



FSG LUP 0002

Land Use Planning

REQUIREMENTS FOR WATER SUPPLY & ACCESS IN A BUSHFIRE MANAGEMENT OVERLAY (BMO)

BACKGROUND

In October 2011, as part of implementing the 2009 Victorian Bushfires Royal Commission's (VBRC) Recommendations the Wildfire Management Overlay (WMO) under the Victoria Planning Provisions (VPP) was replaced by a new control, the Bushfire Management Overlay (BMO). The BMO and associated Clause 52.47 contain a number of clauses and standards for implementing bushfire protection measures. These protection measures include the provision of water supplies and access arrangements to the satisfaction of the 'relevant fire authority'.

CFA's current requirements for water supplies and access in the BMO are similar to those which were in place under the WMO. However, to implement suggestions of the VBRC there are a few minor changes. These include:

- A requirement for a static supply of water for all development (both reticulated and non-reticulated areas) subject to the BMO
- An explicit requirement for water tanks to be made from non-combustible material such as concrete or steel
- Greater emphasis on the use of perimeter roads in subdivision design for both facilitating fire fighting activities and augmenting defensible space

This document provides CFA's specific requirements for water supplies and access in the BMO. CFA also produce a number of guiding documents on these matters in areas outside of a BMO. These are available at www.cfa.vic.gov.au and include:

- Planning Guidelines for Subdivisions in Bushfire-prone Areas
- Requirements for Water Supplies and Access for Subdivisions in Residential 1 and 2 and Township Zones
- Preferred Requirements: Water supplies and access for subdivisions in Rural Zones

These documents will provide useful clarification on the requirements of this Fire Service Guideline.

To complement the new bushfire controls CFA and the Department of Planning and Community Development are producing a new document *Bushfire Planning Victoria* which will be released in draft as part of a community consultation process. The requirements for water supply and access in the draft *Bushfire Planning Victoria* will reflect these requirements and be part of the review process.

SCOPE

This Fire Service Guideline provides CFA's minimum requirements for water supplies and access for development subject to the BMO. Requirements for buildings and works, and subdivision are covered by this document.

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REQUIREMENTS

Subdivision Water Supplies

Objective

To ensure the provision and adequate supply of water to facilitate fire fighting and property protection both during and after the passage of a bushfire.

Standard

All development must be accompanied by water supply and access arrangements which meet the requirements of the relevant fire authority, including:-

A dedicated static water supply, such as a tank, must be provided and meet the following requirements:

- A minimum of 10,000 litres on-site static storage must be provided on the lot and be maintained solely for fire fighting;
- The static storage must be constructed of non-combustible material;
- The water supply must be located within 60 metres of the dwelling; and
- Fire brigade vehicles must be able to get to within 4 metres of the water supply outlet.

The water supply should be readily identifiable from the building and appropriate signage (Figure 1), approved by the relevant fire service, shall provide:

- An arrow pointing to the water supply;
- Have dimensions of 310mm high and 400mm long;
- Be red in colour, with a blue reflective marker attached; and
- Is labelled with a 'W' that is 15cm high and 3cm thick in size.

All below-ground water pipelines must be installed to the following depths:

- subject to vehicle traffic: 300 mm
- under dwellings or concrete slabs: 75 mm
- all other locations: 225 mm

All fixed above-ground water pipelines and fittings, including water supply, must be constructed of non-corrodible and non-combustible materials, or protected from the effects of radiant heat and flame.

Where the dedicated static water supply is above ground, the following additional provisions apply:

- All above-ground dedicated static water supplies must provide at least one 64 mm, 3 thread/25 mm x 50 mm nominal bore British Standard Pipe (BSP), round male coupling (see Figure 2);

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- All pipe work and valving between the water supply and the outlet must be no less than 50 mm nominal bore; and
- If less than 20 metres from the building, each outlet must face away from the building to allow access during emergencies.

