Sunshine Coast
COUNCIL

Bushland Reserve Network Fire Management Guidelines

ORDINARY MEETING   **19 JUNE 2014**

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Prepared by Environmental Operations Branch: 2014

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1: Introduction

The Environmental Operations branch manages the Sunshine Coast Council's Bushland Reserve Network. As of January 2014 there are 528 reserves covering an area of 5450 hectares across the region. The estate is constantly growing with purchases of significant land through the Environment Levy and land contributions through the development approval process. Bushfire management is a key responsibility for Council on these reserves to both manage risks to life and property and to maintain the environmental values of the land.

The Bushfire Management Guidelines have been developed to identify the range of issues relevant to Council and the actions required to address them. The main objectives of the guidelines are to;

- Identify the legislative requirements for Council regarding management of fire risks.
- Identify the process used to define areas of bushfire risk and how this applies to the Bushland Reserve Network.
- Identify the range of actions Council has available to address bushfire risk (fire trails, fuel reduced zones, prescribed burning) and establish the decision tools used for their implementation.
- Identify resources available to Council to undertake fire management activities and the protocols in place for their use.
- Identify monitoring requirements to ensure fire management actions are achieving the desired outcomes in regards to both community safety and the maintenance of ecological values.

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2: Legislative requirements

There are a number of legislative requirements regarding fire management across the Sunshine Coast Council's bushland reserve network. The Fire and Rescue Service Act is the primary piece of state government legislation that deals with fire management. Additional legislation relating to vegetation management and local laws need to be considered. The following outline shows the key sections of each and their relevance to Council. Detailed tables showing specific extracts from the relevant legislation is included in Appendix 1.

Liability under Common Law

Local Government does not accrue liability for fire damage as a consequence of it having areas of vegetation adjoining residential properties. Such liability will only accrue where Council operations were the source the fire in the first instance (eg. Burning off, irresponsible storage of combustible material) or where there is such a large build-up of highly flammable material on Council land that no reasonable local government could not consider it to be a significant fire hazard. It is clear that any vegetation can be a fire hazard however a Council's liability (for obvious economic and practical reasons) does not extend to having to clear vegetation near a property boundary unless it causes a significant hazard that no reasonable Council could ignore.

Fire and Rescue Service Act 1990

This purpose of this act is to govern the control and management of fires in Queensland and it has a direct impact on Council operations. The act specifies that Council needs to obtain permits for prescribed burns, actions required by landowners on becoming aware of a fire on their property and outlines the circumstances under which the Commissioner may require actions to address fire hazards. There is no legislative requirement in this act for the establishment and maintenance of fire trails and fuel management zones.

Vegetation Management Act 1999 (VMA)

The purpose of this act is to regulate the clearing of vegetation in Queensland. It sets the thresholds that define whether regional ecosystems are endangered, of concern or of least concern. The act also establishes the permit process for clearing of vegetation. There are a number of exemptions for clearing that occurs for fire management purposes by Council when establishing fire breaks and fire control lines.

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Nature Conservation Act 1992 (NCA) & Nature Conservation (Wildlife Management) Regulation 2006

In Queensland, all plants indigenous to Australia are 'protected plants' under the NCA. Under Section 89 (1C) "a person, other than an authorised person, must not take a protected plant that is in the wild unless the plant is taken under an exemption under a regulation.

In the Nature Conservation (Wildlife Management) Regulation 2006 exemptions exist under Section 261 ZD for "taking protected plant for firebreak or fire management line". Using this exemption under Section 254 (1) a flora survey prior to undertaking works is not required.

Sunshine Coast Regional Council Local Law No. 3 (Community Health and Environmental Management) 2011

The purpose of this local law is to protect community health, safety and amenity and the environmental values of the region within the local government's area.

The local laws are not applicable to Council undertaking prescribed burns on Council managed lands.

Sunshine Coast Planning Scheme 2014

The Sunshine Coast Planning Scheme contains provisions regulating the clearing of vegetation and requires an Operational Works Permit to be obtained. There are definitions for exempt vegetation clearing which cover works undertaken by Council for fire management activities.
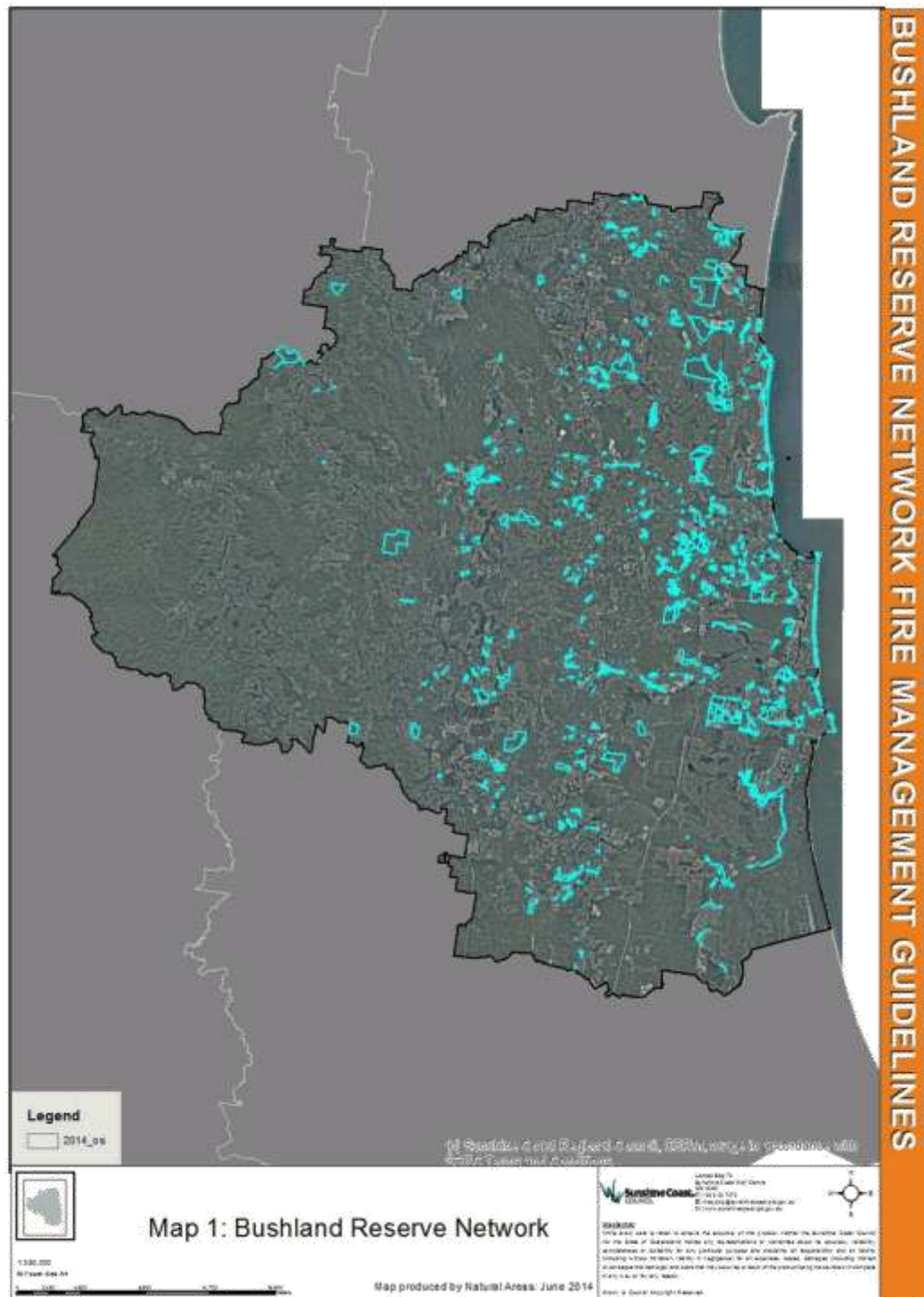
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3: SCC Bushland Reserve Network

General Summary

Council manages 528 reserves throughout the Sunshine Coast covering an area of 5450 hectares. The distribution of these reserves is shown in Map 1. These reserves vary in size from 397 hectares to a few hundred square metres. The following table gives a breakdown on the distribution and size of the reserve network.

