (DELWP), Tim Gazzard (DELWP), Kim Stanley (DEWLP), Rachel (COS), Tony Miner (Geotech), Kevin Tolhurst (Melb Uni), Lyn and Alice (Red Cross)

Community – Pasquale and Diane (13 Iluka Avenue), Duncan (3 Stanway Drive)

Section 2 - Community Values – Peter Galvin

Nil additional

Section 3 - Overview of APZ/ Reduce BAL ratings project – Peter Galvin

'DELWP standard' 40 metre area across the area is not likely in Iluka due to steepness and width of area. Might be possible in patches only, but for area continuity the DELWP standard is not possible to achieve purposes 1, 2 and 3. However a minimum distance option to reduce BAL ratings for purpose 4 is possible and can be explored.

Section 4 – Consequence Table – Tim Gazzard

	Opt 1	Opt 2	Opt 3	Opt 4	Opt 5	Opt 6	Opt 7	Opt 8
Homes still in Flame Zone	9	4	3	2	2	#	N/A	0

Option 6 – (refers to the little light coloured strip on flatter land at the end of Iluka – only impacts on undamaged houses and so is not a measurable option for BAL rating reduction purposes)

13 houses were damaged and destroyed in the flame zone in that area.

Low Fire fighter benefit.

Staff risk to maintain = moderate to high – have access to 'Haul Road' (a little local track that was put in for services years ago, but has been extended by Grocon for better access in the area).

Erosion/landslip risk = Very High. Some drainage issues further down

Cost = 1.5-2.5% total Otways budget (only a small area)

Biodiversity already 30/100. Would be around 18/100. Not well connected to the wider landscape and initially low value.

Potential for 1-2 years rather than 2-4 due to accessibility and small area. However some drainage issues/geotech requirements may slow the process down.

Community questions/ Comments:

How many planning permits have come in so far? A – 2 so far and a number more for initial discussion

If you had to put a bunker in downhill, it needs to face the house, which means it will have to sit out and can be an eye sore. If the bunker was above the house it could be recessed into the hill which may be more amenable.

APZ may not have any real impact on the rebuilding process as many will rebuild regardless (and most of the houses are out of the flame zone while the rest of the properties are in flame zone). However the APZ would have future beneficial impact to everyone in the area.

Section 5 – Visualisation Tool – Peter Galvin

Nil additional

Section 6 – Field Trip

Fire wasn't intense here

If a fire came from the south west under a heavy wind (more traditional) then it would be a much more severe as it would come upslope through the town.

The plantings you use around your rebuilt homes here will make a big difference on the risk around your property.

Section 7 – Voting and Wrap up

How would you rate each option discussed today for IMPACTS TO LANDSCAPE AMENITY?

Option	Option Description	Best	Good	Indifferent	Poor	Worst
Option 1: Status Quo	No APZ and no change to vegetation management adjacent to the township. Could include bunkers, house re-siting, veg m'ment of private blocks at owner discretion		1			2
Option 6: Minimum Distance APZ (part)	Minimum distance APZ to achieve BAL 40 in areas with moderate slope (standard works)	2	1			
Option 8: Minimum Distance APZ (all)	Minimum distance APZ to achieve BAL 40 in ALL areas (including steep slopes requiring specialist works)		2	1		

How would you rate each option discussed today in terms of YOUR PREFERENCES (support or opposition)?

Option	Option Description	Strongly Support	Support	Indifferent	Opposition	Strong Opposition
Option 1: Status Quo	No APZ and no change to vegetation management adjacent to the township. Could include bunkers, house re-siting, veg m'ment of private blocks at owner discretion			1		2
Option 6: Minimum Distance APZ (part)	Minimum distance APZ to achieve BAL 40 in areas with moderate slope (standard works)	2		1		
Option 8: Minimum Distance APZ (all)	Minimum distance APZ to achieve BAL 40 in ALL areas (including steep slopes requiring specialist works)		2	1		

Appendix 7 – Cluster 7 additional notes

Saturday 16 July, 9:30am

Section 1 – Introductions and Overview – Patrick

Agencies – Dave Griffin (Fac), Peter, Kevin, Tim, Kim, Tony (Geotech), Rachel (COS Planning), Joyce, Rakesh and Helen (Red Cross), Erin (DELWP), Pete Ashton (COS), Rory (DELWP Planning Officer), Jay (Clinical psychologist from Lorne Hospital)

Community – Wenda, Bob, Michael, Dorte, Jenny, Mal, Pam, Andrew

General opinion of how people are traveling and going forward (house survived)

Making the rebuild affordable

Bob - Making the point to authorities (Bass Av) to get the road trafficable to trucks and larger vehicles to help the rebuild and future use

Jen - At the bottom of the hill, so interested in the works above them (runoff, erosion, flow etc)

Wenda - Great to meet others in the area – sense of community and interact with others. Find others in the area with similar ideas and values

Section 2 - Community Values – Peter Galvin

Environmental and ecological values – natural biodiversity

Section 3 - Overview of APZ/ Reduce BAL ratings project – Peter Galvin

Community questions/ comments:

How they can work out if everything is burnt, how can you see who is who (neighbours and who had what)?

What does the APZ actually mean? Clear fell, bare ground, impact on koalas etc???

Who's costs are the APZs? A - Maintenance costs (maybe local), implementation (probably state) but a long way to go before that is decided. First have to go through the costs/benefits process and potential designed models.

Are the APZs on public land? A – no, it's actually a mix of private (lots of the Donlevy Estate) as well as others, and some public land. That is an additional level of complexity for the next phase of the process

The difference between BAL 40 to Flame Zone added about $200,000 to the rebuild. So an investment into an APZ may be helpful to reduce the costs for me

Section 4 – Consequence Table – Tim Gazzard

	Opt 1	Opt 2	Opt 3	Opt 4	Opt 5	Opt 6	Opt 7	Opt 8
Homes still in Flame Zone	11	10	5	9	4	7	0	0

Of the 15 properties impacted in this cluster, 11 were in the flame zone.

Fire fighter benefit – Opt 6 (low), Opt 8 (low to moderate), Opt 7 (high impact)

Staff risk to maintain – Opt 6 (moderate), Opt 8 (very high), Opt 7 (moderate)

Erosion/landslip risk – Opt 6 (moderate), Opt (very high), Opt 7 (moderate)

Cost to Otways – 20% of the entire Otways maintenance budget (for both APZ options)

Biodiversity 60/100 – Opt 6 (30/100), Opt 8 (30/100), Opt 7 (30/100)

Timeframe – Opt 6 (1-2 years), Opt 8 (2-4 years), Opt 7 (1-2 years)

Reminder that whatever happens on the APZ, the property owners still need to do their bits to maintain the vegetation on their own blocks or they won't really be getting any benefits from the APZ regardless of the model used.

Community questions/ Comments:

Michael – Option 9 – buy my block!

Dorte – Option 3, so is the refined modelling across the whole area or block by block? A – the new modelling will be across the area as a whole and is due to come out in the next couple of weeks. The new model may or may not change individual BAL ratings, so some may not be better off with refined modelling.

Bob – are you looking at site by site or across the whole area? A – looking at it as a linked landscape, not as an allotment by allotment level. Bit more like a whole jigsaw made up of individual pieces.

Many of the burnt areas already look like that – you'd have to plant to get it up to an APZ level! A – it will grow back much thicker than it was in only a few years, so it's more about being able to maintain it to the new standard once the vegetation stabilises.

Section 5 – Visualisation Tool – Peter Galvin

Nil additional

Section 6 – Field Trip

Pete – to decrease BAL ratings, the APZs would need to be a specific minimum width, and wider to achieve purposes 1-3. Best effectiveness is a continuous area instead of treated patches. So best effectiveness is across the most boundary area rather than just bits.

Community:

Lots of top soil already lost in the area. Some blocks down to clay now that Grocon has removed a lot of the top soil during the clean-up and tree removal. Can we spray seed on it to try and get something to hold it together in the short term? A - Since the fire, lots of small erosion and slips. Drainage systems are overworked, locked by erosion or being bypassed by new spontaneous drainage after rain Need to assess drainage across the settlement, but each property owner needs to take some responsibility to manage onsite drainage outside of COS/crown land. COS is looking at upgrading the drainage system. Shallow root plants as a quick fix not as helpful as they really need deep rooted plants and species, and time to grow is important. Used to capture much of the water by rooves, tanks, gutters and trees. Now with these gone in many areas, 100% of the water falling is flowing down slopes and washing away.

Section 7 – Voting and Wrap up

How would you rate each option discussed today for IMPACTS TO LANDSCAPE AMENITY?