Figure 1 Water supply identification

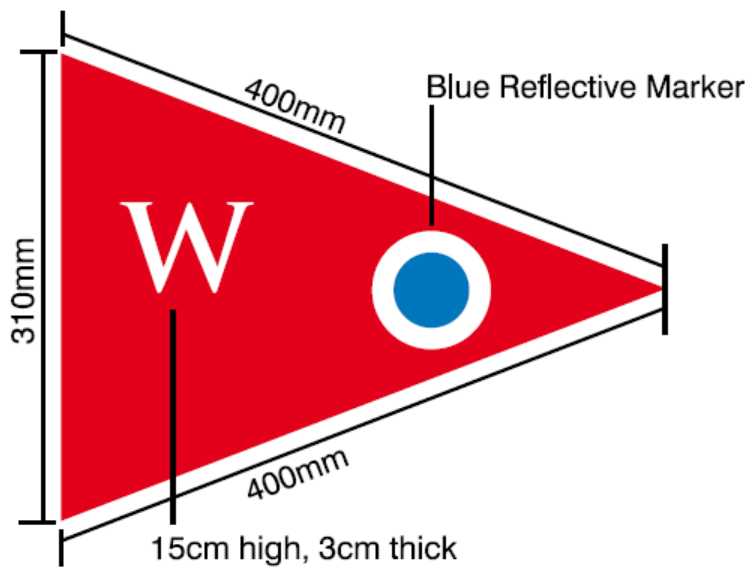
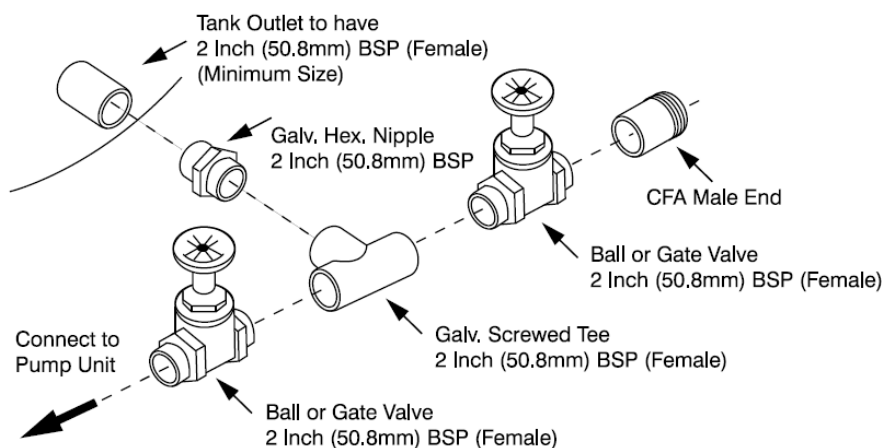


Figure 2 Requirements for fitting for above ground tanks.



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Subdivision Access

Objective:

To ensure the provision of clear and ready access to and from all properties to the public road system for:

- Residents facing evacuation or relocation, and
- Emergency services for fire fighting, property protection or other emergencies.

Standard:

For all subdivisions.

The siting, design and layout of lots and public roads shall facilitate access and egress for residents and fire services through:

- Trafficable roads must comply with Table C1 Clause 56
- Dead end roads must not exceed 200 metres in length or service more than 9 lots;
- All roads must be of all-weather construction and be a minimum width that is capable of carrying a fire brigade vehicle likely to be deployed in the area;
- No horizontal encroachments within 4 metres either side of the centre line of any trafficable road at any time;
- A vertical clearance to a height of 4 metres above the trafficable road at all times (Fig 3);
- Adequate provision for turning of fire brigade vehicles must be provided in dead end roads and cul-de-sacs;
- Road surface capacity and bridges shall be capable of carrying loads of 15 tonnes as a minimum;
- Bridges shall be clearly signposted and indicate the load carrying capacity of the bridge;

For residential, industrial and commercial subdivisions.

The siting and layout of lots should provide a perimeter road that separates the hazard from the development of land and include the provision for:

- Perimeter roads interfacing the hazard shall be a minimum of 8 metres in width from kerb to kerb;
- Parking which encourages users not to impede access of emergency vehicles (e.g off-street parking) and does not obstruct access to water hydrants.

For rural subdivisions.