Reserve Size Class	# of Reserves Managed	% of Reserves Managed	Area Managed (Ha)	% of Area Managed
100 Ha +	11	2	1950	36
50-100 Ha	9	2	648	12
10-50 Ha	72	14	1672	31.5
1-10 Ha	281	53	1002	19
<1 Ha	156	29	82	1.5

This table demonstrates the variation in bushland reserves managed by Council. A small number of large reserves (20) make up nearly 50% of the entire land area managed whilst over 400 small reserves account for only 20% of the land managed. This results in a very large interface between Council reserves and neighbouring properties where fire management may be an issue. With a finite resource base Council must assess the fire risk across the region and focus fire management resources where the potential for large scale fire is highest and adjacent community assets are most at risk.

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Map 1: Bushland Reserve Network
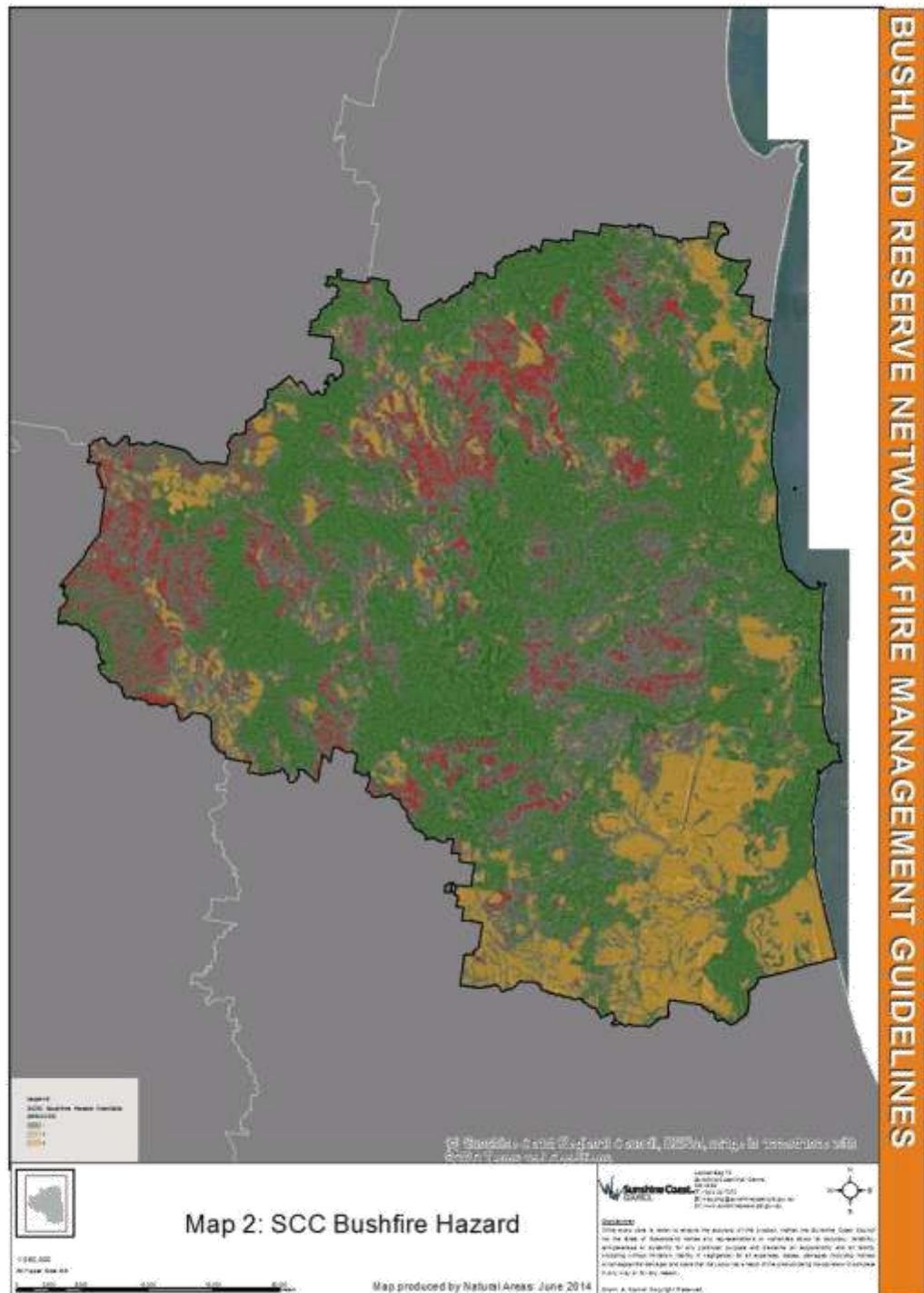
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4: Assessing the bushfire risk

Fire hazard mapping

In 2011, SCC prepared new region wide bushfire hazard mapping for inclusion in the Sunshine Coast Planning Scheme. This mapping provides the most recent assessment of broad scale bushfire hazard prepared specifically for the Sunshine Coast (Map 2). The maps have been developed in accordance with the recently superseded State Planning Policy 1/03: Mitigating the Adverse impacts of Flood, Bushfire and Landslide (SPP 1/03), which sets out a well-established methodology for the determination of bushfire hazard. This mapping requires an assessment of three key characteristics of land that have been found to be the main determinants of the severity of bushfire hazard. These factors are vegetation communities, slope and aspect and are combined to display regions of high, medium and low bushfire hazard.

Vegetation communities have been defined using Regional Ecosystem (RE) Mapping Version 6 from the Queensland Herbarium. Bushfire hazard values from 0-10 have been given to each RE as per documentation developed by the Queensland Fire and Rescue Service. Plantation forestry areas have been mapped using data provided by Forestry Plantations Queensland with a fire hazard rating applied as per SPP1/03. Slope and aspect have been generated using a digital elevation model derived from LiDAR (Light Detection and Ranging) ground return data. Values from 1-5 for slope and 0-5 for aspect are added to vegetation score to give an overall bushfire hazard score. Ratings of high, medium and low are given as per SPP1/03.

Total Hazard Score	Severity of Bushfire Hazard
13 or greater	High
6 to 12.5	Medium
1 to 5.5	Low

The State government has recently released new state-wide bushfire hazard mapping following the replacement of SPP1/03 with the new Single State Planning Policy (Single SPP). This mapping has not been used in the current Sunshine Coast Planning Scheme. On account of the high standard of bushfire mapping already undertaken by Council, the State government did not require Council to use their new mapping in the first edition of the Sunshine Coast Planning Scheme and determined that the planning scheme fully reflected the intent of the Single SPP. The State government have advised Council to update the bushfire hazard mapping presented in the planning scheme to reflect their new methodology at some point in the future.