Option	Option Description	Best	Good	Indifferent	Poor	Worst
Option 1: Status Quo	No APZ and no change to vegetation management adjacent to the township. Could include bunkers, house re-siting, veg m'ment of private blocks at owner discretion	2				3
Option 6: Minimum	Minimum distance APZ to achieve BAL 40 in areas with moderate slope	1		4		

Distance APZ (part)	(standard works)					
Option 7: DELWP Standard	DELWP standard APZs in areas with moderate slope (standard works)	2	2			1
Option 8: Minimum Distance APZ (all)	Minimum distance APZ to achieve BAL 40 in ALL areas (including steep slopes requiring specialist works)	2	1		2	

How would you rate each option discussed today in terms of YOUR PREFERENCES (support or opposition)?

Option	Option Description	Strongly Support	Support	Indifferent	Opposition	Strong Opposition
Option 1: Status Quo	No APZ and no change to vegetation management adjacent to the township. Could include bunkers, house re-siting, veg m'ment of private blocks at owner discretion		1	2		3
Option 6: Minimum Distance APZ (part)	Minimum distance APZ to achieve BAL 40 in areas with moderate slope (standard works)	2		4		
Option 7: DELWP Standard	DELWP standard APZs in areas with moderate slope (standard works)	3	1	1	1	
Option 8: Minimum Distance APZ (all)	Minimum distance APZ to achieve BAL 40 in ALL areas (including steep slopes requiring specialist works)	2	2		2	

Appendix 8 – Cluster 8 additional notes

Saturday 16 July, 1:30pm

Section 1 – Introductions and Overview – Patrick

Agencies – Dave Griffin (Fac), Peter, Kevin, Tim, Kim, Tony (Geotech), Rachel (COS Planning), Joyce, Rakesh and Helen (Red Cross), Erin (DELWP), Pete Ashton (COS), Jay (Clinical psychologist from Lorne Hospital)

Community – John and Janine, David Aughton, David and Sandra, Hermina, Kate, Darryl

Kate – 8 Mitchell Grove (lost permanent home)

Hermina – 6 Bass Ave (house survived)

David Kelly - 2 Bass Ave weekenders – house survived

John and Janine - (couldn't hear them)

Darryl – got an automatic reminder yesterday about today, but it still had the old information on it that the meeting was to meet in the street, not at the surf club

Section 2 - Community Values – Peter Galvin

Nil additional

Section 3 - Overview of APZ/ Reduce BAL ratings project – Peter Galvin

Nil additional

Section 4 – Consequence Table – Tim Gazzard

	Opt 1	Opt 2	Opt 3	Opt 4	Opt 5	Opt 6	Opt 7	Opt 8
Homes still in Flame Zone	6	5	5	6	5	0	0	N/A

Out of the 10 houses affected, 6 were in the flame zone.

Fire fighters – Opt 6 (low), Opt 7 (high)

Staff risk to maintain – Opt 6 (moderate), Opt 7 (moderate)

Erosion/landslip risk – Opt 6 (moderate), Opt 7 (moderate)

Cost – Opt 6 (20%), Opt 7 (50%)

Biodiversity 60/100 – Opt 6 (30/100), Opt 7 (30/100)

Timeframe – Opt 6 (1-2 years), Opt 7 (1-2 years)

Would the lighter areas mean reduced foliage? A – yes, there will be a reduction but not total removal

Is there an option for no APZ? A – yes absolutely

As someone going thru the rebuilding process, how soon would this happen to reduce flame zone to BAL 40?

What do the experts think the foliage reduction will actually mean regarding fire risk?

Who maintains it? A – where APZs currently occur on public land, DELWP currently do. In this case, much of the land will be private and so there is a lot of discussion of feasibility that still need to occur. This exercise is focussing on costs and benefits to help the decision on APZ styles and needs, and then this will inform the feasibility question later.

APZ behind Bass Av, did you say that they are on public land? Most of that is the Donlevy Estate. A – clarification, the ones already in other towns are public land, Wye Sep is mostly private

I would imagine that the costs of maintaining APZ works to the government needs to be compared to the millions of dollars spent towards the post fire and recovery process for Wye and other fires. Shouldn't it be seen as an investment in communities rather than paying for the clean-up afterwards?

Who are the ultimate decision makers for this? A – this information goes back to the managers and senior reps of agencies in Melbourne to make decisions. The executive leadership group will be part of that too.

Hermina – I went on the field trip and saw a range of different APZs and differences in the biodiversity/ecological values. The community needs to understand that APZs aren't scorched earth with no life, that some of the models (like graduated ones) aren't going to be as drastic as they may assume. On a small scale there may be some difference, but on a larger scale there isn't much of an impact across all species

Darryl - There hasn't been much of a mention to the destruction reduction that may happen from APZs. I was a farmer for many years and was burned out twice from grassfires, so you can't get a better APZ that open farmland. So how can an APZ stop houses burning down? Is there a way to measure it? A – lots of work been done after fires to get some good data on what does make a difference. APZs are designed for firefighting access/ support first. The added benefit of BAL reduction is based on science so that a house built to standard for that BAL is 6 times more likely to survive a fire than one that is not. It is important for properties to do their bit on their land or the APZ will not work for them. The APZ's are not designed to stop a fire as they are not a barrier.

Would any decisions made be revised in 10 years' time or so to reflect changes in community values and people down the track? A – it all needs to be kept maintained yearly so options for future reviews as the process continues. However, once it's built it needs to be kept maintained into the future.

If we had the 40 m APZ, would there be an expectation that fire fighters would go in there? A – most houses are lost after a fire, the APZ isn't there to make a stand in the face of a fire, but to allow earlier access if possible to fire fighters after a fire.

Section 5 – Visualisation Tool – Peter Galvin

Nil additional

Section 6 – Field Trip

Do you do ecological studies to determine flora/fauna in the area? There used to be yellow-bellied gliders in the area before the fire. Still heard here now. A – would be a field assessment to determine biodiversity values before APZ implementation for offset purposes. If something rare/special was found, then would be taken into consideration and more studies required.

Hermina – would a community group be able to be set up using the Cluster grouping to support the ongoing management of local areas/ reserves? Are there already models that can be used? Landcare or Community Fireguard for example? A - Kim discussed values of the Community fireguard program as an option. Kevin – great to do, but unless you can guarantee an ongoing maintenance program it won't impact on the planning requirements/ reduction of BAL etc.

Dave and Sandra, David and Hermina all interested in doing more work in the gully reserve as a community asset. But hard to get people linked and together. When are people home or how to get hold of emails etc. Cluster group may help start a working group that can do great things locally. Opportunity to chat and get contact details. Hermina volunteered to start as a group leader for the purposes of getting it going.

Hermina – what about the Community Fireguard program as a model? Would that work here? A – discussion of what the program does and information to be sent to the group for consideration.

Would this all mean a buy-back scheme to get the land for the APZs? A – perhaps. Not looking at feasibility at this stage. May be a compliance issue or a policy change to make the work on private land possible

Section 7 – Voting and Wrap up

How would you rate each option discussed today for IMPACTS TO LANDSCAPE AMENITY?

Option	Option Description	Best	Good	Indifferent	Poor	Worst
Option 1: Status Quo	No APZ and no change to vegetation management adjacent to the township. Could include bunkers, house re-siting, veg m'ment of private blocks at owner discretion				1	7
Option 6: Minimum Distance APZ (part)	Minimum distance APZ to achieve BAL 40 in areas with moderate slope (standard works)		7			
Option 7: DELWP Standard	DELWP standard APZs in areas with moderate slope (standard works)	8				

How would you rate each option discussed today in terms of YOUR PREFERENCES (support or opposition)?

Option	Option Description	Strongly Support	Support	Indifferent	Opposition	Strong Opposition
Option 1: Status Quo	No APZ and no change to vegetation management adjacent to the township. Could include bunkers, house re-siting, veg m'ment of private blocks at owner discretion			1		8
Option 6: Minimum Distance APZ (part)	Minimum distance APZ to achieve BAL 40 in areas with moderate slope (standard works)	3	5		1	
Option 7: DELWP Standard	DELWP standard APZs in areas with moderate slope (standard works)	8			1	

Appendix 9 – Community questions from all Clusters

Decision making

- Who is going to make the decision? PG - DELWP will compile and put to the executive leadership group who will make the decision.