The siting and layout of lots shall provide safe access to and from the property and include the provision for:

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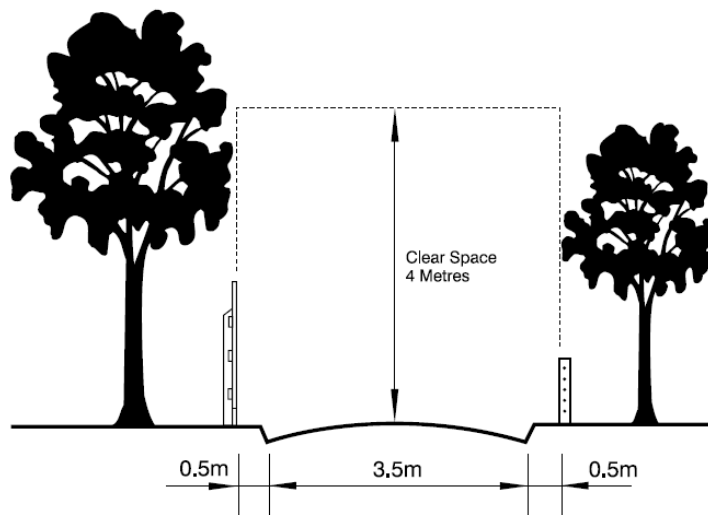


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- Access into and out of all properties shall be by direct access to a public road;
- Building envelopes shall ensure that dwellings are clustered and minimises the loss of vegetation for supporting mutually shared defensible space;
- Access through a subdivision or across a lot to an individual building site if less than 6 metres width must be provided with passing bays of a minimum of 20 metres in length every 200 metres. The combined width of the passing bay and accessway must be a minimum of 6 metres;
- Road access of at least 6 metres is required where access serves more than one lot;
- A second access within an allotment directed in an alternative direction where the primary access is greater than 200 metres from a public road; and
- Where required by a fire service, a fire trail shall be of minimum trafficable width of 4 metres, with a 1 metre slashed edge (making 5 metres in all) and have a maximum grade of 15 degrees at any point along its length.

Figure 3 Encroachment clearances



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Building & Works- Water Supplies

Objective

To ensure the provision and adequate supply of water to facilitate fire fighting and property protection during and after the passage of a bushfire.

Standard

All development must be accompanied by a water supply and access to this water supply which meets the requirements of the relevant fire authority, including:

A dedicated static water supply, must be provided and meet the following requirements:

- A minimum of 10,000 litres of on-site static storage must be provided on the lot and be maintained solely for fire fighting;
- The static storage must be constructed of non-combustible material;
- The water supply must be located within 60 metres of the dwelling; and
- Fire brigade vehicles must be able to get to within 4 metres of the water supply outlet as indicated on the Bushfire Management Plan.

The water supply should be readily identifiable from the building and appropriate signage, to be approved by the relevant fire service (see Figure 1 above), shall provide:

- An arrow pointing to the water supply;
- Have dimensions of 310mm high and 400mm long;
- Be red in colour, with a blue reflective marker attached; and
- Is labelled with a 'W' that is 15cm high and 3cm thick in size.

All fixed above-ground water pipelines and fittings, including water supply, must be constructed of non-corrosive and non-combustible materials, or protected from the effects of radiant heat and flame.

If the dedicated static water supply is above ground, the following additional provisions apply:

- All above-ground dedicated static water supplies must provide at least one 64 mm, 3 thread/25 mm x 50 mm nominal bore British Standard Pipe (BSP), round male coupling (see Figure 2 above);
- All pipe work and valving between the water supply and the outlet must be no less than 50 mm nominal bore; and
- If less than 20 metres from the building, each outlet must face away from the building to allow access during emergencies.

All below-ground water pipelines must be installed to the following depths:

- subject to vehicle traffic: 300 mm
- under dwellings or concrete slabs: 75 mm

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- all other locations: 225 mm

Building & Works- Access

Objective

To ensure that safe access is provided to properties for emergency and other vehicles at all times.