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Map 2: SCC Bushfire Hazard

Map produced by Natural Areas: June 2014

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Hazard Mapping of SCC Bushland Reserves

SCC uses ArcGIS for mapping of the Bushland Reserve Network. This software allows for the overlay of the regional bushfire hazard mapping on the reserve network and the ability to identify reserves that contain areas of high and medium bushfire hazard. This process has been used to generate lists of applicable reserves for further inspection of site specific bushfire hazards.

Once these reserves have been identified they are then ranked by reserve size. The focus for fire management activities will be on the larger reserves or reserves that are part of large areas of contiguous vegetation where there is the potential for large scale fires. These lists are also used to identify which reserves have an individual Fire Management Plan, fire trails or fuel management zones and whether planned burns have been undertaken. This summary information also assists in identifying any possible gaps in the reserve specific fire management planning process.

Potential Bushfire Corridors

Whilst Council manages only small overall areas of bushland on a region wide scale (approximately 2.5% of the total LGA) there is value to Council in the identification of potential fire corridors and reserves within these areas. The bushfire hazard mapping has been used to identify a number of significant areas where a concentration of high or medium bushfire hazard occurs on a landscape scale.

Conondale Ranges

The Conondale National Park covers an area of over 20 000 hectares. With rugged terrain and limited access this area has the potential for large bushfires impacting of rural areas to the east. Council has no reserves in this area.

Approximate corridor area: 20 000Ha, Council reserve area: 0Ha.

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<u>Beerburrum Forestry plantations to Caloundra</u> (Map 3)

The large area of exotic pine plantations and private land to the south of Caloundra has the potential to support major bushfires. Past fires have occurred in 1994 and more recently in 2006. Wildfires under the appropriate fire conditions in this area are difficult to contain and have the potential to impact on large numbers of people. Whilst SCC does not manage much land in this area any reserves on the southern and western edges of Caloundra have the potential to be impacted by large fires in this area.

Council reserves within this corridor: Bells Creek Riparian Area, Bobbie Sattler Reserve, Racebourse Road Bushland Reserve, Pierce Avenue Bushland Reserve, Sydal Street Park, Isabel Jordan Bushland Reserve. Approximate corridor area: 15 000Ha, Council reserve area: 374Ha.

Map 3: Beerburrum to Caloundra

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Eudlo to Mons (Map 4)

The ridges that run from the upper Mooloolah Catchment through to Mons have a high density of remnant vegetation. This area is mostly privately owned with cleared areas of pasture occurring amongst the vegetated areas. Wildfires under the appropriate fire conditions have the potential to travel several kilometres and impact on the populated areas of Chevallum, Tanawha, Mons and the western edges of Buderim.

Council reserves within this corridor: Armstrongs Environmental Reserve, Maroochy Regional Bushland Botanic Gardens, Tanawha Tall Gums Conservation Area, Tall Gums Environmental Reserve, Topview Bushland Reserve Network, Cunning Rd Bushland Conservation Reserve, Frizzos Nature Refuge. Approximate corridor area: 6 500Ha, Council reserve area: 288Ha.

Map 4: Eudlo to Mons

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Northern Blackall Range (Map 5)

This area is dominated by the Mapleton Forest Reserve and covers over 10 000 hectares of remnant forest managed by the Queensland Parks and Wildlife Service and private landowners. The Reserve is dominated by open forest though there are significant areas of rainforest in the gullies. The terrain is rugged and access for firefighting activities is limited. This area has the potential for large scale fires to develop, particularly under high fire danger conditions with winds from the south west to north west.

Council reserves within this corridor Mapleton Forest Road Bushland Conservation Reserve, Andy Mergard Bushland Reserve, Balkins Road Bushland Reserve, Belli Park Bushland Conservation Reserve, Yandina – Cooloolabin Road Bushland Conservation Reserve. Approximate corridor area: 15 000Ha, Council reserve area: 92Ha.

Map 5: Northern Blackall Range

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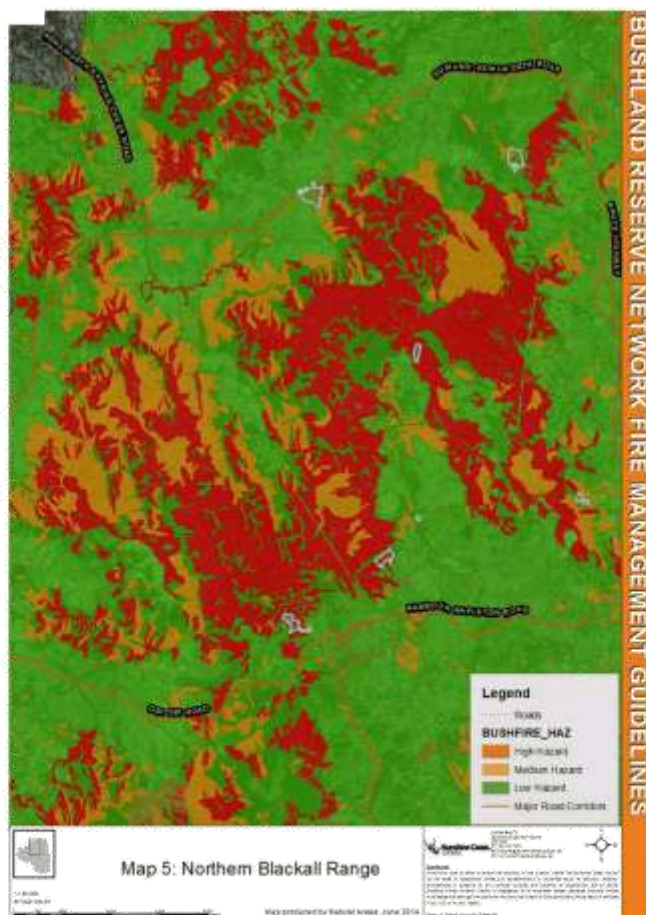
Mooloolah River National Park (Map 6)

The Mooloolah River National Park covers an area of over 800 hectares. The vegetation is a mixture of heathland, open forest and wetlands. Wildfires under the appropriate fire conditions in this area have the potential to impact on high density residential populations to the north and east. In this area Council manages a significant interface between urban development adjacent to Mountain Creek Conservation Area.

Council reserves within this corridor: Mountain Creek Conservation Area, Premier Circuit Environmental Reserve, Milieu Place. Approximate corridor area: 1 200Ha, Council reserve area: 122Ha.