Costs

- Will the community be asked to pay for this?
- Could the APZ maintenance costs be reduced if local people could do much of the work? Partnerships? Some will require specialist equipment and skills.
- Implementation costs will be high even tho many of the trees are already gone or dead. Unlikely that removal of dead/dangerous trees will meet APZ required standards, and so more/other works will need to occur to meet the purposes and stability requirements
- Who's costs are the APZs? A - Maintenance costs (maybe local), implementation (probably state) but a long way to go before that is decided. First have to go through the costs/benefits process and potential designed models.
- The difference between BAL 40 to Flame Zone added about $200,000 to the rebuild. So an investment into an APZ may be helpful to reduce the costs for me

APZ purposes, model, area

- What about the 40m "standard" DELWP have for the APZ – thought it would be difficult to achieve here and would that be recommended? PG said that it would not necessarily be recommended. Slope may increase difficulty and determine options that are available.
- Will it reduce ratings? A – that is one of reasons for an APZ.
- Would it be better to look at actual APZs? PG indicated this had been done / was the intent of last week. But the locations can be given for people to do it themselves.
- Karingal Dve drainage area/gully – is that part of the APZ area? A – yes, Option 8
- How big would the APZ need to be to protect us from a more serious fire than the last?
- What is involved, what parts are we talking about, the extent?
- If the APZ doesn't go right around the town, does that change its effectiveness?
- How effective are different APZs to protect against different types of fires?
- What is the purpose of the APZ?
- When doing a cost benefit analysis, are you taking into consideration all of the purposes or just some? Looking at all options/criteria individually and then balancing them up together. A - Will be discussed during the day. Many considerations, not just the 4 purposes.
- Purpose 4 – to get the benefits for BAL ratings it looks like it may need 40 metres, but some areas are not able to have that much, and some areas may need more?
- What about this process is looking at the flame zone area only, not the ones already in BAL 40 where other options may work.
- Is it uniformly steep or is there variation re safety? A – yes it's variable, but the cut-off used here was 25 degrees (dangerous slope to work on) and so that standard was used as a base across the brown mapped area of steep slope.
- Implementation costs will be high even tho many of the trees are already gone or dead. Unlikely that removal of dead/dangerous trees will meet APZ required standards, and so more/other works will need to occur to meet the purposes and stability requirements
- Where is the modified flame zone line now? Has it changed much? A – it has not changed much in this particular Cluster due to the slope and average property sizes. Terramatrix is working on a more refined site map for BAL ratings, however it is not expected to change this Cluster much.

- How is Option 8 that reaches a score of 0 homes in the flame zone measured? It looks at the house footprints that were in that area and calculates where the flame zone can be moved to with the APZ option implemented.
- Much of the slope here is private land and gives a false representation of the steepness of APZ. The bottom part may be accessible to machinery and so be able to be maintained easily. A – but that's relative – it's still steep for a machinery driver for the most part. The effectiveness of the APZ in actually a partnership between the APZ area and the private property maintenance, so the effectiveness will depend on the combined area that can be/ is maintained to a good standard (both public and private land, neighbours etc)
- Is there enough accessible land in a grouping to make any sort of effective APZ zone to make a difference?
- Could we split the mapped cluster into 2 for not possible and accessible/possible in the flatter areas as another Option to explore later? Option 9/10?? Do patch maintenance to improve around those properties together? Perhaps achieving most houses reduced from Flame Zone (instead of all) is something we could cope with here?
- Option 3, so is the refined modelling across the whole area or block by block? A – the new modelling will be across the area as a whole and is due to come out in the next couple of weeks. The new model may or may not change individual BAL ratings, so some may not be better off with refined modelling.
- Are you looking at site by site or across the whole area? A – looking at it as a linked landscape, not as an allotment by allotment level. Bit more like a whole jigsaw made up of individual pieces.

Maintenance

- Who would maintain it? PG probably DELWP but this would need to be worked through.
- How will they be maintained?
- Much of the slope here is private land and gives a false representation of the steepness of APZ. The bottom part may be accessible to machinery and so be able to be maintained easily. A – but that's relative – it's still steep for a machinery driver for the most part. The effectiveness of the APZ in actually a partnership between the APZ area and the private property maintenance, so the effectiveness will depend on the combined area that can be/ is maintained to a good standard (both public and private land, neighbours etc)
- Many of the burnt areas already look like that – you'd have to plant to get it up to an APZ level! A – it will grow back much thicker than it was in only a few years, so it's more about being able to maintain it to the new standard once the vegetation stabilises.

BAL Ratings

- Does Option 3 mean can you reduce the flame zone by remodelling? A – yes by using more detailed and site specific information which usually reduces the extent of the flame zone.
- Option 4 who's house is still in flame zone?
- By doing the work required to minimise fuel around the house, will that change the BAL rating? And if the neighbour doesn't clean up their place (on the Donlevy Estate especially), what is the point of doing it on my place or putting in an APZ? A – any clean up you do will have a direct influence on your risk but won't change the BAL ratings as it can't be guaranteed in perpetuity. The APZs would start at the back boundaries of the adjacent houses (including the Donlevy Estate).
- Purpose 4 – to get the benefits for BAL ratings it looks like it may need 40 metres, but some areas are not able to have that much, and some areas may need more?
- BAL ratings – are they about house safety? A – no, they are actually about protecting human life, not about house survivability/buildings

- What about this process is looking at the flame zone area only, not the ones already in BAL 40 where other options may work.
- Could we split the mapped cluster into 2 for not possible and accessible/possible in the flatter areas as another Option to explore later? Option 9/10?? Do patch maintenance to improve around those properties together? Perhaps achieving most houses reduced from Flame Zone (instead of all) is something we could cope with here?
- Some homes may have to have different ratings on different walls due to where the Flame Zone / BAL 40 / BAL 29 lines are drawn.
- APZ may not have any real impact on the rebuilding process as many will rebuild regardless (and most of the houses are out of the flame zone while the rest of the properties are in flame zone). However the APZ would have future beneficial impact to everyone in the area.

Block Shape

- Are you saying that if there is rebuilding – should we rebuild 12m from neighbours? In an ideal world. A – the planning says 3m from boundary therefore its 6m - ridiculous narrow blocks makes this very hard
- Most sites too small for bunkers. Tony discussed the fact bunkers really are not an option for most sites in Wye River due to slope and size.
- Could bunker help? A – Many small blocks to try and fit everything they need in. Bunker options are limited due to siting issues and specific bunker requirements.
- Are bunkers not more of an option because of slope? A – yes, specification for the sitings of bunkers mean that there are few options to fit a house and bunker on most properties. Site specifics may mean they could squeeze it all in, but more unlikely in this area due to property size, shapes and slopes

Bunkers

- Aren't most sites too small for bunkers? A – the fact is bunkers really are not an option for most sites in Wye River due to slope and size.
- Could bunker help? A – Many small blocks to try and fit everything they need in. Bunker options are limited due to siting issues and specific bunker requirements.
- Why do bunkers only drop the BAL rating level down 1 level instead of more? A – using the Australian Standard (very high level up decision making and not something we can easily influence)
- Are bunkers not more of an option because of slope? A – yes, specification for the sitings of bunkers mean that there are few options to fit a house and bunker on most properties. Site specifics may mean they could squeeze it all in, but more unlikely in this area due to property size, shapes and slopes.
- Is sharing bunkers an option? A – standards say that a bunker must be attached to a house, not a shared resource. You may share them during a fire in reality, but only the house they are associated with will achieve a reduction in the BAL rating. The standard does not allow for shared bunkers. The bunker must be on the property of the house it is attached to. Also, can't install bunkers where there is a potential for tree fall. Not something most of Wye can guarantee.
- If you had to put a bunker in downhill, it needs to face the house, which means it will have to sit out and can be an eye sore. If the bunker was above the house it could be recessed into the hill which may be more amenable.

APZs on Private Land

- What about privately owned sections up to their houses – is APZ behind them? PG - Breaks would start at the back of houses – and would need to negotiate and work with privately owned land – may be a difficulty.

- Any APZ would need to have ongoing management and agreement would need to be had with the privately owned property.
- worried about private land such as the Donlevy Estate. PG stated APZ on private land
- Is there a way to improve the management of the Donlevy Estate?
- Is the acquisition of the land behind required for APZ construction mandated? How would APZs be made to happen if they were deemed appropriate? A – that's another process that may follow.
- Are the APZs on public land? A – no, it's actually a mix of private (lots of the Donlevy Estate) as well as others, and some public land. That is an additional level of complexity for the next phase of the process

Private property maintenance

- Tim highlighted that APZ options assume management of your own property otherwise risk still remains.
- comments of poor practises of some landowners or electricity people – chopping trees and discarding down slope… will APZ be managed better?
- Is there a way to improve the management of the Donlevy Estate?
- Expression of displeasure at management of the privately owned land behind them.
- Expression of anger at lack of action by Council towards these landowners
- By doing the work required to minimise fuel around the house, will that change the BAL rating? And if the neighbour doesn't clean up their place (on the Donlevy Estate especially), what is the point of doing it on my place or putting in an APZ? A – any clean up you do will have a direct influence on your risk but won't change the BAL ratings as it can't be guaranteed in perpetuity. The APZs would start at the back boundaries of the adjacent houses (including the Donlevy Estate).
- Would it be safe to say that the area in the APZ area would be similar to the blocks? A – yes to an extent.
- Much of the slope here is private land and gives a false representation of the steepness of APZ. The bottom part may be accessible to machinery and so be able to be maintained easily. A – but that's relative – it's still steep for a machinery driver for the most part. The effectiveness of the APZ in actually a partnership between the APZ area and the private property maintenance, so the effectiveness will depend on the combined area that can be/ is maintained to a good standard (both public and private land, neighbours etc)

Amenity

- What's going to be there? A – 50% of trees would remain roughly and mulch understorey
- looks very bare/risk of erosion. (Looking at the visual of an APZ.)
- people use the area behind them as a walkway now anyway.
- would it be better to look at actual APZs? A – this had been done / was the intent of last week. But the locations can be given for people to do it themselves.
- What are people's views of them when they live beside them? A – different people have different views. A community member shared her views last week and although she didn't want too many trees to be taken and concerned about pedestrians always walking past but the area has grown on her and she is comfortable with it.
- What does it look like?
- Will the APZ construction affect the amenity of the area for permanent residents? A – yes, trucks, chainsaws etc will be seen and heard for some time.
- Could APZs be used for other purposes – ie recreation (walking, bikes etc)?
- After the fire and the loss of trees, how would an APZ look that is different to what there is right now? Would it be a good opportunity to take the trees out now? A – trees are useful to reduce and lift the wind and cool the ground, so are important to retain in APZs.

