

Observations regarding the bushfire emergency in Mallacoota 1 January 2020.

The severity of the impact was not as severe as could have been due to a number of fortuitous factors during the bushfire event.

These factors were:

1. The fire itself was not driven by high wind on the morning but moved with its local fire generated weather front. Had conditions been otherwise the impact on private property and public infrastructure would have been amplified significantly and more widespread in the town by several orders of magnitude compared to the level of damage experienced.
2. The fire stopped short of the Mallacoota Holiday Camp Park (East Gippsland Shire Council operated) and did not spread into the visitor tents, vehicles and trailers. Had this been otherwise then the risk for those sheltering along the lake edge in the designated 'Safer Refuge' area contiguous with the camp park would have been extremely problematic. The danger fire poses in the dense camping fields of equipment represents an elevated risk (gas bottles, easily flammable mobile materials, etc) to adjacent people.
3. The Sewerage Pump Station No1 and backup generator, that deals with Mallacoota's entire effluent, survived when a large tree split and large branches impacted the pump building narrowly avoiding major damage and the crippling of the entire sewerage system for the town. Had this been otherwise the health impact on the population would have been a horrific health risk for all remaining (trapped) holiday visitors, residents and emergency workers as well as polluting the lake system.

Two of these factors (2. and 3.) should be taken into account in future planning for risk mitigation in the event that a similar event occurs.

The solutions:

Risk Issue 2.- For the Mallacoota Holiday Camp Park the density and layout of camp sites addressed by:

1. *Densely packed mass camping fields needs to be avoided to minimise the potential spread of fire. Some oversight standards with risk standards need to be set by State Government through its agencies for private and local government camp parks (as currently applied to building constructions in regulations).*
2. *Camping sites need to be removed from adjacent designated 'Safer Refuge' areas. Areas along the lake edge where refuge is logical and appropriate should be devoid of camps.*

Risk Issue 3.- For the Sewerage Pump Station No1 and backup generator addressed by:

1. *The structure engineered with a facility capable of withstanding fire impact risks.*
2. *Locating the backup generators and other infrastructure internally in the facility providing protection to assets.*

A number of issues with the East Gippsland Shire Council preparedness for an emergency in peak tourist season were evident during the event and need to be reviewed.

1. Inadequate local government planning or preparation for a suitable refuge was apparent for the shelter and care of visitors and residents over any emergency. The Local Emergency Group activated the Mallacoota Sports Hall as a refuge facility when the need became imperative. For future holiday seasons, if we are to encouraging thousands of visitors into the camp park which augment the local resident population (by a factor of 10), then planning for any likely emergency events needs to be recognised as a prime subsequent responsibility of the East Gippsland Shire Council. (The Mallacoota Sports Hall may have not been designated as a 'Refuge' due to concerns about responsibility and liability, despite the obvious need experienced in the prior history of utilisation during the 1983 fire event and (dates uncertain) windstorm and heavy rain events.)
2. The hall itself was wired for 3 phase power only, when no generator of that specification was available or able to be obtained. (SES Generators with single phase were operated externally via power leads to emergency lighting stands and SES battery operated lights in toilets.) Trip and electrical safety hazards with such solutions were obvious.
3. People with mobility problems had issues accessing the toilets via steps, especially in the poor lighting conditions.
4. The hall itself became a refuge for pets and livestock whilst primarily being shelter for the aged, young, infirm and those needing temporary emergency accommodation. This posed a problem for the health and welfare for those people and those with allergies. Dogs posed a potential health and physical threat particularly to the young, infirm and sleeping people.
5. Council needs to develop comprehensive clear guidelines for management of any large or small scale emergency in conjunction with all the relevant emergency services and State Government.

Possible solutions for consideration:

Issue 1. Council take seriously and rigorously the responsibility to define areas for refuge during an emergency for known user populations.

Issue 2. An agency wire the hall for/and ensure availability of matching generator.

Issue 3. Council plan and build attached ground floor disability access toilets.

Issue 4. Another location such as Mud-brick Hall or the new sports buildings designated animal refuge site during an emergency.