Map 6: Mooloolah River NP

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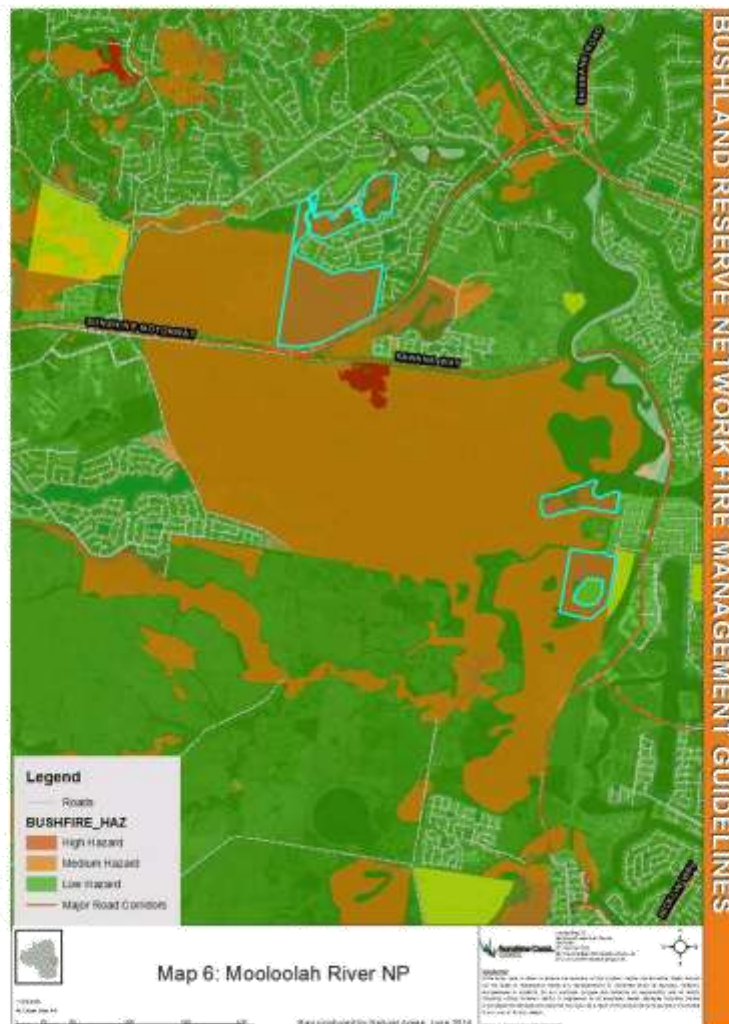
Peachester to Mt Mellum (Map 7)

An area of high bushfire hazard extends from the south east of Peachester to the
north west towards Mount Mellum and the western edge of Landsborough. This area
was impacted during the Beerburrum wildfire in 1994 and has the potential to carry a
large scale fire. Most of the vegetation in this area is privately owned.

Council reserves within this corridor: East Mount Mellum Nature Refuge, Range
Road Reserve, Peachester Range Park, Taroona Court Bushland Park, Ocean View
Park. Approximate corridor area: 1 800Ha, Council reserve area: 265Ha.

Map 7: Peachester to Mt Mellum

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Obi Obi to Curramore (Map 8)

A large area of vegetation follows the ridgelines from Walli State Forest (south of Kenilworth) to Curramore and Witta. This area includes Maleny National Park as well as large areas of privately owned bushland.

Council reserves within this corridor: Kirby's Road Environmental Reserve.
Approximate corridor area: 3 000Ha, Council reserve area: 215Ha.

Map 8: Obi Obi to Curramore

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Imbil State Forest to Kenilworth (Map 9)

Over 8000 hectares of remnant vegetation and plantation forest sits to the west of
Kenilworth in the Imbil State Forest. Wildfires under the appropriate fire conditions in
this area have the potential to impact on Kenilworth and surrounding areas.

Council reserves within this corridor: Kenilworth Bluff – Wilcox Family Park.
Approximate corridor area: 5 000Ha, Council reserve area: 123Ha.

Map 9: Imbil to Kenilworth

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Lake Weyba to Coolum Beach (Map 10)

Over 1500 hectares of coastal vegetation is within Noosa National Park along the coastal strip from Noosa Heads to Coolum Beach. Large fires have occurred in this area under fire weather conditions and have the potential to impact on the coastal development. Council works in partnership with QPWS in this area in the maintenance of fire trails and when undertaking prescribed burns.

Council reserves within this corridor: Lake Weyba Bushland Network, Stumers Creek Natural Amenity Reserve, Stumers Creek Bushland Conservation Reserve. Approximate corridor area: 1 500Ha, Council reserve area: 200Ha.

Map 10: Weyba to Coolum

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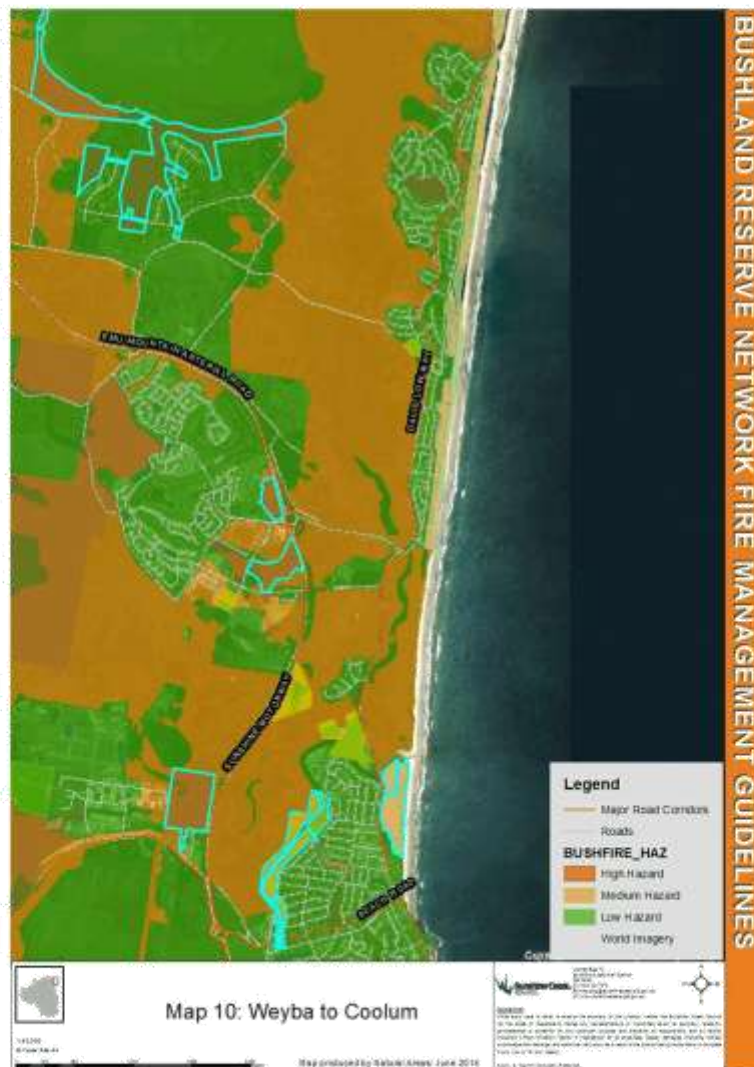
Mudjimba to Mt Coolum (Map 11)

Mount Coolum National Park and adjacent private and council land contains an area
of coastal heath of approximately 500 hectares to the east of the Sunshine Motorway
between Mudjimba and Mount Coolum. A large bushfire in this area has the potential
to impact on adjacent residential development as well as the Sunshine Coast Airport.

Council reserves within this corridor: Lumeah Drive Bushland Conservation Reserve,
Marcoola Bushland Conservation Reserve, Crinia Amenity Reserve. Approximate
corridor area: 500Ha, Council reserve area: 23Ha.

Map 11: Mudjimba to Mt Coolum

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Yandina to Peregian Springs (Map 12)

Large areas of bushland on various tenures extend from Yandina to Verrierdale and Doonan to the north east and from Yandina Creek to Peregian Springs. These areas include land managed by QPWS, council and private properties.