- What could they look like? Is there a way for us to work out how they may look? A – yes – today will have a variety of ways to help you understand and decide.
- Would the APZs open up the areas to motorbikes and 4WD issues? A – haven't had a huge problem with other areas. Slope may also impact on vehicles using the areas. A consideration for amenity as well. Some people think the amenity is improved, and others feel it has worsened due to extra recreation use. Personal values.
- Haven't a lot of trees already died? If you take the dead trees out isn't it already like an APZ? A – considerations for slope retention, slippage etc – taking dead trees out may not be strategically the right way of establishing an APZ here.
- What does the APZ actually mean? Clear fell, bare ground, impact on koalas etc???
- Many of the burnt areas already look like that – you'd have to plant to get it up to an APZ level! A – it will grow back much thicker than it was in only a few years, so it's more about being able to maintain it to the new standard once the vegetation stabilises.

Firefighters/ bushfire risk

- if there is an APZ will that mean that firefighters actually go up into the area/houses? A – not necessarily due to risks but may make it easier to get in for burning / backburning or to go in more quickly after the fire which may save some houses.
- fire did not burn on way thru' but wind changed and it did. would that be usual? A – not unusual northerly coming in – southerly pushes it back – we model 100's of fires for the APZ.
- How big would the APZ need to be to protect us from a more serious fire than the last?
- If the APZ doesn't go right around the town, does that change its effectiveness?
- How effective are different APZs to protect against different types of fires?
- would the APZ you're talking about have had any impact on the fire we had? A – most houses were lost from other things than direct flame contact from the bush. Most from house to house, embers, materials around homes etc. The difference would be the reduction of risk to powerlines, trees down on houses and over roads etc.
- If I move my house out of flame zone and my neighbours don't, will that influence my house? No – it's a house by house basis. Some insurance companies aren't allowing the footprint to be moved
- Would we get a crown fire? Kevin – the slopes are not necessarily enough to provide run up to allow a crown fire. So much of the area would not get a crown fire.
- Can you replant plants that don't burn? A – no such thing really. Some are more flammable than others and grow up faster after fire. Wouldn't necessarily replant a standard APZ for an environmental or aesthetics point of view, but may for an erosion/stability point of view. Introduction of more fire retardant non-native plantings as an option to consider (ie fruit trees). Have a look at some of the things that survived the fire around the town, and that may have burnt but didn't contribute much to the fire intensity.
- Is there enough accessible land in a grouping to make any sort of effective APZ zone to make a difference?

Slope/ erosion/ landslip issues

- What about the 40m "standard" DELWP have for the APZ – thought it would be difficult to achieve here and would that be recommended? PG said that it would not necessarily be recommended. Slope may increase difficulty and determine options that are available.
- general nodding and agreement of steep slopes and risks to workers and erosion/geotech risk.
- Can we manage the veg and landslip risk at the same time?
- The blue gums take a long time to get that tall, would it help to plant some indigenous faster growing trees to help bind the soil? A – one of the biggest risks is erosion. Planting fast

growing trees, shrubs and grasses will help in the short and long term. A – the new COS plant book will be out soon.

- Arborist report from Grocon to 'remove' a tree – is that at ground level or grubbed out? A – ground level to retain roots. The more we remove the more at risk the ones that are left are of falling over – taller trees with shallow roots.
- After the fire and the loss of trees, how would an APZ look that is different to what there is right now? Would it be a good opportunity to take the trees out now? A – trees are useful to reduce and lift the wind and cool the ground, so are important to retain in APZs.
- Haven't a lot of trees already died? If you take the dead trees out isn't it already like an APZ? A – considerations for slope retention, slippage etc – taking dead trees out may not be strategically the right way of establishing an APZ here.
- Lots of top soil already lost in the area. Some blocks down to clay now that Grocon has removed a lot of the top soil during the clean-up and tree removal. Can we spray seed on it to try and get something to hold it together in the short term? A - Since the fire, lots of small erosion and slips. Drainage systems are overworked, locked by erosion or being bypassed by new spontaneous drainage after rain Need to assess drainage across the settlement, but each property owner needs to take some responsibility to manage onsite drainage outside of COS/crown land. COS is looking at upgrading the drainage system. Shallow root plants as a quick fix not as helpful as they really need deep rooted plants and species, and time to grow is important. Used to capture much of the water by rooves, tanks, gutters and trees. Now with these gone in many areas, 100% of the water falling is flowing down slopes and washing away.

Biodiversity/ ecology

- Can we manage the veg and landslip risk at the same time?
- What type of vegetation would be planted?
- The blue gums take a long time to get that tall, would it help to plant some indigenous faster growing trees to help bind the soil? A – one of the biggest risks is erosion. Planting fast growing trees, shrubs and grasses will help in the short and long term. A – the new COS plant book will be out soon.
- What's going to be there? PG - 50% of trees would remain roughly and mulch understorey
- What is the purpose of the APZ?
- Stella (owned a house here for 32 years) has been hand-weeding parts of the gully for 18 years and that area remained unburned. She is the surviving house in The Boulevard area surrounded by lost homes. Is strongly against any heavy veg management of the gully and has being staying around watching to ensure that the trees aren't taken out while she was away. The values are very different across the community. Had tried for years to get holiday neighbours involved to no avail, they didn't have any understanding of the natural bush or care about the environment while they were here. No appreciation of the natural values. The people that are here today are already converted to the cause, but the ones that are not here are the ones that need to be involved most. Stella quite passionate and upset
- Why would the area have a statewide habitat score of 40? A – it is scored in isolation of what was there not how it's linked. Averaged across the site – not pristine at all. Very weedy (asparagus fern, pittosporum etc). Having it more open may help access for weed removal but may not improve its biodiversity value due to changes in overall ecological structure.
- Can you replant plants that don't burn? A – no such thing really. Some are more flammable than others and grow up faster after fire. Wouldn't necessarily replant a standard APZ for an environmental or aesthetics point of view, but may for an erosion/stability point of view. Introduction of more fire retardant non-native plantings as an option to consider (ie fruit trees). Have a look at some of the things that survived the fire around the town, and that may have burnt but didn't contribute much to the fire intensity.

- What does the APZ actually mean? Clear fell, bare ground, impact on koalas etc???
- Many of the burnt areas already look like that – you'd have to plant to get it up to an APZ level! A – it will grow back much thicker than it was in only a few years, so it's more about being able to maintain it to the new standard once the vegetation stabilises.

Rebuilding

- are you saying that if there is rebuilding – should we rebuild 12m from neighbours? In an ideal world. A – the planning says 3m from boundary therefore its 6m - ridiculous narrow blocks makes this very hard
- also the 8m limit makes it harder to build away from neighbour – COS – there is some flexibility with this but this is about limiting the size of developments to retain character.
- If the decision was to put in an APZ and it took 2-4 years, does that mean that that we would have a delay in planning permits until it's done? If it will change the rating, would we have to wait for it to be completed before it would change the planning permit requirements from flame zone to Bal 40? Good question and unsure of the answers at this stage
- Some homes may have to have different ratings on different walls due to where the Flame Zone / BAL 40 / BAL 29 lines are drawn.
- How many planning permits have come in so far? A – 2 so far and a number more for initial discussion
- APZ may not have any real impact on the rebuilding process as many will rebuild regardless (and most of the houses are out of the flame zone while the rest of the properties are in flame zone). However the APZ would have future beneficial impact to everyone in the area.

