

Fire Management Plan

Kirbys Road Environmental Reserve, Obi Obi.



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Introduction

This fire management plan has been prepared to address community safety and the maintenance of ecological values in Kirbys Road Environmental Reserve (the reserve). The reserve is located to the west of Flaxton.

Legislative requirements

Qld Fire and Emergency Services Act (1990)

Sunshine Coast Council (SCC) and its corporatised entities as well as all other entities which are owned and/or managed on behalf of SCC and who are responsible for the management of land, are considered to be a land occupier under the *Fire and Emergency Services Act 1990* (s67). The *Fire and Emergency Services Act 1990* is the head of power for the Qld Fire and Emergency Services (QFES) who administers the provisions of the Act and Regulations.

The definition of a land occupier under the act is:

“occupier of land” includes, where there is no person in actual occupation of the land, the person charged by the owner or by law with the management of the land.

The act also defines the term occupier.

“occupier”, used with reference to any premises, means the person in actual occupation or, if there is no such person, the owner.

Section 67 of the Act requires SCC on becoming aware of a fire burning on land it occupies to take all reasonable steps to extinguish or control the fire and report the fire and its location to a fire officer as soon as possible.

The act also requires SCC to obtain a permit to burn from the closest QFES station or fire warden prior to conducting any burns within their property.

Local Laws - SCC

Sunshine Coast Council Local Law No. 3 (Community Health and Environmental Management) 2011 and Sunshine Coast Council Subordinate Local Law No. 3 (Community Health and Environmental Management) 2011 are the local laws that regulate fires in urban areas. It applies specifically to fires that do not require a permit under the Fire and Emergency Services Act. All burns undertaken by Council will be within the QFES permit system so the local laws do not apply.

Site description

Location

The property is described as Lot 176 on MCH798 and Lot 178 on MCH865. The size of the property is approximately 215 hectares (see Map 1). The reserve can be accessed through a gated access trail off Kirbys Road.

Landscape

The dominant landscape features are moderate to very steep vegetated slopes, ridges and a number of gully lines and creeks.

Vegetation

Version 8 Regional Ecosystem mapping identifies two RE's within the reserve. The following information on these RE's has been obtained from the Department of Environment and Heritage Protection. Vegetation mapping for the reserve is presented in Map 2. A large portion of the reserve is mapped as non-remnant vegetation.

12.12.1 - Notophyll and notophyll/microphyll vine forest, sometimes with *Archontophoenix cunninghamiana* and/or *Lophostemon confertus* closed forest. The plant families *Lauraceae*, *Myrtaceae* and *Elaeocarpaceae* are diagnostic of the type and *Pouteria*

queenslandica is common in the northern half of the bioregion. *Araucaria cunninghamii* is often present on margins. Occurs in gullies on Mesozoic to Proterozoic igneous rocks especially granite and rhyolite. This RE is listed as "Of Concern".

Fire management guidelines for this RE are;

STRATEGY: Do not burn deliberately. Protection relies on broad-scale management of surrounding country. May need active protection from wildfire in extreme conditions or after prolonged drought. Planned burns should not create a running fire into vine forest. Ensuring conditions of good soil moisture and moisture of litter in surrounding communities will limit fire behaviour/intensity.

ISSUES: Fire sensitive and not normally flammable. Some preliminary work suggests rainforest seedling germination from planned burning activities will assist the establishment of seedlings in newly burnt areas, especially due to smoke. There may be issues with lantana and other weeds from fire and other disturbance. Remnants may be limited by frequent fire at the margins; this requires further research.

12.12.15 - *Corymbia intermedia* +/- *Eucalyptus propinqua*, *E. siderophloia*, *E. microcorys*, *Lophostemon confertus*. Other canopy species include *E. acmenoides*, *E. moluccana*, *Angophora subvelutina* and occasional vine forest species. Patches of *Eucalyptus pilularis* sometimes present. Occurs on Mesozoic to Proterozoic igneous rocks. This RE is listed as "least concern".

Fire management guidelines for this RE are;

SEASON: Summer to winter.

INTENSITY: Plan for low to moderate. Unplanned occasional high intensity wildfire will occur.

INTERVAL: 4-8 years maintains a healthy grassy system. 8-20 years for shrubby elements of understorey.