Council reserves within this corridor: Musgrave Drive Bushland Conservation Reserve, Arcoona Road Bushland Conservation Reserve, Corbould Road Bushland Conservation Reserve, Doonan Creek Environmental Reserve, McCords Road Bushland Conservation Reserve. Approximate corridor area: 2 200Ha, Council reserve area: 616Ha.

Map 12: Yandina to Peregian Springs

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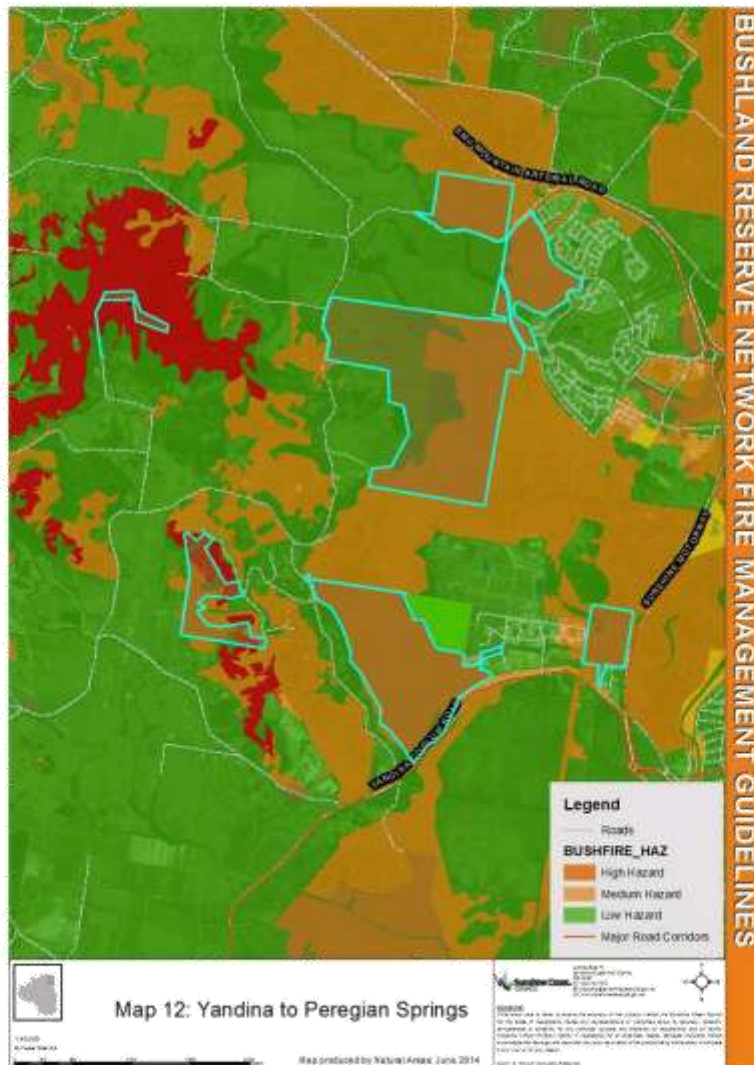
5: Addressing the risks

Fire Management Plans

Council develops Fire Management Plans (FMP's) for reserves within the estate where fire risk management forms a significant component of the overall management actions. The development of a FMP involves a detailed site assessment to identify a number of issues including;

- Areas of high and medium bushfire hazard where specific hazard mitigation is required to reduce the risk of bushfires in the reserve impacting on adjacent properties or assets.
- This mitigation may be achieved through the construction of fire trails or fuel management zones. It can also be achieved through identifying protection burn areas where frequent prescribed burns are used to reduce fuel hazards.
- Fire trails and other access points within the reserve.
- Other assets that are used during fire management activities such as water points and gates.
- Community information and liaison with QFES where relevant.
- Environmental values that require periodic fire and guidelines for how and when fire will be used in these areas.
- Areas within the reserve that require fire exclusion.

A completed Fire Management Plan has been included in Appendix 2.

Fire Trails and Fuel Management Zones (FMZ)

Fire trails and FMZ are established and maintained in reserves where a significant benefit is obtained. Council has developed the following decision chart to identify when a fire trail or FMZ should be established.

Once the decision to construct has been made and funding is available the design standards for fire trails and fuel management zones as defined in Council's Landscape Infrastructure Manual will determine the level of construction. The maintenance levels for slashing of these areas depend on the reserve classification. The number of maintenance cuts per year ranges from one to six.

The design standards for fire trails and fuel management zones as defined in Council's Landscape Infrastructure Manual are included in Appendix 3.

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Fire Trail and Fuel Managed Zone Construction - Decision Process

Request for new fire trail or FMZ. Source: FMP, CRM, internal request, external request (DERM, QFES)

Is the area a Council managed Bushland reserve?

No. Refer to relevant landowner.

Yes. Is the area a high or medium bushfire hazard in the planning scheme mapping?

No. Low risk, no fire trail or FMZ required.

Yes. Is the area within a large mosaic of connected vegetation? (10+ hectares)

No. Assess fire potential. Site topography will determine if action required. Generally action would only occur in areas where the vegetation sits to the west of adjacent properties with an uphill slope. Include any existing FMZ on adjacent properties in the assessment.

Yes. Are there adjacent dwellings that would be threatened during a fire in the area?

No. Assess practicality of FMZ or trail and construct only if <u>significant</u> community benefit will arise (such as facilitate hazard reduction or ecological burning, allows other adjacent landowners to burn their lands).

Yes. Implement fire trail or FMZ as topography allows.

Other considerations
- Are sufficient resources for both construction and ongoing maintenance costs available?
- Non-reserve areas (such as unmade road reserves). Inspect for potential for trail or FMZ in these areas to provide a <u>significant</u> community safety outcome. Generally trails will not be established in these areas as they contribute a small portion of overall fire risk in the landscape. If the road reserve presents the only possible option topographically, works can proceed as resources allow. As a general rule adjacent landowners would be expected to manage fire risks on their own lands. If such works occur on unmade road reserves all efforts should be made to include adjacent landowners in the maintenance of these areas to minimize ongoing maintenance costs to council.