Timeframes

- understanding and agreement that process will take 2-4 years.
- timeframe of 2/4 years is probably a problem for planning approvals now. A – we are looking at these now – decisions about three weeks away.
- when would rating change? Time still working thru whether changes would need to happen first.
- What are the timeframes involved?
- If the decision was to put in an APZ and it took 2-4 years, does that mean that that we would have a delay in planning permits until it's done? If it will change the rating, would we have to wait for it to be completed before it would change the planning permit requirements from flame zone to Bal 40? Good question and unsure of the answers at this stage

Other

- is all this work just for this area or the whole of Victoria? If just here may not be worth it as many people may not rebuild. A – hopeful learning will be useful elsewhere.
- What does the APZ mean for individual blocks?
- What would APZs influence individual properties?
- What are the plans for the retaining walls in Karingal? A – Looking at replacing any retaining walls that had existed. Some slopes didn't have a wall and have been fire affected, so may need one to reduce future risk to the public.
- Climate change – has this been taken into account in the modelling? A – we are still building up to a fire index to 100, even though Black Saturday was 180. Buildings to the best standards are still untested at highest ratings.
- It's going to be difficult to take it all in to vote today. Lots of information to understand and make sense of. Many people couldn't be here today. Peter – Not going to be able to please everyone regarding opportunities to participate. Options for emailing your thoughts in to the central email address for anything you think of later. Also Open Houses for further feedback. Potential for conducting a survey, but that will miss the conversations and clarifications we've had today with the detail of background and discussions

- Only half of Wye/Sep was fire affected. Is there anything in the pipeline that is engaging with the non-fire affected community? A – there is a larger resilience focus that is occurring for an across the settlement perspective.
- When doing a cost benefit analysis, are you taking into consideration all of the purposes or just some? Looking at all options/criteria individually and then balancing them up together. A - Will be discussed during the day. Many considerations, not just the 4 purposes.
- What about the properties that did not have a home on them that are still intending to build? That may add more houses that may be built in the Flame Zone to the tally in addition to the ones that were lost. Have they been included in the conversations? That could change numbers across the area.
- How they can work out if everything is burnt, how can you see who is who (neighbours and who had what)?
- Option 9 – buy my block!

Appendix 10 – General cluster meeting information

Cluster Schedule and Attendance:

Cluster	Location	Date and Time	Att
#1	Riverside Drive Central and East	Friday 8th July, 9.30am – 12 noon	0
#2	Riverside Drive West and Illowra Avenue	Friday 8th July, 1.30pm – 4.00pm	6
#3	Karingal Drive, Coryule Avenue, Durimbil Avenue and Koonya Avenue	Saturday 9th July, 9.30am – 12 noon	12
#4	McClennan Court, Wallace Avenue and Koonya Avenue south	Saturday 9th July, 1.30pm – 4.00pm	9
#5	Dunoon Road and Stanway Drive	Friday 15th July, 9:30am – 12 noon	5
#6	Iluka Avenue	Friday 15th July, 1.30pm – 4.00pm	3
#7	Bass Avenue west and Harrington Street	Saturday 16th July, 9.30am – 12 noon	8
#8	Bass Avenue east, Mitchell Grove and Olive Street	Saturday 16th July, 1.30pm – 4.00pm	8
TOTAL			51

Note: Cluster 1 was unattended and therefore the meeting did not proceed.

Section 1 – Introductions and Overview – Patrick O'Halloran (Clusters 1-4) and David Griffin (Clusters 5-8)

Welcome. Purpose of Cluster meetings and what your participation will look like. Timeframes, what will be covered, agency introductions. Community introductions and expected outcomes/questions where time permitted.

Section 2 - Community Values – Peter Galvin

Peace and tranquil setting

Natural environment and landscape, ecological values

Beach and forest coming together

Small hamlet

Section 3 - Overview of APZ/ Reduce BAL ratings project – Peter Galvin

For this project, the purpose of APZs are:

Provide access for firefighting and vegetation management

Provide safe working environment in event of bushfire

Provide established boundary for planned burning or back burning

Reduce radiant heat/ember load for adjacent houses during bushfire (BAL rating reduction)

Purposes 1-3 are covered when using 'DELWP Standard' APZ of at least 40 metres; Purpose 4 is a new outcome for consideration for this project as the minimum distance required to achieve a BAL

ratings reduction from Flame Zone to BAL 40 (generally 13 metres or so) and does not achieve purposes 1-3 at all.

Explanation of maps and differences between the minimum distance and DELWP Standard APZs. Not all areas are conducive to the establishment of APZs due to local geotechnical considerations.

Section 4 – Consequence Table – Tim Gazzard

Discussing options with multiple considerations to determine cost/benefits and looking at how they may achieve the potential of taking ALL houses that were lost/damaged in the mapped Flame Zone to a new reduced rating of BAL 40. The analysis only considers houses that had been there during the bushfire and does not include empty blocks that may decide to build in the future.

Option	APZ Purpose Considered	BAL Modelling Considered	APZ Considered	Bunkers Considered	Re-siting Considered
1	#4	Current	No	No	No
2	#4	Current	No	No	Yes
3	#4	Refined site-specific	No	No	No
4	#4	Current	No	Yes	No
5	#4	Refined site-specific	No	Yes	Yes
6	#4	Current	Minimum Distance on moderate slope	No	No
7	#1, 2, 3, 4	Current	DELWP Standard on moderate slope	No	No
8	#4	Current	Minimum Distance on moderate and steep slopes requiring specialist works	No	No

Even if the APZs were approved, they could take 2-4 years to implement. BAL ratings must reflect current or ongoing states of vegetation and fuels as well as long-term site conditions; they cannot reflect a proposed future state. Additionally, any potential changes to BAL ratings within the current Colac Otway Planning Scheme will require approval by the Minister for Planning. Therefore, APZ options would be unlikely to have any impact to BAL ratings, if at all, until they were implemented, and following this, any new BAL ratings would require Ministerial approval. No benefit of APZ options from a BAL perspective would be able to be realised until after implementation (2-4 years).

Size of some of the machines and activities required to do the work (especially in slopes greater than 25 degrees) and potential dangers such as crew accidents, machinery rolling downhill and accidental toppling of trees downslope.

Any APZ model will only be able to achieve BAL rating reductions if property owners take ongoing responsibility for the appropriate maintenance of their own properties for bushfire safety and risk reduction.

Section 5 – Visualisation Tool – Peter Galvin

Presentation of PowerPoint showing images of different existing APZ's in the Otway Ranges.

Before and after pictures of treated areas

Examples of different sites for comparison of visual amenity and changes to vegetation structure and species

Discussion of machinery and techniques (including candling) that may be involved in establishing and maintaining different APZs.

Demonstration of digital visualisation tool.

Photographs of points around and into the settlement

Translation of those points to digital representation

Click to transition select points from no treatment, minimum distance APZ and maximum distance APZ to show potential visual impacts and considerations

Section 6 – Field Trip – Kevin and Tony (with input as required from other agencies present)

APZs and bushfire

The Christmas Day bushfire was not typical of the fires that would be expected in this area as it was not actually very intense. It would be expected in summer that the strong south-west wind would bring a bushfire into town and blow it upslope creating a much more severe situation.

Of all the houses lost and damaged in this bushfire, only two were destroyed from direct exposure to the fire front. The rest were lost from embers and spotting into the town setting fire to gardens, debris and stored materials, as well as from house to house (more typical of a town fire, not a bushfire).

Just because a house survived this time does not mean it is safe from future fires.

Standard DELWP APZs are not barriers to bushfire at all. They are normally used to provide safer and quicker access to fire fighters AFTER a bushfire has passed to achieve some asset protection (more houses burn down in the hours after a bushfire than before or during the fire front).

APZs may have an added benefit of reducing direct flame attack to the first line of buildings adjacent to the forest. That is part of the current community discussion.

APZs DO NOT prevent embers or stop them from setting new fires when they blow into flammable materials around the township.

Improved fire protection across the community continues to rely on the management of fuels on private property, especially immediately around and under houses. The better maintained around a house, the fewer areas for falling embers to set on fire. A group of maintained neighbouring houses will also help to improve the fire safety of each other.

A continuous area of maintained vegetation (including on both public and private land) will be more effective than patches of treated area.

APZ design

To reduce the ability for an approaching bushfire to easily travel from ground to canopy (which creates the most intense heat and embers), removing the vegetation structure in-between is the first step. The second step is managing the bark hazard on the trees. The bark can act as a ladder for the fire to travel up (in the case of stringybarks), or create piles of dropped bark that accumulates every year (such as the blue gums across this area). Burning bark is a significant cause of embers which can blow ahead and cause spot fires some distance from the fire front.

The removal of stumps and fallen logs in APZs takes away the larger fuels that cause intense heat for some time after a fire has passed, allowing for earlier access into the area for emergency crews. This also allows for safer and easier access for annual management, including potential for mechanical maintenance in some flatter areas (generally less than 25 degrees slope).