Standard

All proposals should meet the following requirements:

- Access to the dwelling must be designed to allow emergency vehicle access. The minimum design requirements are as follows:
 - Curves in driveway must have a minimum inner radius of 10 metres
 - The average grade must be no more than 1 in 7 (14.4%) (8.1°) with a maximum of no more than 1 in 5 (20%) (11.3°) for no more than 50 metres
 - Dips must have no more than a 1 in 8 (12.5%) (7.1°) entry and exit angle
- If the driveway from the road to the dwelling and water supply, including gates, bridges and culverts, is greater than 30m long, the driveway:
 - must be designed, constructed and maintained for a load limit of at least 15 tonnes, be of all weather construction;
 - and
 - must provide a minimum trafficable width of three and a half metres, and be clear of encroachments four metres vertically.
- If the driveway is longer than 100 metres, a turning area for fire fighting vehicles close to the dwelling must be provided, by either:
 - a turning circle with a minimum radius of eight metres, or;
 - the driveway encircling the dwelling, or;
 - a T head or Y head with a minimum formed surface of each leg being eight metres in length measured from the centre point of the head, and four metres trafficable width.
- If the length of the driveway is greater than 200 metres, passing bays must be provided. Passing bays must be 20 metres long and must be provided every 200 metres, with a trafficable width of six metres.

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Figure 3 Encroachment clearances

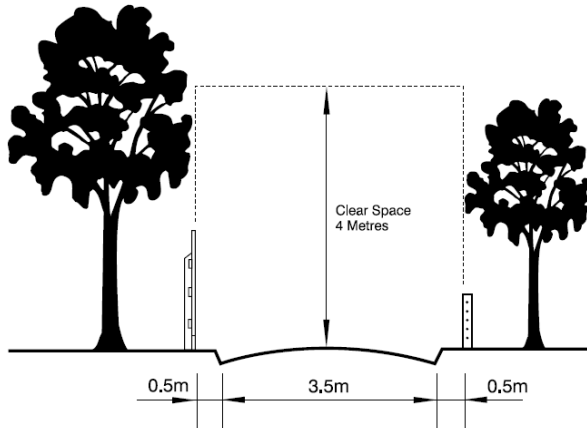


Figure 4 T-head and Y-head

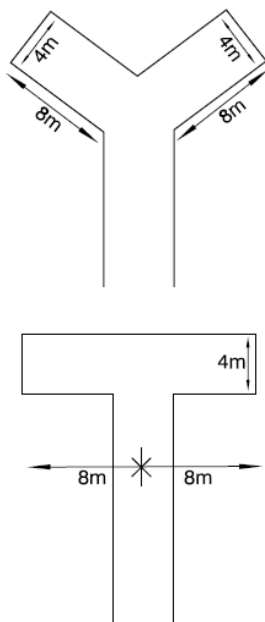
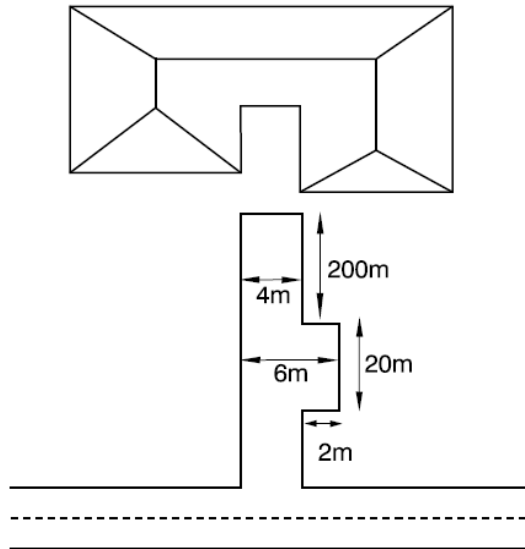


Figure 5 Driveways longer than 200m



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FURTHER QUERIES

If you have any detailed queries, please contact your CFA Department of Community Safety at the following CFA Regional offices:

45 Chapel Street
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Phone: (03) 5430 2200
Fax: (03) 5442 2246

120-122 Princes Highway
DANDENONG VIC 3715
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Fax: (03) 9767 1880

18-22 Lakeview Drive
LILYDALE VIC 3140
Phone: (03) 8739 1300
Fax: (03) 8739 1382

92-94 Coleraine Road
HAMILTON VIC 3300
Phone: (03) 5551 1500
Fax: (03) 5551 1582

Level 3
Port of Sale Business Centre
64 Foster Street
SALE VIC 3850
Phone: (03) 5149 1000
Fax: (03) 5149 1082

251 High Street
MELTON VIC 3337
Phone: (03) 8746 1400
Fax: (03) 8746 1480

120 Curlewis Street
SWAN HILL VIC 3585
Phone: (03) 5036 2800
Fax: (03) 5036 2882

1 Ely Street
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