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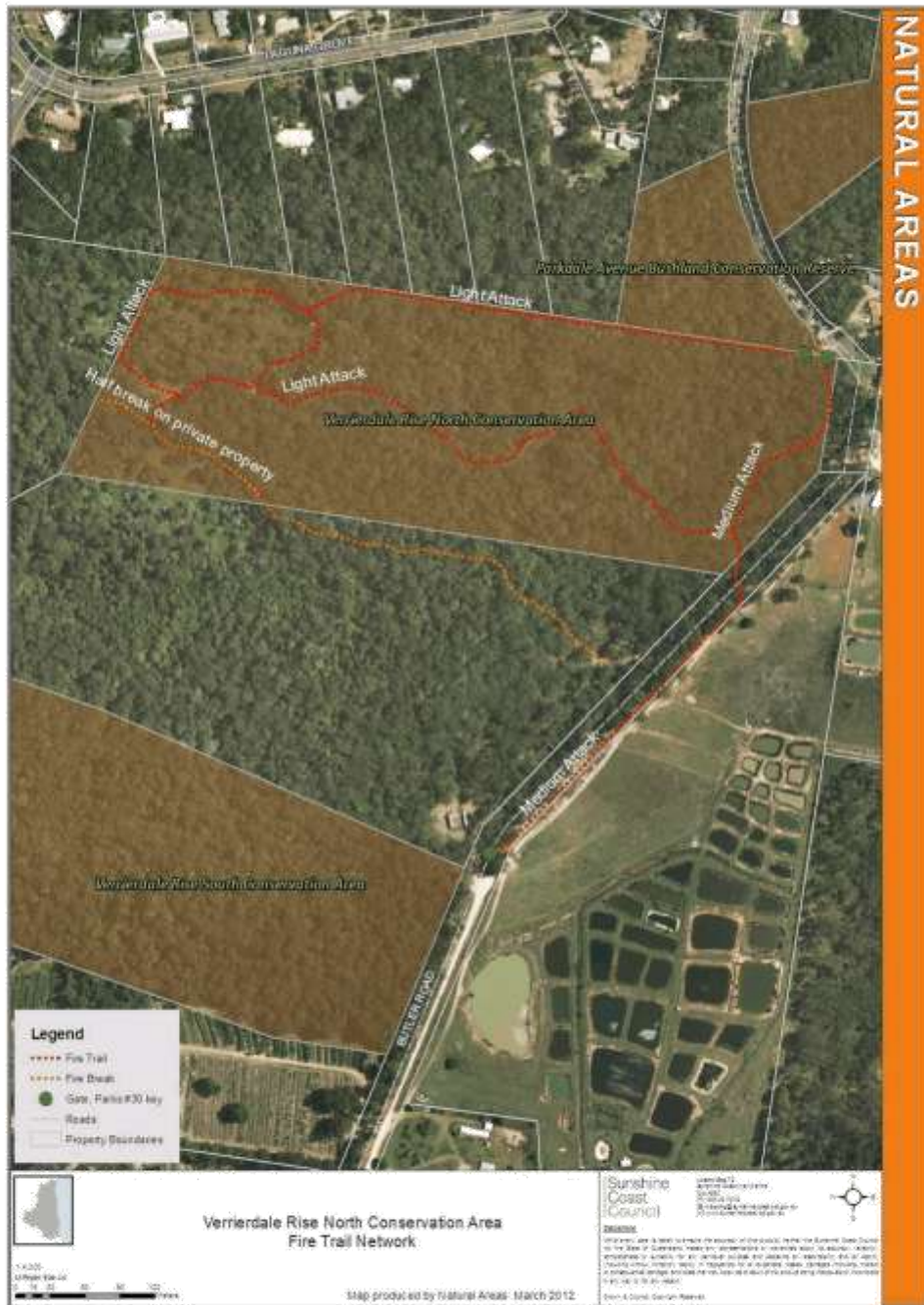   2014

Fire Trail Mapping

Council uses ArcGIS software to map the fire trails throughout the Bushland Reserve Estate. Trails are mapped using GPS and data recorded for each trail includes the reserve name, trail standard (as per above), trail condition and any relevant comments. In addition to the trails other features such as gates are mapped and data such as lock type is recorded. An example of a fire trail map is provided below.

As of March 2014 Council has over 69 km of fire trails across the entire estate. Of this 26.99 km is in good condition, 41.49 km is in fair condition and 0.82 km is in poor condition. These statistics change each year with new reserves being added and new trails constructed. Trails in poor condition are upgraded through the capital works program. Fire trails identified as no longer required may also be decommissioned and removed.

Fire Trail Statistics: March 2014

Trail Condition	Trail count	Total length (km)
Good	65	26.99
Fair	81	41.49
Poor	1	0.82
All	147	69.30

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Verrierdale Rise North Conservation Area
Fire Trail Network

Map produced by Natural Areas March 2012

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Planned burning

Council undertakes an annual program of planned burning throughout the reserve network. On average council undertakes ten prescribed burns each year, varying in size from small areas of less than 1 hectare to large scale landscape burns with adjacent landowners such as QPWS that may cover hundreds of hectares.
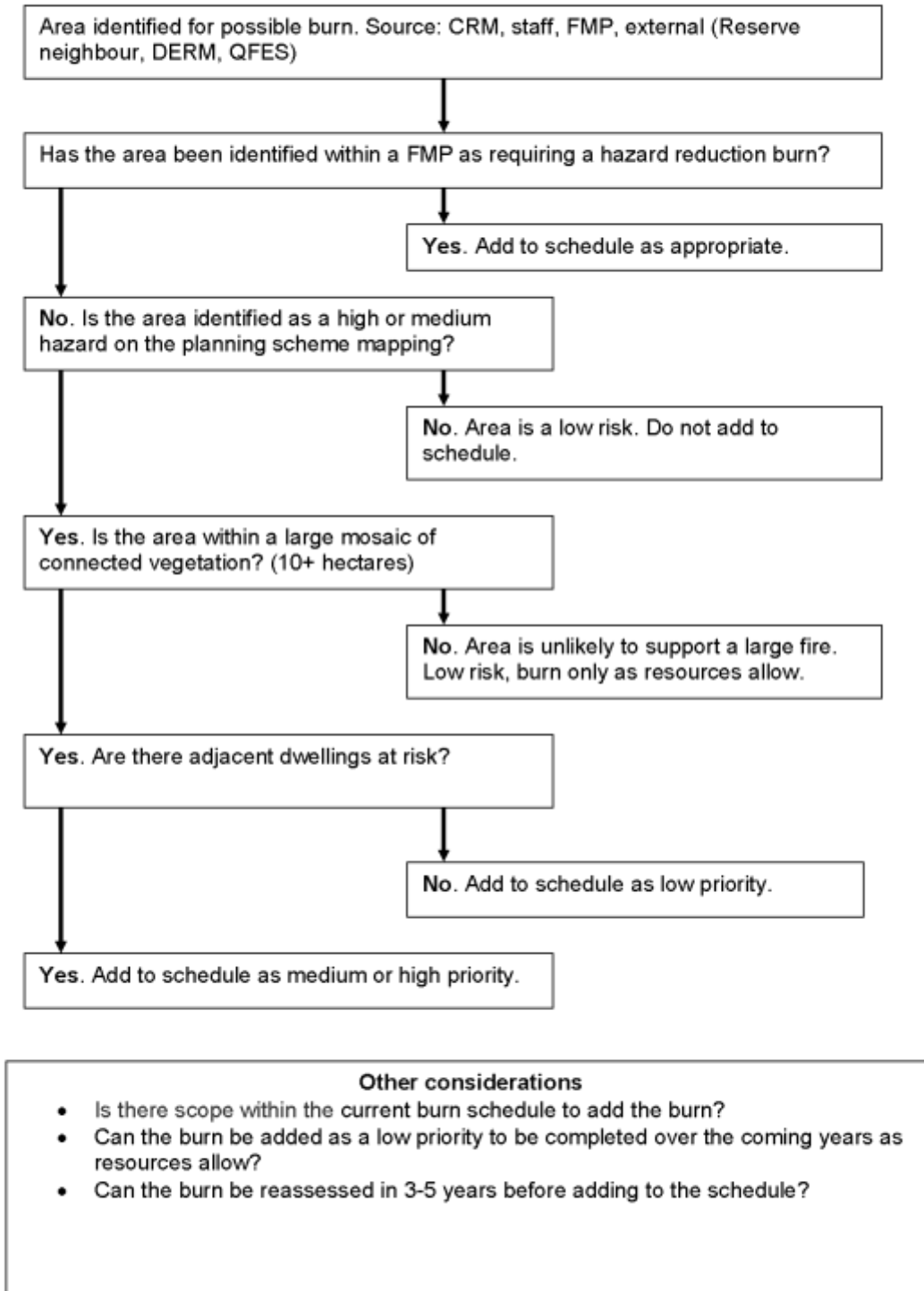
Standard documentation has been prepared to manage the operational aspects of prescribed burning. This includes Job Safety and Environmental Analysis (JSEA), risk assessment and site induction forms, fire operations proforma and standard letters sent to neighbouring residents to advise them of Council burning activities. Examples of these documents are provided in Appendix 4.