Potential APZs may be similar to what some burned areas look like now, with the understorey, shrub layer and some trees removed. They would also have stumps and fallen logs removed, and perhaps another 30-50% of the trees taken out depending on the area and slope. Bark and regrowth would be periodically mulched back onto the ground and break down. Eventually a layer of grasses and herbs will grow, so the area may become more open and park-like.

Without vegetation management, the burned area will grow back much thicker than it was before the fire, before naturally thinning out over coming years.

Local flora and fauna

Most of the surrounding forest is only 50-60 years old and is regrown from the 1962 bushfires. This is a young actively growing forest with lots of structure, and is still quite dense because it is going through a natural thinning process which will continue as the forest matures over the next 30-40 years.

In this type of gum forest, a total canopy is never achieved as the trees don't like the competition so will not interlock overhead. There will always be openings in the canopy.

Some of the gully areas are closely grown in such a way that they are naturally wetter and less flammable to start with. To open these particular areas up with an APZ may dry them out and make the remaining vegetation more flammable in the future.

Around 60% of the trees' root boll is within the first 2 metres of the soil. The soils are shallow in the area with underlying rock, so that tall trees are prone to toppling in strong winds.

Trees are important to cool the ground, and to reduce and lift the wind.

Trees are important to stabilise the soils and slopes with their root mass, and to take-up groundwater.

While some plants and animals will be negatively impacted if APZs were established due to removal of habitat, others will find the more open and sunlit environment beneficial.

Land slope and erosion issues

To consider overall geotechnical stability of a site, you need to factor in three things – slope, ground strength (what's holding it all together) and groundwater.

Trees provide a mechanical re-enforcing of the ground stability. Taking out trees may leave roots now to keep binding the soil, but over time they will die and rot and no longer help.

By decreasing the number of trees, stabilising root mass and water absorption are also reduced. Soils will become wetter and more prone to erosion and slippage.

Remaining trees will be more exposed to wind and wetter soils, which increases their chance of toppling over

As the young forest is entering a self-thinning stage naturally, vegetation management that mimics natural thinning over time may allow the remaining trees to compensate to the changes more effectively. Gradual removal of smaller trees, while maintaining the areas where understorey is already removed to prevent its regrowth, may help remaining trees cope with slow changes to water, wind and larger canopy gaps.

Removing many trees will cause a nett loss in root density and function. A phased process that gradually replaces trees with either species more appropriate to APZs, or structures that provide similar functions to prevent erosion and slippage may only work in some areas.

There has been a lot of small slips and some erosion since the fire. Some areas have lost top soil through the process of cleaning up and dangerous tree removal. Water that would have been captured by house tanks, town drainage systems and vegetation is now all running off. The gutters that are still undamaged are overflowing, blocked by erosion, or bypassed by spontaneous drainage after rain. While drainage upgrade works are being assessed, property owners need to take some responsibility to manage onsite drainage on their own properties.

Bunkers

Bunkers have a strict set of specifications for them to be considered as an option for safety and to reduce BAL ratings down one level.

Many small size, narrow or odd shaped properties do not have room to also put in a bunker to the standards required

They cannot be installed in areas subject to tree fall

A bunker must be formally associated with a single house. You may choose to share them during a fire, but only the house they are 'attached' to will achieve a reduction in the BAL rating. The standard does not allow for shared bunkers. The bunker must be on the property of the house it is associated with.

If you have a bunker downslope from your house, the bunker entry must face the house. This may mean the bunker has to significantly sit above the ground to allow access which may be an eyesore.

If the bunker is above your house, it may be able to be recessed into the hill to reduce visual issues, however the weight of it (around 6 tonnes) and the amount of work to support the foundations effectively may cause other issues including future slippage

Appendix 11 – APZ Online Survey

Introduction

The Asset Protection Zone (APZ) Survey was developed to engage the broader Wye River/ Separation Creek community (i.e. not just people directly targeted for cluster meetings) about their views on APZs. The purpose of the survey was to ascertain:

- Is the Wye River/ Separation Creek community supportive, opposed or indifferent to APZs;
- Why do they hold that view

Method

The APZ survey was hosted on Typeform, a free online survey tool. The tool supported text, images and video to provide supporting information to respondents.

Survey information and questions were designed in collaboration between the Wye River recovery team with assistance from Laura Little of the Community Partnerships and Engagement Support team. The survey was pre-tested with three members of the Wye River Community Resilience Committee and adjusted accordingly.

The survey was available on the WyeSep Connect website from 22 July until 2 August (12 days) and was promoted via the site, its Facebook page, the community resilience newsletter and at two community meetings whilst the survey was open.

Results

Respondents

31 people responded to the APZ survey.

Figure 15 below shows 84% (x=26) of respondents were holiday home/second property owners. The remainder were permanent residents, visitors/ tourists or other.

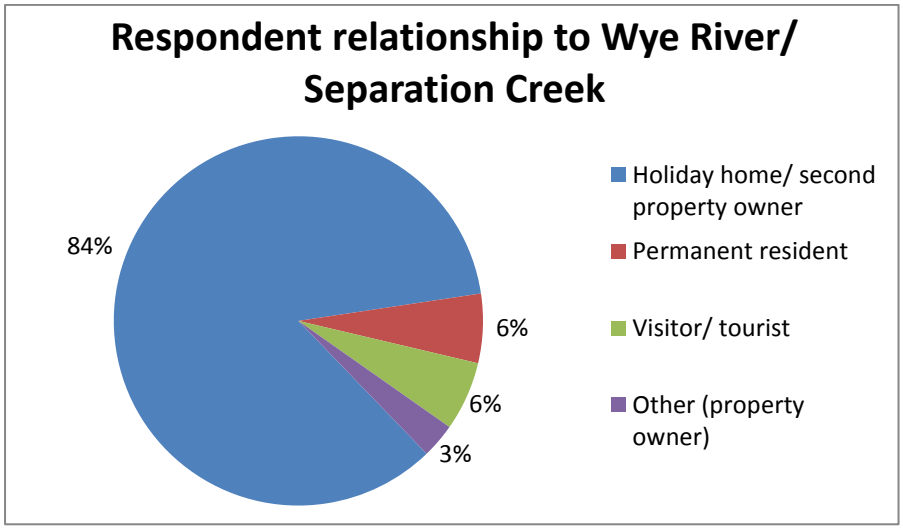


Figure 15: Respondent relationship to Wye River/ Separation Creek

Figure 16 below shows 42% (x=13) of respondents attended the APZ field trip or a cluster meeting prior to completing the survey; 58% (x=18) did not.

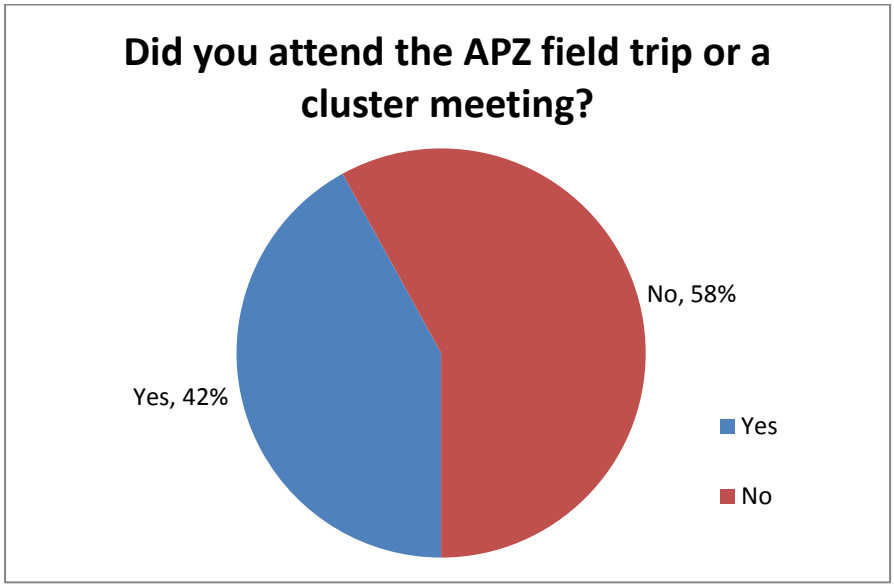


Figure 16: Did respondent attend the APZ field trip or a cluster meeting

Visual appearance

Figure 17 below shows respondents' opinions of the visual appearance of Minimum Distance APZs compared with their opinions on the visual appearance of DELWP standard 40m APZs. For Minimum Distance APZs, opinions are evenly split – 45% (x=14) of respondents selected like/ like very much; 42% (x=13) selected dislike/ dislike very much; 13% (x=4) were indifferent. Results for 40m APZ are clearer, with 58% (x=18) of respondents selecting dislike/ dislike very much compared to only 22% (x=7) selecting like/ like very much. 19% (x=60) of respondents were indifferent to the appearance of 40m APZs.