STRATEGY: Aim for 40-60% mosaic burn. Needs disturbance to maintain RE structure (eucalypt overstorey with open understorey of predominantly non-rainforest species). It is unlikely that mosaic burns will be achievable because fire would most likely be of higher intensity (i.e., likely to be a wildfire) and is only likely to occur at long intervals (at least 20+ years) during prolonged dry periods. In exceptional circumstances, different localities containing this ecosystem could be burnt to ensure a continuum of habitat availability across the broader landscape. Using this strategy maximises the probability of spatial mosaics in the landscape.

ISSUES: Frequent fire is needed to maintain understorey integrity, keeping more mesic species low in the profile of the understorey so that other species can compete. It is essential that wildfires are not the sole source of fire in this ecosystem. High intensity fires occur periodically through time, however frequent low to moderate intensity fires will create the disturbance required to keep the understorey diverse. A follow-up burn soon after a high intensity wildfire can be considered to reduce germinating mesic species. This RE may contain a high number of rare and threatened plant species which require appropriate fire management. There is evidence that suggests that infrequent high intensity fires sustain the eucalypt overstorey. Wet sclerophyll has been shown to be a moving ecotone between vine forest and moist/dry sclerophyll.

A detailed flora survey was undertaken in 2012 by Brush Turkey Enterprises for Sunshine Coast Council with 298 native flora species identified. This includes 7 listed species. The Slender Milkvine (*Marsdenia coronata*), Bush Nut (*Macadamia integrifolia*), and Maroochy Nut (*Macadamia ternifolia*), listed in the Queensland Government's NCA 1992 as 'Vulnerable' and the Giant Ironwood (*Choricarpia subargentea*) listed in the

Queensland Government's NCA 1992 as 'Near Threatened'. The Slender Milkvine (*Marsdenia coronata*), Bush Nut (*Macadamia integrifolia*), and Maroochy Nut (*Macadamia ternifolia*) are also listed in the Commonwealth Government's EPBC Act 1999 as 'Vulnerable'.

It is unlikely that these species would be impacted by both prescribed and unplanned fires as they occur primarily in the rainforest vegetation areas. The exact location of these species needs to be considered when undertaking any planned burns.

60 introduced species were also identified within the reserve. Two 'Class 2' declared species were observed throughout the reserve, *Baccharis halimifolia*, and *Sporobolus africanus*.

Several 'Class 3' declared species were observed throughout the reserve, including *Lantana camara*, *Anredera cordifolia*, *Cinnamomum camphora*, *Ligustrum lucidum*, *Sphagneticola trilobata* and *Ligustrum sinense*.

Fauna

Two detailed fauna surveys (pre & post-wet season) were conducted in January and June, 2012. 133 vertebrate fauna species, 8 microbat species and 84 bird species were observed or acoustically recorded during the two surveys.

Two mammals listed as Vulnerable under the Commonwealth EPBC Act (1999) were recorded; Koala (*Phascolarctos cinereus*) and Grey-headed Flying-Fox (*Pteropus poliocephalus*).

One reptile recorded, the Elf Skink (*Erotoscincus graciloides*) is listed as near threatened under the Nature Conservation Act (1992).

Four EPBC Act (1999) listed terrestrial migratory bird species were detected during the site survey; Spectacled Monarch (*Symposiarchus trivirgatus*), Rufous Fantail (*Rhipidura rufifrons*),

Rainbow Bee-eater (*Merops ornatus*) and Latham's Snipe (*Gallinago hardwickii*).

Summary of Ecological Issues

A large portion of the reserve is dominated by open forest and vegetation mapped as non-remnant which will require periodic fires to maintain the open understorey. In addition, there are areas of notophyll vine forest scattered throughout the reserve which require fire exclusion.

Due to the diversity of fauna in the reserve it is essential to establish and maintain a range of habitat types. Where it is possible to burn safely, fire should be used to maintain the open forest structure to ensure there is minimal mid storey vegetation. For areas where it is not possible to contain a burn within the reserve, fires will be less frequent. This will result in a thicker vegetation structure with an established mid storey.

Fire hazard

State Planning Policy - Fire Hazard Assessment Methodology

The State Government replaced State Planning Policy (SPP01/03) with a new single SPP in 2013. This SPP also includes state-wide mapping of bushfire hazards.

The SPP is predominantly to be referred to with respect to new development within Queensland. The SPP mapping data provides a trigger for local governments to investigate and consider the relevant interest and does not automatically preclude development. The mapping is amended from time to time to ensure the most recent state information is available.