The Natural Areas team maintains an ongoing schedule of prescribed burns. These burns are ranked in priority from 1 to 4. Priority 1 burns will be achieved in the current year and lower priority burns will also be undertaken as weather and resources allow. At the end of each year completed burns are removed and those burns remaining in the schedule are increased in priority by one and remain in the following year's program. This increase in priority ensures that once in the schedule burns will be completed within a maximum 4 year timeframe.

Decision processes have been developed to ensure that any burns added to the schedule will achieve significant outcomes in terms of hazard reduction or ecological management. These processes are described below. Council strives to achieve both outcomes when undertaking prescribed burns when possible.
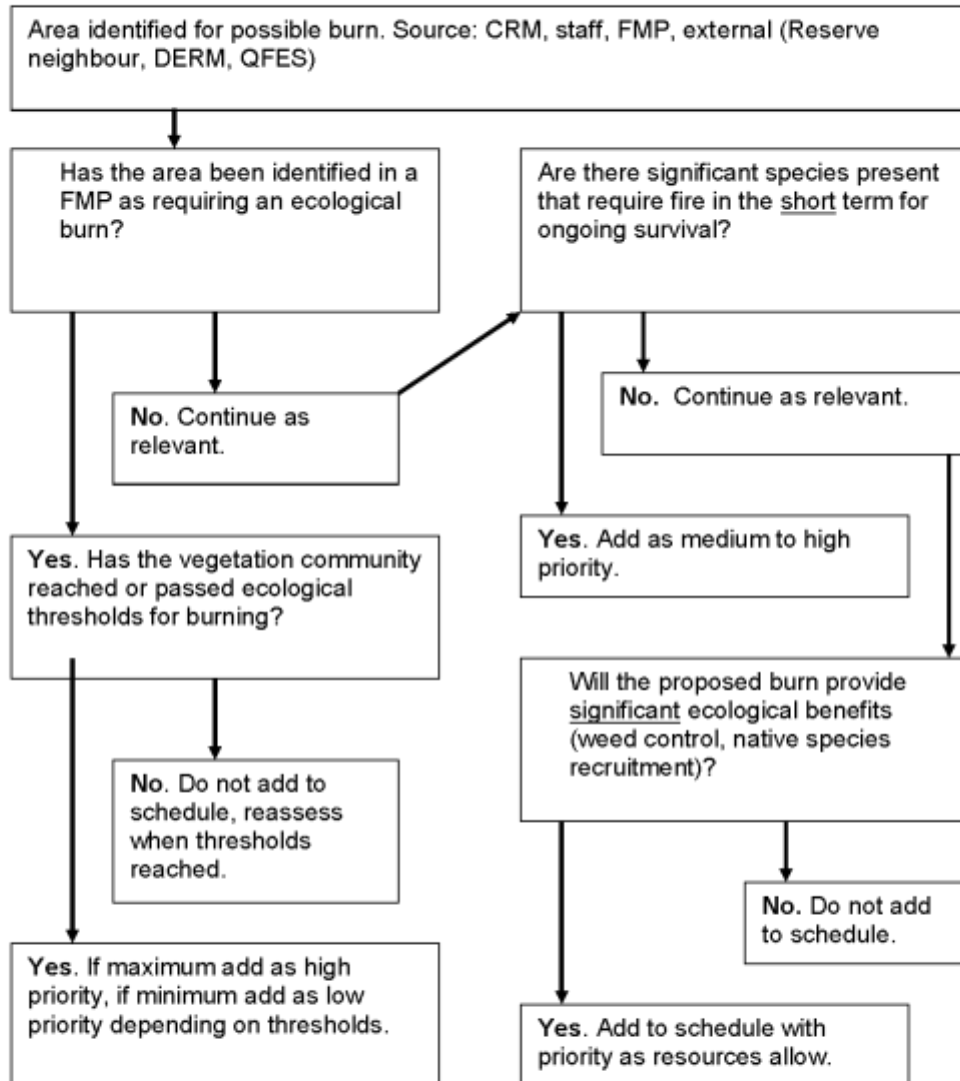
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Prescribed Burn Decision Process

Primary purpose: hazard reduction

Area identified for possible burn. Source: CRM, staff, FMP, external (Reserve neighbour, DERM, QFES)

Has the area been identified within a FMP as requiring a hazard reduction burn?

Yes. Add to schedule as appropriate.

No. Is the area identified as a high or medium hazard on the planning scheme mapping?

No. Area is a low risk. Do not add to schedule.

Yes. Is the area within a large mosaic of connected vegetation? (10+ hectares)

No. Area is unlikely to support a large fire. Low risk, burn only as resources allow.

Yes. Are there adjacent dwellings at risk?

No. Add to schedule as low priority.

Yes. Add to schedule as medium or high priority.

Other considerations
- Is there scope within the current burn schedule to add the burn?
- Can the burn be added as a low priority to be completed over the coming years as resources allow?
- Can the burn be reassessed in 3-5 years before adding to the schedule?

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Prescribed Burn Decision Process

Primary purpose: ecological

Area identified for possible burn. Source: CRM, staff, FMP, external (Reserve neighbour, DERM, QFES)

Has the area been identified in a FMP as requiring an ecological burn?

Are there significant species present that require fire in the short term for ongoing survival?

No. Continue as relevant.

No. Continue as relevant.

Yes. Has the vegetation community reached or passed ecological thresholds for burning?

Yes. Add as medium to high priority.

No. Do not add to schedule, reassess when thresholds reached.

Will the proposed burn provide significant ecological benefits (weed control, native species recruitment)?

No. Do not add to schedule.

Yes. If maximum add as high priority, if minimum add as low priority depending on thresholds.

Yes. Add to schedule with priority as resources allow.

Other considerations
- Is there scope within the current burn schedule to add the burn?
- Can the burn be added as a low priority to be completed over the coming years as resources allow?
- Can the burn be reassessed in 3-5 years before adding to the schedule?

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Fire management Resources

The Environmental Operations Branch maintains fire management resources to allow Council to undertake prescribed burns and be involved when required in wildfire response. At February 2014 the following resources are available.

Fire Units

Call sign	Vehicle make	Tank capacity (L)
SC41	Toyota Landcruiser	400
SC44	Ford Ranger	300
SC45	Ford Ranger	300
SC46	Toyota Landcruiser	500

* An additional 5th fire unit is awaiting a suitable vehicle following deamalgamation. Call signs to be reassigned when this vehicle is available.

Staff

Training Level	Number of staff
Prescribed Burn Supervisor	2
Sector Commander	3
Crew Leader	8
Crew Member	17

6: Fire event response

Response protocols

Council has developed a response protocol with QFES that outlines the process for Council resources to be mobilised during bushfires.

SCC Assistance to QFES

- SCC is not to be seen as a resource of QFES (IE another rural fire unit under their control).
- SCC would assist when available, and especially for emergency situations.
- SCC would provide QFES assistance within SCC capability as required.
- SCC has light attack capable crews and vehicles but would prefer mopping up duties in order to release QFES resources to other roles.