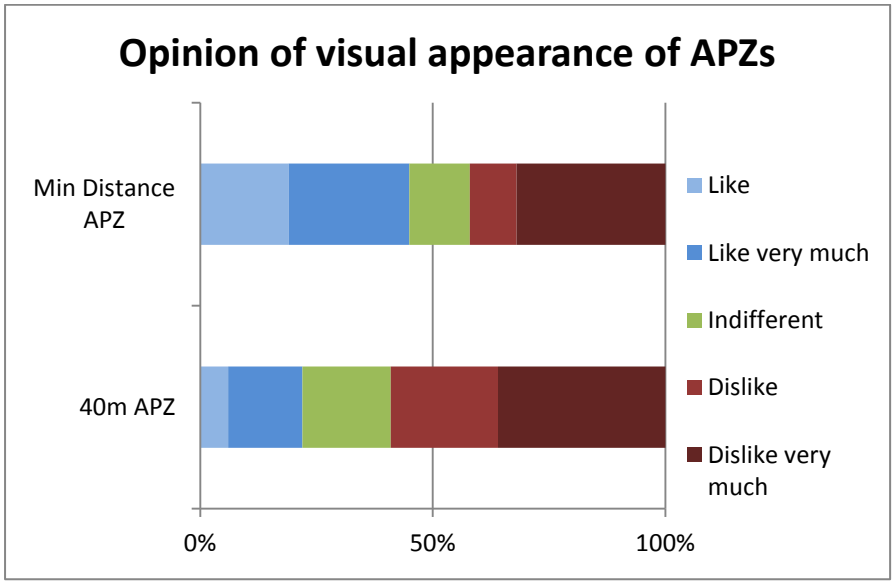


Figure 17: Opinion of visual appearance of APZs

How important are these aspects of APZs?

Respondents were asked to rate how important various aspects of APZs are to them when thinking about whether APZs should be implemented or not. Figure 18 below compares results of four APZ outcomes – ability to improve firefighter access and safety, ability to reduce BAL ratings for properties immediately adjacent to APZs, possibility that there will be changes in the mix of fauna using areas created as APZs and visual appearance of APZs.

Firefighter access and safety was viewed as very important by 61% (x=19) of respondents. 35% (x=11) of respondents viewed BAL reduction as very important. 45% (x=14) of people believed visual appearance and change in fauna was very important. BAL reduction was seen as not at all important by the largest percentage of respondents, at 23% (x=7).

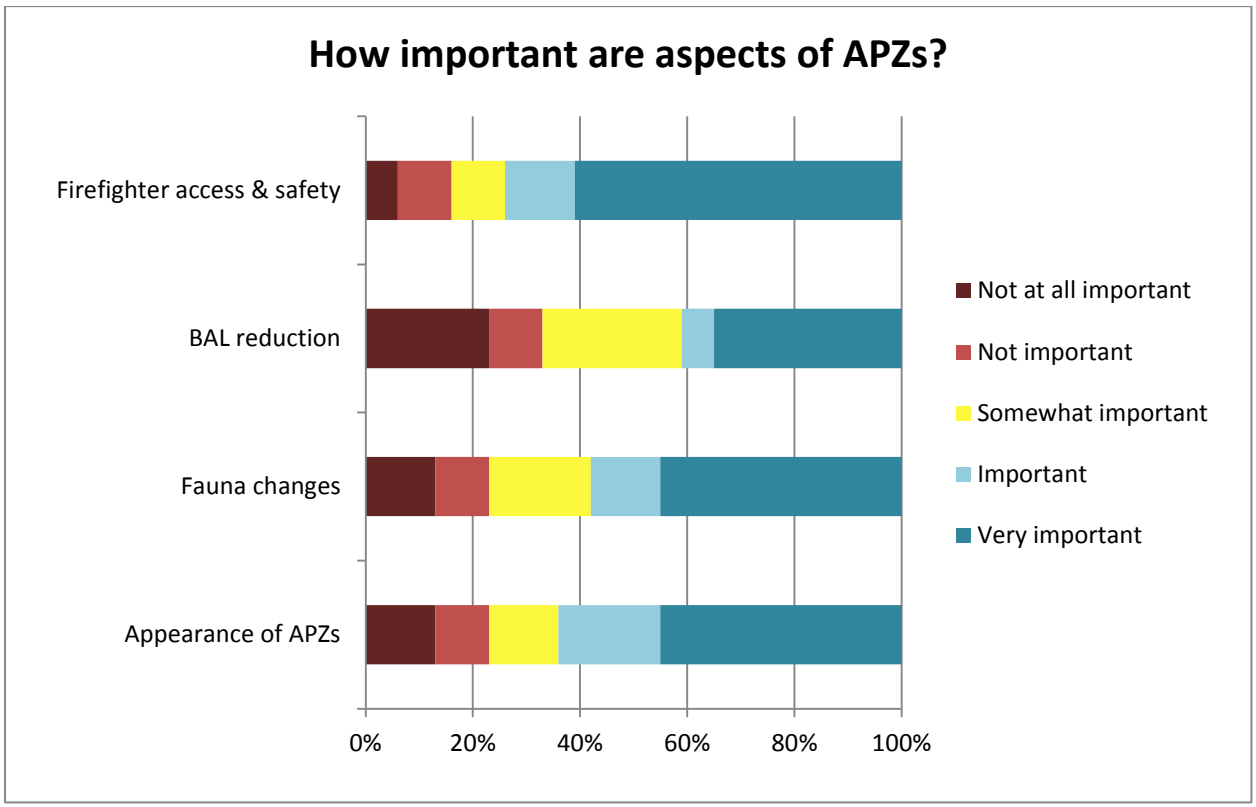


Figure 18: Importance of APZ considerations

When asked directly to rate which of two considerations was most important, respondents rated Further investigating risk reduction options throughout the whole settlement area (71%) and Support firefighters with safer and easier access to conduct planned burning and fight bushfires (74%) as more important than reducing BAL for properties immediately adjacent to APZs. See figure 19 and 20 below.

