



DEVELOPMENT DESIGN SPECIFICATION

D10

BUSHFIRE PROTECTION

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DEVELOPMENT DESIGN SPECIFICATION D10 BUSHFIRE PROTECTION

GENERAL

D10.01 SCOPE

1. The work to be executed under this Specification consists of the design of bushfire protection facilities to protect life and property and bring a fire to a halt.
2. The specification contains procedures for the design of fire protection facilities. Designs shall be carried out to satisfy requirements of the Council and the guidelines published by the Planning NSW Fire Service, December 2001. Consultation with Council's Fire Control Officer may be required.
3. All references in this document, unless noted otherwise, refer to the relevant sections of:

Planning NSW Rural Fire Service (December 2001)

- Planning for Bushfire Protection. A Guide for councils, Planners, Fire Authorities, Developers and Home Owners.

D10.02 OBJECTIVES

1. This specification aims to outline the design requirements aimed at minimising bushfire hazard in developments. It applies to both urban and rural developments.

***Rural & Urban
Development***

D10.03 REFERENCE AND SOURCE DOCUMENTS

(a) Council Specifications

C501 - Bushfire Protection (Perimeter Tracks)

(b) NSW Government Legislation

Environment Planning and Assessment Act 1979 - Section 94

(c) NSW Government Department Publications

Planning NSW Rural Fire Services (December 2001)

- Planning for Bushfire Protection. A Guide for Land Use Planners, Fire Authorities, Developer and Home Owner.

Department of Land and Water Conservation

- Soil Conservation Service 1983. Guidelines for Planning, Construction and Maintenance of Tracks.

Department of Land and Water Conservation

- "Bushfire Trails and access Tracks on Reserves and State Lands" 1997 – Publication No: HO/31/97

(d) Standards - Australian

AS 3959 – 1991 Construction Standards for Buildings Located in Bushfire Prone areas.

SAA HB36 – 1993 Building in Bushfire Prone Areas.

(e) Further reading

Board of Fire Commissioners

- "Hazard Reduction for the Protection of Buildings in Bushland areas" 1984.

Californian Department of Forestry

- "Fire Safety Guides for Residential Development in California" 1980.

Insurance Council of Australia.

- "Bushfire Safety in Urban Fringe Areas."

Luke, R.H. - "Before the Fires Start."

DESIGN CRITERIA**D10.04 GENERAL**

1. Asset protection zones, and perimeter roads or tracks are to be specified in accordance with Planning NSW Rural Fire Services "Planning for Bushfire Protection" (PFBP) Section 4.2 'Asset Protection Zone' and Section 4.2.2 © 'Perimeter Road or Fire Trail' respectively. Access tracks and perimeter tracks shall be clearly indicated on the subdivision plan. Erosion control features and revegetation requirements shall also be indicated in the subdivision plan.

***Perimeter
Road or Fire
Trail***

2. Access shall be designed as specified in accordance with PFBP Section 4.3 'Access'.

Access

3. For those subdivisions receiving reticulated water, fire hydrants shall be situated at appropriate intervals or near where potential fire hazard areas exist as determined by Council.

Fire Hydrants

4. Council's Fire Control Officer shall be consulted.

***Council
Consultation***

5. The Rural Fire Service shall be consulted for endorsement of the proposed design.

***RFS
Consultation***

D10.05 ASSET PROTECTION ZONES

1. Asset protection zones (APZ) shall be designed in accordance with PFBP Section 4.2 'Asset Protection Zone' as part of the development. APZ shall encompass two key components:

***Asset
Protection
Zones***

- Inner Protection Area (IPA) (including perimeter road); and
- Outer Protection Area (OPA).

Refer to PFBP Figure 4.1 'Components of an Asset Protection Zone', and PFBP Figure 4.2 'Perimeter Roads and Fire Trails'.

10.06 INNER PROTECTION AREA (IPA)

1. The Inner Protection Area (IPA) shall be located in accordance with PFBP

Location

Section 4.2.2 (b) (i) 'Location' and Figure 4.1.

2. Fuel loadings of the IPA shall be specified in accordance with PFBP Section 4.2.2 (b) (iv) 'Fuel Loadings'.

Fuel Loadings

3. The FRZ shall be part of the development so that dedication of land or monetary contribution through Section 94 of the EP and A Act ensures that the cost of fire protection is met by the developer, not by the general community.

Part of the Development

4. Developments abutting slopes greater than 20 degrees shall avoid both the ridge and the slope.

Clearing Steel Slopes

5. The IPA shall have a minimum depth as specified in PFBP Section 4.2.2 (b) (iii) Depth.

Minimum Depth

D10.07 OUTER PROTECTION AREA (OPA)

1. An Outer Protection Area (OPA) shall be designed in accordance with PFBP Section 4.2.2. 'Outer Protection Area'.

Outer Protection Area

2. Fuel loadings of the OPA shall be specified in accordance with PFBP Section 4.2.2 (b) (iv) 'Fuel Loadings'.

Fuel Loadings

D10.08 PERIMETER ROAD OR FIRE TRAIL

1. The perimeter road or fire trail lies between the OPA and the boundary of the allotments.

Location

2. The perimeter road or fire trail shall be designed in accordance with PFBP Section 4.2.2 (c) (iii) 'Specifications'.

Design

3. Tracks shall be constructed to Soil Conservation Service (1983) and Department of Land & Water Conservation (1997) guidelines.

4. Set-back – part of the allotment may be used as a section of the buffer by setting a minimum lot depth and rear setback.

Minimum Lot Depth

D10.09 INTERNAL ACCESS FROM SUBDIVISION ROADS

1. The provision of adequate internal access is also controlled by subdivision design. Subdivision roads shall incorporate the specifications set out in PFBF Section 4.3 'Access'.

Incorporated in Subdivision Design

D10.10 STAGING WORKS

1. The design and staging of the development shall be undertaken as recommended in PFBF Section 4.4 'Design and Staging of the Development'

Staging

2. Buildings shall be sited in accordance with PFBP Section 4.5.2 'Siting Principles'.

Siting

3. Bushfire protection is to be incorporated into the design of the development, rather than into individual allotments..

Incorporated in Subdivision Design

SPECIAL REQUIREMENTS

D10.11 DWELLINGS IN BUSHFIRE HAZARD AREAS

In bushfire hazard areas, dwellings shall be constructed in accordance with AS3959 and SAA HB36.

***Dwelling
construction***

D10.12 FIRETRAILS & ACCESS TRACKS

1. The maximum spacing of cross banks shall be in accordance with the following criteria:

***Maximum
Spacing of
Crossbanks***

Slope (degrees)	Maximum Bank Spacing (m)
≥5≥10	60
≥10≥15	40
≥15≥20	30
≥20≥25	20

2. Grades in excess of 25% shall not be used unless detailed design is included to ensure the long-term stability of the track and wearing surface. Bitumen Sealing of tracks in excess of 25% will be required.

***Detailed
Design***

3. Table drains with grades in excess of 5%, or adjacent to culvert inlets or outlets, shall be designed to resist scour through the utilisation of appropriate techniques, including but not limited to rock check dams, concrete or bitumen lining, reinforced turfing, rock pitching, etc.

D10.13 RESERVED

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