The Sunshine Coast Council Planning Scheme 2014 includes bushfire hazard mapping that was prepared using the old methodology from SPP 1/03. Both mapping products show the reserve has a mixture of medium and high to very high bushfire hazard areas as well as low hazard areas where the vegetation is

dominated by rainforest species. Both mapping products are provided below in Maps 3a & 3b.

Other considerations

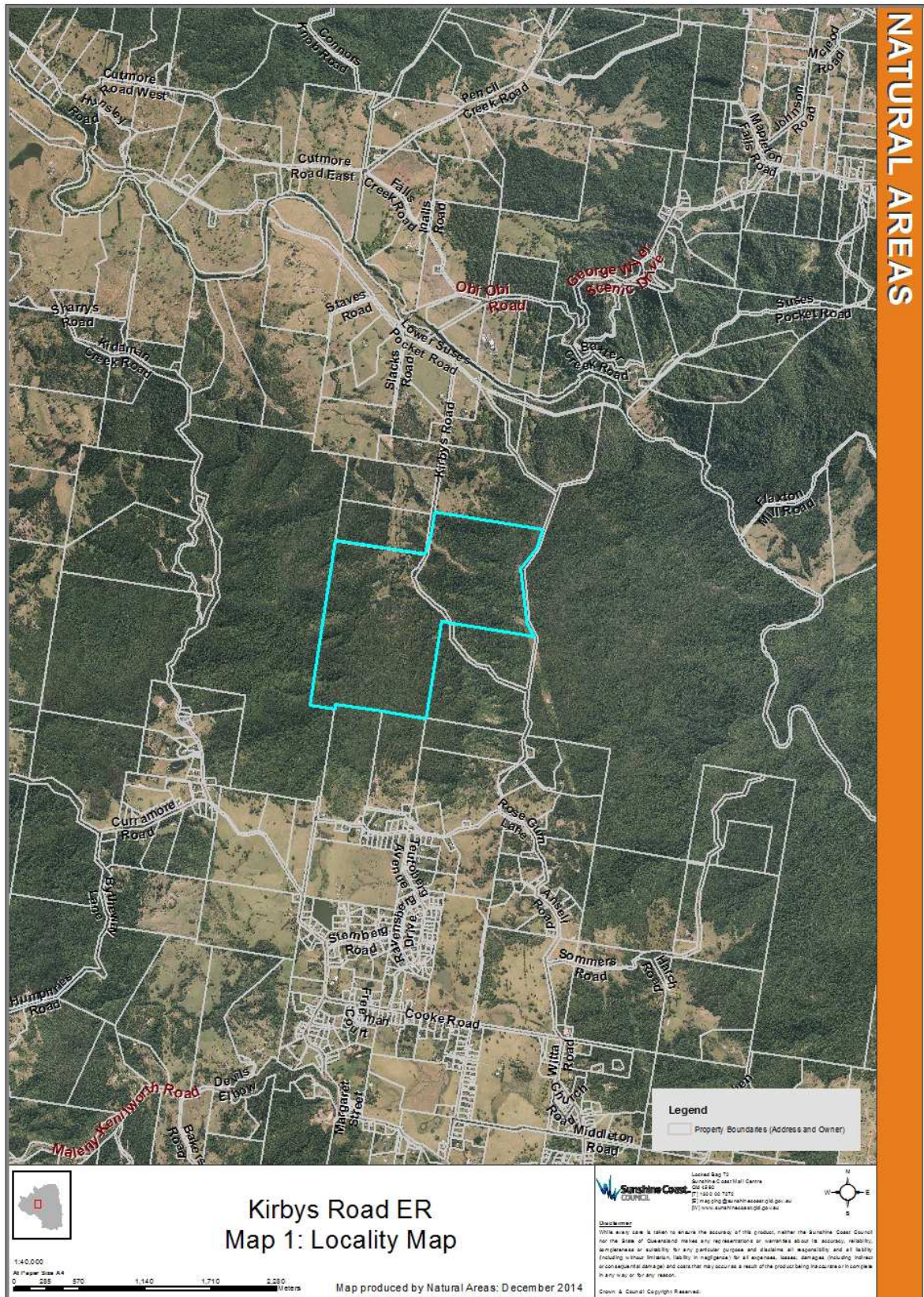
The reserve is surrounded by large vegetated land parcels to the east and west, which increases the overall area of vegetation available during a bushfire and the potential for landscape scale bushfires to enter the reserve. The reserve itself only makes up a small portion of the total surrounding vegetated landscape which includes the 1550ha Kondalilla National Park to the east and the 1880ha Maleny National Park to the west.