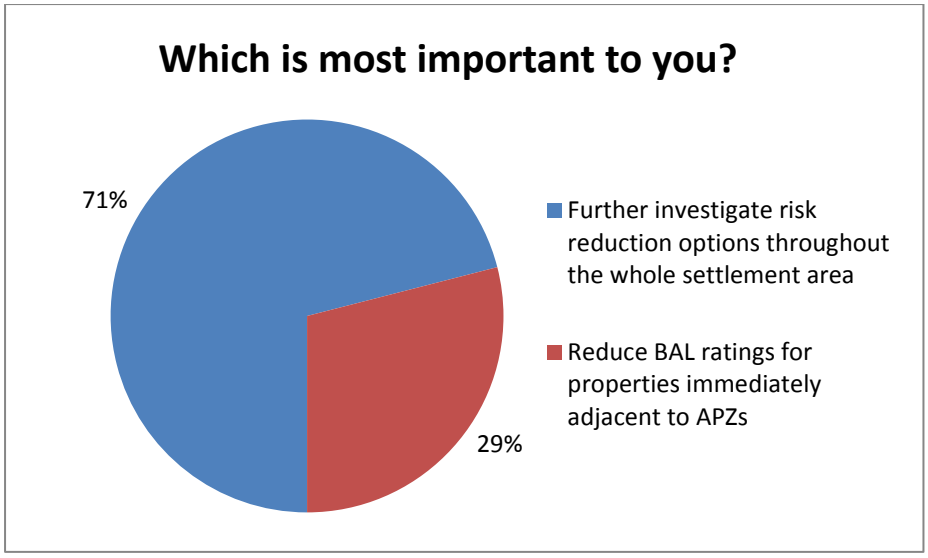


Figure 19: Importance of investigating other options vs BAL reduction

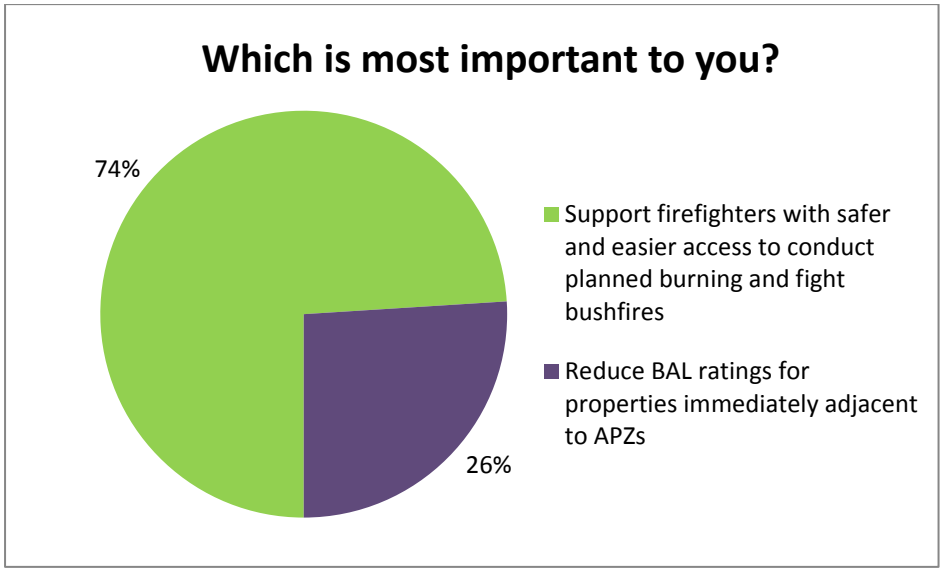


Figure 20: Importance of supporting firefighters vs BAL reduction

APZ options

Figure 21 below shows respondents' support or opposition for Minimum Distance and DELWP standard APZs. 58% (x=18) of respondents were supportive or strongly supportive of Minimum Distance APZs, while 33% (x=10) were opposed or strongly opposed. 52% (x=16) of respondents were supportive or strongly supportive of DELWP Standard APZs, while 42% (x=13) were opposed or strongly opposed.

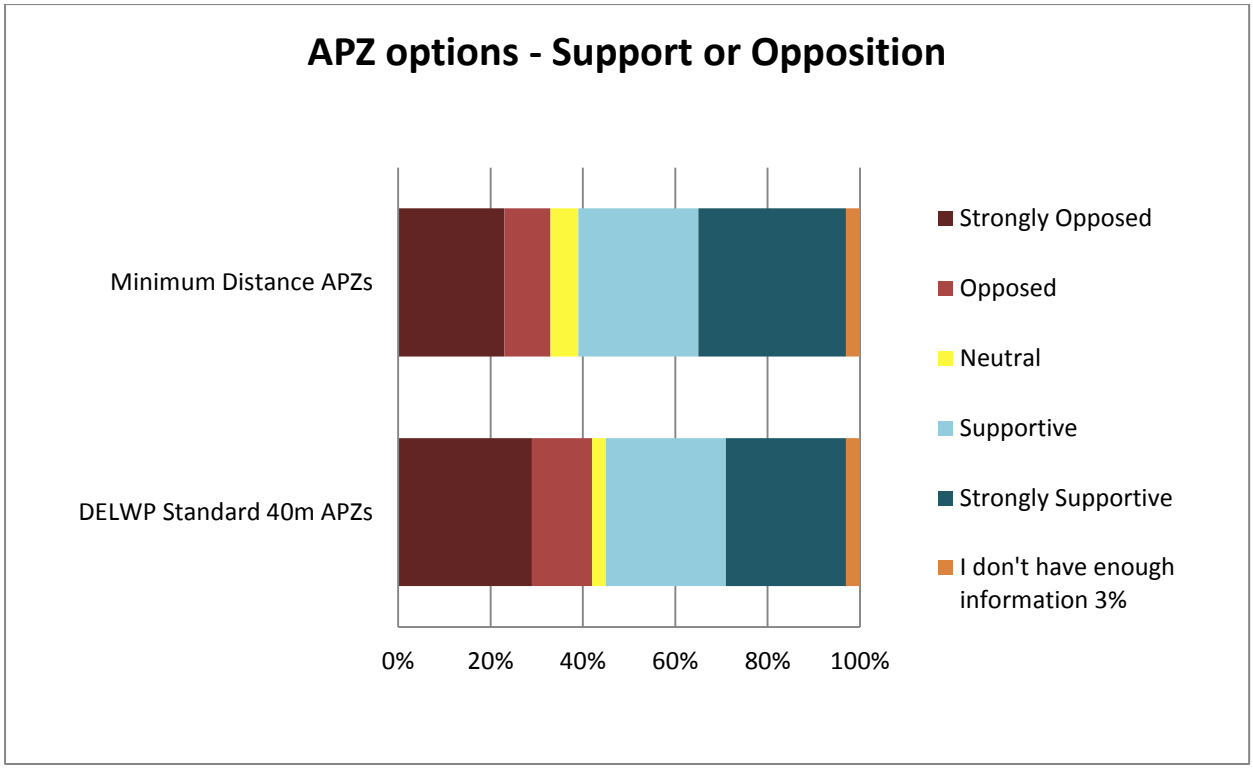


Figure 21: Level of support or opposition for APZ options

Respondents were asked to choose which option they would prefer for Wye River and Separation Creek at this time, of a possible four options.

Figure 22 below shows 32% (x=10) chose 'Implement DELWP Standard 40m APZ', 29% (x=9) chose 'Maintain status quo', 26% (x=8) chose 'Implement Minimum Distance APZs', and 13% (x=4) chose 'Something else'. In total, 58% (x=18) selected one of the two APZ options.

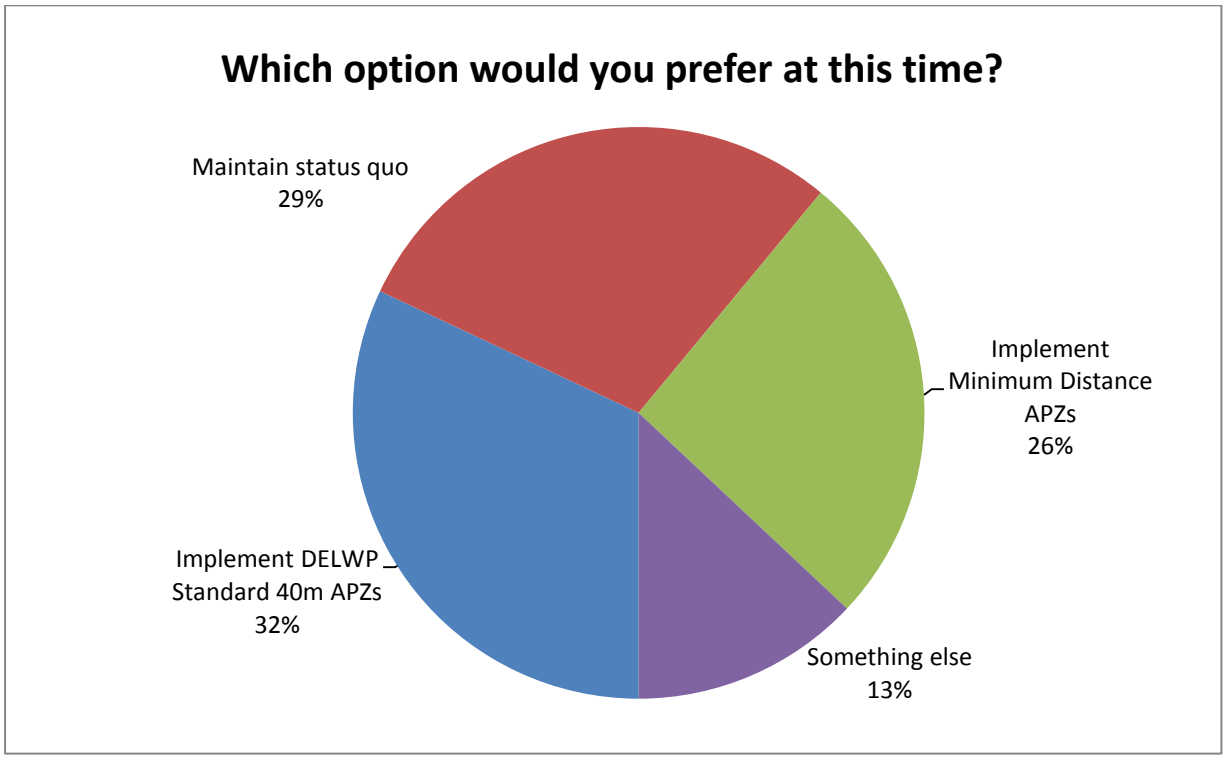


Figure 22: Option preference for Wye River and Separation Creek

Respondents were asked to briefly explain why they chose their option. The reasons for choosing each option are broadly categorised below:

Implement DELWP Standard 40m APZ (32%)

- Bushfire safety and management – 70%
- Environment and amenity – 20%
- BAL reduction – 10%

Maintain status quo (29%)

- Environment and amenity – 72%
- Does not reduce bushfire risk – 21%
- Concerns about erosion and landslip – 7%

Implement Minimum distance APZ (26%)

- Bushfire safety and management – 37.5%
- Balance between BAL reduction and bushfire safety – 25%
- Environment and amenity – 25%
- BAL reduction – 12.5%

Something else (13%)

- Environment and amenity – 60%
- APZ won't work, not a good idea, other ideas are better – 40%

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