



Dubay Jarjum Nurahm Aboriginal Area Type-1 Reserve Fire Management Strategy

1. Fire Management Principles

The Department of Environment and Climate Change (DECC) manages about seven per cent of the land area of NSW. These areas have been reserved to conserve their natural and cultural values. These values include biodiversity, landscapes, Aboriginal sites, historic structures and recreational settings.

Under the *Rural Fires Act 1997*, the NPWS is a fire authority and is responsible for the management of fire on all lands under its control. This includes the detection and suppression of fires and the implementation of risk prevention programs to protect life and property from fires. The NPWS also assists with the suppression of fires on adjacent lands, as may be required under plans prepared under the *Rural Fires Act 1997*.

Cooperative arrangements are derived from the Bush Fire Coordinating Committee and implemented through local Bush Fire Management Committees. The other three agencies that participate in cooperative fire management across NSW are the Department of Primary Industries, the NSW Rural Fire Service and NSW Fire Brigades.

NPWS is an active member of the Northern Rivers Zone Bush Fire Management Committee.

The management of fire is a critical component of land management across the NSW landscape. As both a fire authority and conservation agency, DEC plays an important role in protecting life and property and conserving natural and cultural heritage.

2. Fire Management Objectives

The primary objectives of fire management by the NPWS are to:

- protect life, property and community assets from the adverse impacts of fire;
- develop and implement cooperative and coordinated fire management arrangements with other fire authorities, reserve neighbours and the community;
- manage fire regimes within reserves to maintain and enhance biodiversity; protect Aboriginal sites known to exist within NSW and historic places and culturally significant features known to exist within reserves from damage by fire; and

- assist other fire agencies, land management authorities and landholders in developing fire management practices to conserve biodiversity and cultural heritage across the landscape.

The maintenance of biodiversity to avoid the extinction of natural species, populations and communities within the landscape underpins fire management activities within the NPWS.

The NSW National Parks and Wildlife Service *Fire Management Manual* details the policies and procedures for all fire management planning and fire operations on lands reserved under the *National Parks and Wildlife Act 1974* and any land managed by DEC on behalf of the Minister for the Environment.

This strategy is a Relevant Plan under Section 38(4) and Section 44(3) of the Rural Fires Act 1997.

3. The Fire Environment

3.1 Fire history

There is no mapped fire history for the Aboriginal Area. The existence of a predominantly sclerophyl vegetation indicates fire has been a common part of this environment in the past. The presence of remnant rainforest species is an indication of periods of absence of fire. The application or exclusion of fire could be used to manage the requirements of these vegetation types.

3.2 Topography

The 5.92ha Aboriginal Area is an isolated low coastal dune disturbed by sand mining surrounded by an intensively disturbed coastal plain.

3.3 Vegetation

Fire is a natural feature of many environments and is essential for the survival of some plant communities. However, inappropriate fire regimes, related to fire frequency, season, and intensity, can lead to loss of particular plant and animal species and communities. The ecological consequences of high frequency fire have been listed as a key threatening process under the TSC Act.

The Aboriginal Area contains a variety of vegetation types including swamp sclerophyl forest, remnants of littoral rainforest and elements of heathland.

Requirements for most plant species can be summarised on the basis of vegetation communities. There is a threshold in fire regime (fire interval) variability, which marks a critical change from a high species diversity to low species diversity. The following guidelines will be used to guide management of fire regimes in vegetation communities in identified Land Management Zones within the reserve.

Table 1. Fire Regime Guidelines for Vegetation Communities.

Vegetation Community	Minimum Interval	Maximum Interval	Notes
Rainforest	n/a	n/a	Fire should be avoided
Swamp sclerophyll forest	7	35	Crown fires should be avoided at the lower end of the interval range
Heathland	7	30	

Source: Bradstock *et al* (2003) - intervals given are tentative due to insufficient data.

3.4 Climate and weather

Bushfires in the region mostly occur in the hot and dry months of spring and early summer, with a peak in October. Strong northwesterly winds may combine with low humidity to result in very high and above fire danger ratings several times each season. Southerly changes also have the potential to strongly influence fire behaviour. Summer rains in January/February normally mark the end of the fire season, and conditions generally favour prescribed burning in autumn and early winter. Prescribed burning may be undertaken in late winter and spring, however conditions supportive of wildfire can occur as early as July and so prescribed burning during this period should be avoided.

3.5 Built assets vulnerable to fire

There are no built assets within or immediately adjoining the Aboriginal Area that require specific protection actions within the Area.

3.6 Natural assets vulnerable to fire

Due to its small size, the entirety of the Area could be affected by single fire events and this should be avoided.

The remnants of rainforest in the Area are more likely to be vulnerable to fire events.

All natural assets in the reserve are vulnerable to too frequent fire.

3.7 Cultural Heritage values vulnerable to fire

A number of burial sites within the Area would be vulnerable to the use of earth moving machinery during fire fighting operations and earth moving machinery is not to be used in the Area.

3.8 Bushfire risk

Damage to cultural assets by earthmoving machinery during fire control activities is the main bushfire risk in the Area

3.9 Bushfire zoning

The 'NPWS Strategy for Fire Management' (2003) uses a system of bushfire management zones for bushfire management in NPWS reserves. These zones are compatible with the system adopted by the Bushfire Coordinating Committee for use in District Bushfire Management Committee (DBFMC) bushfire risk management plans.

The approach divides reserves into fire management zones. These zones are management areas where specified fire management operational objectives, strategies and performance indicators have been developed to militate against the threat of a wildfire.

NPWS has assessed the reserve for fire management planning purposes and has zoned the reserve as a Land Management Zone (LMZ). The primary fire management objectives for this zone are to prevent the extinction of all species that are known to occur naturally within the reserve, and to protect culturally significant sites. The reserve has been designated as a LMZ because fuels on the reserve do not pose a high level of threat to immediately adjacent built assets, does not have a history of frequent bushfire ignitions and no history of fires leaving the reserve.

The LMZ does not require intensive management and focuses on those actions appropriate to conserve biodiversity and cultural heritage including managing for appropriate fire regimes.

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Current Situation	Desired Outcomes	Strategies and priorities
<p>The key values of the Aboriginal Area are the burial sites.</p> <p>The reserve is vegetated with a mosaic of vegetation types varying from fire sensitive to fire adapted types.</p> <p>Fire poses a threat to some vegetation types within the reserve whilst others are fire adapted or pyrogenic</p>	<p>Ensure burial sites are not damaged by earthmoving machinery during fire control activities</p> <p>Manage for a fire regime that is appropriate for the conservation of plant and animal communities</p>	<p>High - Ensure exclusion of earthmoving machinery from the Area is identified in Northern Rivers Bush Fire Risk Management Plan which is currently in preparation</p> <p>High - Existing management trails in the area to be maintained using vegetation management techniques only.</p> <p>High - Suppress wild fire</p> <p>High - Maintain a response capability to address residual risk.</p> <p>High - Maintain cooperative detection and response coordination plans with BFMC and other bush fire response agencies.</p> <p>High - Manage the reserve as a Land Management Zone.</p> <p>Mod – Apply prescribed fire to parts of the Area if, in the prolonged absence of fire, rainforest begins to dominate the Area.</p>

Legend for priorities

High priority activities are those imperatives to achievement of the objectives and desired outcomes. They must be undertaken in the near future to avoid significant deterioration in natural, cultural or management resources.

Medium priority activities are those that are necessary to achieve the objectives and desired outcomes but are not urgent.

Low priority activities are desirable to achieve management objectives and desired outcomes but can wait until resources become available.

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