Overall the fire hazard has been assessed as being high, given the large size and steep slopes of the reserve. Whilst fires can and will occur within the reserve, there is only one house adjacent to the reserve boundaries. It is situated approximately 145m west from the northern boundary, and has Kirbys Road between it and the reserve. This reduces the potential impacts of wildfire to life and property.

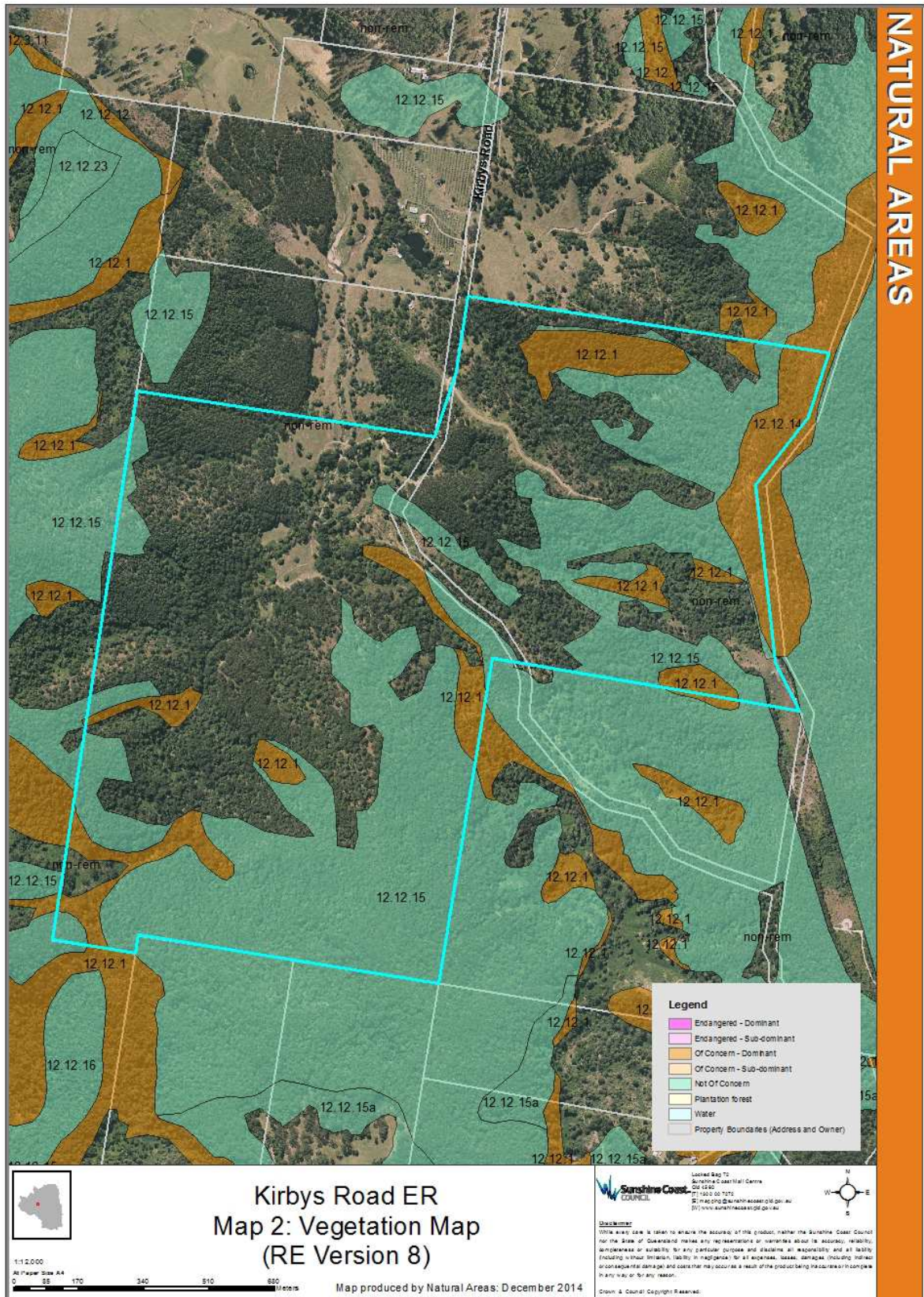
Prescribed burns in the reserve will require cooperation with neighbouring property owners as burns cannot be contained within the reserve boundary due to the steep terrain.

