



Directive 3.5 – Bushfire

SOP 3.5.6 – Structural Triage

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Introduction

1. Structural Triage in a bushfire context is the classification of buildings at risk of being impacted by bushfire according to a range of factors which influence the likely success of defensive tactics employed by fire crews during the incident. Structural triage is undertaken prior to the arrival of the fire front to ensure valuable resources are deployed against feasible tasks where they will have greatest effect – not dangerous or marginal causes. This procedure details the key criteria for assessing a structure and the ability to defend it and the map marking system that conveys this assessment to follow-up crews.

Procedures

2. **Assessing Structures.** Assessment of a structure and the ability to defend it is a simple analysis of the design and preparation of the structure and the capability of the resources assigned against the threat. All justifications for structural triage decisions are to be recorded in an Incident Diary or electronically to be disseminated to other crews, or back to Incident Management Teams (IMT) at Incident Control Centers (ICC) and recorded on the Web-based Emergency Operations Centre (WebEOC) as required.

The ability to defend a property is assessed according to six (6) key criteria as follows:

CRITERIA	NOTES
Construction	Structures are to be assessed for the flammability of their construction materials.
	Houses constructed of wooden weatherboards, roof frames and roof cladding are vulnerable to ember attack and will require greater defensible space and the commitment of greater resources than a similarly placed brick and tile dwelling.
Defendable Space	Structures are to be assessed for the availability of space around the structure – where there are no vertical fuels through which the fire can be readily transferred to the structure.
	A defensible space of 20 metres is advised as the minimum acceptable area which will permit safe defensive operations in support of a structure. However, this distance is variable under the influence of other key criteria. Non-flammable construction may permit a reduction in defensible space, whereas the siting of the structure at the top of a ridgeline may require a significant expansion of the defensible space. Key to assessing defensible space is an assessment of the anticipated fire behaviour and how that will be assisted or reduced by the aspect of the structure in relation to the bushland surrounds.

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Vehicular Access	Structures are to be assessed for their accessibility to firefighting appliances.
	Structures that cannot be accessed by firefighting appliances are much less defensible. Awkward, lengthy access ways also present a significant risk to firefighters seeking to escape under duress. Heavily wooded entries should be assessed as requiring defensible space to ensure withdrawal routes will not be denied by the passage of the fire front.
Water Supplies	An understanding of available water supplies is to underwrite all decisions regarding the ability to defend structures at the Rural Urban Interface (RUI).
	Where water is restricted to mobile supplies, hard decisions will be required to prioritise where that finite resource is best used. Structures that have their own static supplies will be more defensible. Where reticulated supplies are available, the options will be much broader. Given the vulnerability of power during bushfires and the reliance of reticulated water on electric pumping stations, all reticulated supplies must be tested at the time of triage to ensure they are working. Depending upon the interface environment, crews whilst assessing properties must advise IMT's of the available water sources or of the additional water capabilities that should be deployed.
Personnel Resources	An understanding of available personnel resources will assist in determining the number of structures that could potentially be safely defended.
	The defence of a structure will require a minimum crew of four: 1 x OIC : 2 x Firefighters : 1 x Pump Operator/Communications
Preparedness	Conduct a review of the available protection systems and engineering solutions. For example, are pools, tanks, couplings, sprinklers, dams, portable pumps, etc. available and accessible? Have the property owners undertaken preparation activities? Is there allowable time for Firefighters to assist with basic ladder fuel removal from around vulnerable properties?. i.e. backyard furnishing's from up against property.

3. **Structural Triage Marking System.** Structures are to be assessed as undefendable or defensible (with two sub-categories)¹. Structural assessments are to be recorded on maps for handover to Task Force/Crew Leaders assigned with responsibility for that area. Each structure is to be overlaid with a symbol indicating the assessment undertaken during the structural triage.

Map markings to be used are as follows:

STRUCTURAL ASSESSMENT	SYMBOL	DEFINITION
Undefendable		- Firefighters will not defend this structure. - It is determined the structure is unlikely to survive a bushfire even if residents and/or firefighters stay to defend it. - This structure does not have sufficient defensible space, access or water supply (or other reason). - All who stay face an unacceptable risk of harm.

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Defendable – With Firefighter Assistance		- Where firefighting resources are available, firefighters will defend this structure². - This structure has defendable space and can be accessed safely - Residents have advised that they intend to stay and defend their home but firefighters know they will need assistance.
Defendable – Without Firefighter Assistance³		- Firefighters will not need to defend this structure. - The structure has defendable space and the assessor is confident the residents who are planning to stay have the necessary resources to defend it safely.

¹ A structure may be re-categorised if there is sufficient time to fix deficiencies.

² If firefighting resources are not available, the structure is to be categorised 'undefendable'.

³ While it is important that firefighters reassure all residents that the actions they are taking are correct, the priority of defensive firefighting operations must be on those structures assessed as Defendable – With Firefighter Assistance.

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DOCUMENT HISTORY

VERSION	DATE	DESCRIPTION of CHANGE
1.0	Jul 10	New SOP created. New sections created: • (All) Source documents: • Determining Structural Triage (Tasmania Fire Service) • Triage for Fireground (Tasmania Fire Service) • Rural Urban Interface Firefighting Techniques (Arnol, 2007) <i>All listed SOP/SAP, now retired.</i>
1.1	May/12	Content Reviewed for currency through RUI WG and RUI procedures information video – no change
1.2	Nov 13	Updated Task Force/Strike Team terminology as per AIIIMS definitions.
1.3	Apr 16	Inclusion of 6 th assessment criteria to bring in-line with Directive 3.5 – Bushfire.
1.4	Aug 17	Update to consider electronic mapping or product to be accessible for recording on WebEOC.
2.0	Sept 18	Major review of document

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