BUSINESS CASE: EXECUTIVE SUMMARY OCTOBER 2015

Alternative approaches to enhancing community fire preparedness: a business case

Report prepared for Mornington Peninsula Shire as part of the Financial Risk Adaptation Planning project

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Executive summary

Introduction

Financial Risk Adaptation Planning (FRAP) is a series of case studies funded by the Victorian government. It aims to assist member councils of South East Councils Climate Change Alliance to assess the short, medium and longer terms costs and benefits of alternative adaptation options in the context of a changing but uncertain future climate.

This case study examines alternative approaches to bushfire awareness and management education to see if they can achieve improved bushfire preparedness, lower costs to Mornington Peninsula Shire (MPS) and reduced exposure of MPS to liability. The case study draws on bushfire preparedness data captured through a survey of residents undertaken in a selected 'high risk' community in the Mount Martha township and an accompanying literature review. Both of these are discussed in the *Mount Martha Fire Preparedness Case Study* (MPS 2015).

Issue definition

As in many other regions of Victoria and Australia, bushfires are a significant hazard in the Mornington Peninsula. The region has experienced at least three major fires since European settlement leading to substantial loss of property and many other 'intangible' social and environmental impacts. Climate and fire weather projections indicate that fire risk in bushfire prone areas of MPS is likely to increase in the future.

MPS is responsible for the management of approximately 260 bushland reserves across the Mornington Peninsula. MPS's objective for the fire management of this land is to reduce the bushfire risk to life and property from fires starting in the bushland reserves and spreading to private properties in high fire risk areas by:

1. reducing the potential for flame contact and radiant heat to people and properties in those areas by undertaking vegetation management works in the reserves; and
2. increasing the preparedness of property owners to actively reduce bushfire risks to their properties and to implement a plan of action should a bushfire occur.

To meet the second objective MPS runs a 'Fire Walk and Talk' program of community bushfire preparation meetings for residents that live around bushland reserves. Discussions at Fire Walk and Talks have been useful. However, attendance has been low in the past three years, averaging 6 people per session in 2013-14.

In 2015 MPS undertook an assessment of its fire management program focussing on Mount Martha where a large number of deep vegetated gullies run from the coast through the urban and peri-urban areas of the township. The purpose of the assessment was to gain an understanding of the cost and effectiveness of existing MPS fire management programs (the 'Status Quo'), which in turn was used to inform development and assessment of alternative programs to the Status Quo.

Options assessment

Five broad options for community engagement leading to household action to increase private property preparedness were developed and assessed including the current approach taken by MPS (Option 1 - Status Quo). Two of the Options (3 and 5) have two variations, meaning that seven options in all were assessed:

- Option 1. Status Quo – fire walk and talks.
- Option 2. Supported resident action within reserves.
- Option 3a. Differential rating scheme to refund costs of actions.
- Option 3b. Direct refund of costs of actions.
- Option 4. One to one fire risk property assessments.
- Option 5a. Town hall style meetings.
- Option 5b. Community group meetings.

Development of the options drew on results of a survey of residents in Mount Martha, a literature review, local experience with community engagement, data on numbers of residents living within close proximity of a Shire bushland reserve, and an appraisal of potentially available resources to deliver community engagement.

A business case of this type would typically centre on an assessment of the costs and benefits of alternative options in a cost benefit analysis (CBA). Because it was not feasible to measure the benefits of options in monetary terms, an alternative method of assessment was applied to the analysis, referred to as levelised cost. Levelised cost is a type of cost effectiveness assessment that seeks to compare options that produce similar types of outcomes, but in different quantities or over different timeframes, on a comparable basis. The levelised cost assessment used for this business case quantifies 'dollars expended per point of increased household preparedness' ($/point).

Two categories of costs were identified for each option in the assessment:

- annual costs to MPS of implementing the option; and
- annual costs to households of participating in the option.

Benefits of options were measured as an increase in the number of points of household preparedness. This was quantified using an algorithm that combines:

- the number of households engaged by an option;
- the proportion of households engaged who are in high fire risk areas;
- the average effectiveness rating of low, moderate and high cost measures; and
- the proportions of actions implemented that are low, moderate and high cost.

Results of the analysis reveal that all alternative options (Option 2 to Option 6) have a lower levelised cost than the Option 1 (Status Quo) - expressed in terms of $ expended per additional point of household preparedness. Option 4 (One to one fire risk property assessments) has the lowest levelised cost at $444/point. This is only marginally lower than the levelised cost of Option 3a (Rate rebate scheme) ($447/point). Option 3b (Refund of costs) also has a relatively low levelised cost ($541/point). By contrast Option 1 (Status Quo) has a levelised cost of $3,335/point.

Conclusions

These results suggest that there is a strong case for MPS to pursue implementation of either Option 4 or Option 3a in preference to the Status Quo.

Further work is needed on detailed design however, before either of these options (or possibly a combination of the two) is implemented. An important aspect of the design phase will be to undertake and carefully monitor the results of a pilot phase conducted over a period of 12 months to two years.