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<u>When would SCC Provide Assistance?</u>

<u>Fires on Council Owned Land</u>

- SCC would always attend hazard reduction burns
- SCC would always attend wild fires when requested by QFES
- SCC would relinquish control of wild fires to QFES when on site

<u>Fires on Private Land Adjoining Council Owned Land</u>

- SCC would possibly attend hazard reduction burns– especially where necessary to protect Council owned land
- SCC would possibly attend wild fires if notified where necessary to protect Council owned land or the community
- SCC is unlikely to attend wild fires where there is no immediate threat to Council owed land or the community - subject to potential future weather and threat predictions or a specific request is made to the DEMDO by QFES

<u>Fires on Private Land NOT Adjacent Council Owned Land</u>

- SCC would not normally attend hazard reduction burns
- SCC would not normally attend wild fires unless it is necessary to protect the community or a specific request is made to the DEMDO by QFES

<u>Fires on National Parks Land</u>

- SCC would most probably attend hazard reduction burns when invited – especially where necessary to protect or include Council owned land
- SCC would most probably attend wild fires if notified where necessary to protect Council owned land or the community
- SCC may attend wild fires where there is no immediate threat to Council owned land or the community - subject to potential future weather and threat predictions or a specific request is made by QPWS.

<u>Call for Assistance</u>

The Disaster Management system would be utilised to communicate requests from QFES for assistance from SCC.

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- QFES Fire Communications Centre calls Disaster and Emergency Management Duty Officer (DEMDO – John Gallina)
- DEMDO advises Manager Environmental Operations
- DEMDO activates Disaster Management arrangements

Triggers for increased resource availability

The Queensland Fire and Emergency Services use a Wildfire Alert Level (WAL) system to specify the readiness and availability of their resources during the year. There are four WAL categories and Council receives notification from QFES when the WAL changes. The implications for local Rural Fire Brigades is summarised below.

QFES WAL1

- Normal activities

QFES WAL2

- All equipment checked and appliances in a complete state of readiness.
- Consider ceasing hazard reduction burning.
- Consider contact with Fire Wardens to discuss local conditions.
- Brigade area familiarisation and awareness of local area conditions.
- Assessment of water points (dams, creeks, pools etc).
- Update risk assessment of known hazards.
- Ensure adequate supply of PPE and drinking water in store.

QFES WAL 3 (in addition to Level 2 activities)

- Conduct Brigade area inspections and patrols.
- Development availability lists.
- Development team roster.
- Be prepared to back up urban crews.
- Two brigade response active.

QFES WAL 4 (in addition to Level 3 activities)

- All members be prepared and advise First Officer of any unavailability of personnel.
- Firefighters to keep hydrated.

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- Where possible, have a crew on standby.

Council uses the WAL to specify readiness levels for the Environmental Operations fire management resources. The implications for Council resources are described below.

SCC WAL1

- Normal activities. One of the two lead fire units (SC41 & SC46) will have fire unit on the vehicle but no specific preparations in place.

SCC WAL2

- Both lead fire units (SC41 & SC46) will have fire units on. Tanks will be filled and all equipment on board for response if required.

- Natural Areas units (SC44-SC45) will have slip on units available for rapid installation if required.

- All staff to have PPE available at work location.

SCC WAL 3 (in addition to Level 2 activities)

- Natural Areas units (SC44-SC45) will have slip on units installed and ready for rapid filling and deployment if required.

- PPE to be available in vehicles.

- 4 staff to be on-call to provide a response capability if required.

SCC WAL 4 (in addition to Level 3 activities)

- All fire units to be filled with all equipment ready for deployment.

Scheduled Natural Area Maintenance Activities

During periods of very high fire danger (FDI 24+) as advised by the Bureau of Meteorology scheduled maintenance works by slashing and mowing contractors are to be suspended until fire danger eases to high or lower.

Integration with other agencies and resources

SCC has established an integrated communications system for council resources (vehicles, trucks and plant). This radio system is compatible with QFES channels and allows communication within council resources and directly with QFES resources.

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ORDINARY MEETING   **19 JUNE 2014**

Item 8.4.1   Sunshine Coast Council Bushland Reserve Network Fire Management Guidelines
Appendix A   Sunshine Coast Council Bushland Reserve Network Fire Management Guidelines 2014

7: Community safety

Community education

Council works in partnership with the Queensland Fire and Emergency Services in their delivery of community safety programs. As the peak body in Queensland, QFES implement a nationally based approach to community education through the Prepare, Act, Survive program.

8: Ecological requirements

The maintenance of environmental values is a significant factor in Council's fire management program. Wherever possible Council will try to integrate ecological outcomes with risk management.

Detailed information around recommended fire regimes and burning practices for the management of flora and fauna populations are contained in Appendix 5.

9: Monitoring and evaluation

Fuel load monitoring

Through the bushfire hazard assessment process (described in Section 5) Council identifies those reserves where individual fire management plans are required. Part of this planning process involves the identification of protection burn areas where fuels will be maintained at low levels through regular planned burns. In these areas desired fire intervals are specified to maintain fuel loads at low levels or to alter fuel structure to reduce hazard by promoting a grassy understorey over a shrubby understorey.

Fuel load assessment of these sites may be required as the prescribed burning thresholds are reached. Fuel load assessments will be undertaken using the Overall Fuel Hazard Assessment Guide (DSE 2010). In those areas identified as protection burn areas it is important to recognise that regular burning may result in changes to fuel structure that reduces fire hazard and with a reduction in elevated fuels overall fuel load may not be the best measure to determine that burning is required.

Periodic fuel load assessments occur generally in response to specific concerns being raised about potential fire hazard in Council reserves. These may come from members of the public or from agencies such as the Queensland Fire and Emergency Services. Following any fuel load assessments decisions to undertake hazard reduction through either burning or by establishing fire trails or fuel reduced zones will occur through the decision processes outlined previously.

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Fire history mapping

The Environmental Operations Branch currently collects spatial information on all prescribed burns within the reserve network. Information is also captured for wildfires when possible. Once collected the fire history data provides valuable information for use in assessing the recommendations in individual reserve Fire Management Plans. On completion of a prescribed burn the outer perimeter is mapped as accurately as possible using a PDA with GPS receiver. Data such as Fire Management Unit, fire date, forest fire danger ratings, fuel loads, resources involved and fire behaviour details including intensity and extent is collected.

Fire history data is also made available to other agencies such as the Queensland Fire and Emergency Services and the Queensland Parks and Wildlife Service. Data from all three agencies is integrated by the QFES Regional Interagency Departmental Committee to produce a map showing prescribed burns for the entire QFES North Coast Region.

Fire trail and FMZ monitoring

The monitoring of fire trails and fuel management zones is undertaken as per Natural Areas Service Levels. For fire trails the minimum monitoring frequency is one time per year.

Post fire monitoring

For prescribed burns post fire monitoring is undertaken when resources allow assessing the effectiveness of burning to meet desired management objectives, both ecological and fuel reduction. Photo points are also regularly used to monitor changes in vegetation over time. In sites where significant species are present council may install permanent monitoring plots in order to record data before burning and during the post burn regeneration. Given the intensive nature of this type of monitoring this is primarily used where scheduled plant species are being burnt to promote regeneration.

Reactive monitoring after wildfires is undertaken to assess the effectiveness of any fire trails or fuel reduced zones. These events provide the opportunity to critically assess the performance of these measures and decide if the specifications used by council are adequate.

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