Issue5. Council in collaboration with local emergency services develop an Emergency Management Plan (EMP) for Fire, Flood, Storm, Tsunami and other potential events, and that this EMP be reviewed annually, preferably in the months prior to the peak holiday season.

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Incident management matters that may require review.

Compounding the need for a refuge and subsequent post fire crisis, was the unfortunate ABC Emergency Broadcasts prior to the fire event, which advised people it was too late to leave and to remain.

The Mallacoota to Genoa road was safe and open and exit advice to go north on the Princes Highway into NSW to safety was appropriate on the preceding days. (The Princes Highway to the west of Genoa was not an option and was closed due to fire impact at further west the time.) The local incident group did give this unofficial advice during public emergency information meetings contrary to the official advice being broadcast and quite a few visitors and tourists did take the opportunity to safely depart, however confusion about mixed messages deterred many.

A review of the official advice processes should be undertaken, as the lack of the local situational awareness by the remotely located Incident Control Centre impeded the timely safe exit of many visitors and exacerbated the magnitude of the post fire tasks in meeting their needs with food, water, health care, fuel, power, resources and evacuations.

Fuel was critical in the pre and post fire period for many personal, emergency and infrastructure generators. In contemplating the operation of evacuation convoys after the fire, the use of larger military vehicles at the front and rear of convoys meant the injudicious usage of vital diesel fuel for what seems limited safety benefits in the presence of the other emergency agencies tasked to the convoys simultaneously.

Municipal and Infrastructure Planning matters that may require attention for improved fire protection.

1. During the bushfire fire front I stayed at [REDACTED] to protect my property and nearby homes which proved successful with only buckets and garden hoses. I do make the observation that had there been access to public hydrants and fire hose, it may have been possible to save more homes. In areas deemed high risk from bushfires, the capability of residents whose fire plan is to remain and defend, the provision of public hydrants and fire hose would greatly enhance safety and possible outcomes.

(Comment: I recognise that this would need further careful evaluation and management to avoid unrealistic reliance on these physical items rather than encouraging the residents evacuation to a safer place. Access would need to be protected with locks, maintained regularly and only available on prior application in defined circumstances. I also note that local government has specified as a condition of planning permits that they be provided for particular high fire risk areas. It is incongruous that this infrastructure provision is not standard in existing residential areas of high fire risk, but is available from the mains via emergency fire service special equipment only.)

2. In the 'Terra Nova' area homes and structures predominantly surviving the fire did so in observable clusters, and conversely burnt homes were destroyed in clusters, despite amber attack presumed to be equally widespread over the landscape. A significant factor here is the substandard (smaller) size of allotments in the subdivision which affected ignition spread (*close proximity of houses to each other, sheds and fences which 'wicks' fire between structures*) and hindered the ability of anyone to protect structures in clear access and some safety. (*-personal observation*)

(Comment: Although the subdivision is historical there is a trend towards smaller allotments and cluster titles in rural areas generally that are conducive to adverse outcomes in bushfire events. Some further attention and research may be needed to determine if this needs to be taken into account in urban planning standards.)

3. I question the Fire Assessments as required for Planning Approvals by municipalities may be of limited value in realistically assessing or quantifying the risks, whilst being a cost burden to individuals and startup enterprises. Specifically: **AS 3959-2009:** The Australian Standard ***Construction of buildings in bushfire prone areas*** provides guidance on risk assessment and construction to assist buildings to survive the passage of a fire front and is used as the basis for bushfire-related planning and building requirements in Victoria and ***Bushfire Attack Level (BAL) and construction standard:*** The BAL describes the severity of the threat from radiant heat (in kW/m²) and the construction standard required to improve protection of buildings against that threat. There are 6 BAL ratings: low, 12.5, 19, 29, 40 and FZ (flame zone).

(Comment: Throughout the town and adjacent region the impact to dwellings and infrastructure was not experienced in accord with these measures but linked to other factors including preparation, the decision to remain and defend and when to leave and return post fire. (personal observation only) Advice and reports do not and will not determine what impacts will be experienced. Some correlation would be expected for obligatory standards to be justified.)

These comments are intended to be of assistance in better preparation, response and management for emergency events and not intended to be critical of anyone or agencies. These comments are to be referenced as to their source if they are to be used and with prior permission.

Yours truly,

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