There are several areas of hardwood plantation within the reserve established by a former owner. These plantations require fire exclusion and protection from wildfire. These areas have been identified as a specific fire management unit within this plan.

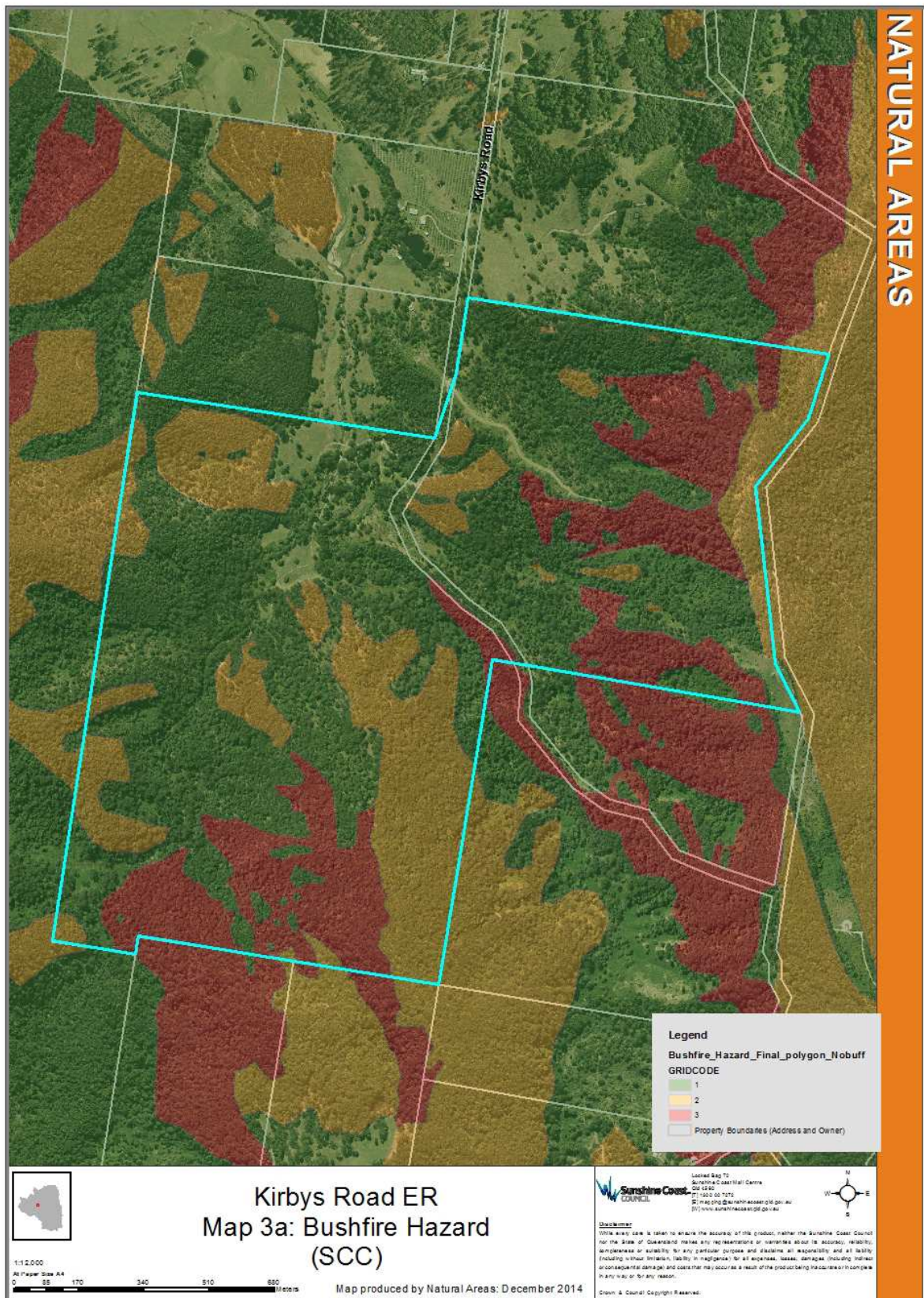
Map 1 - Locality Map



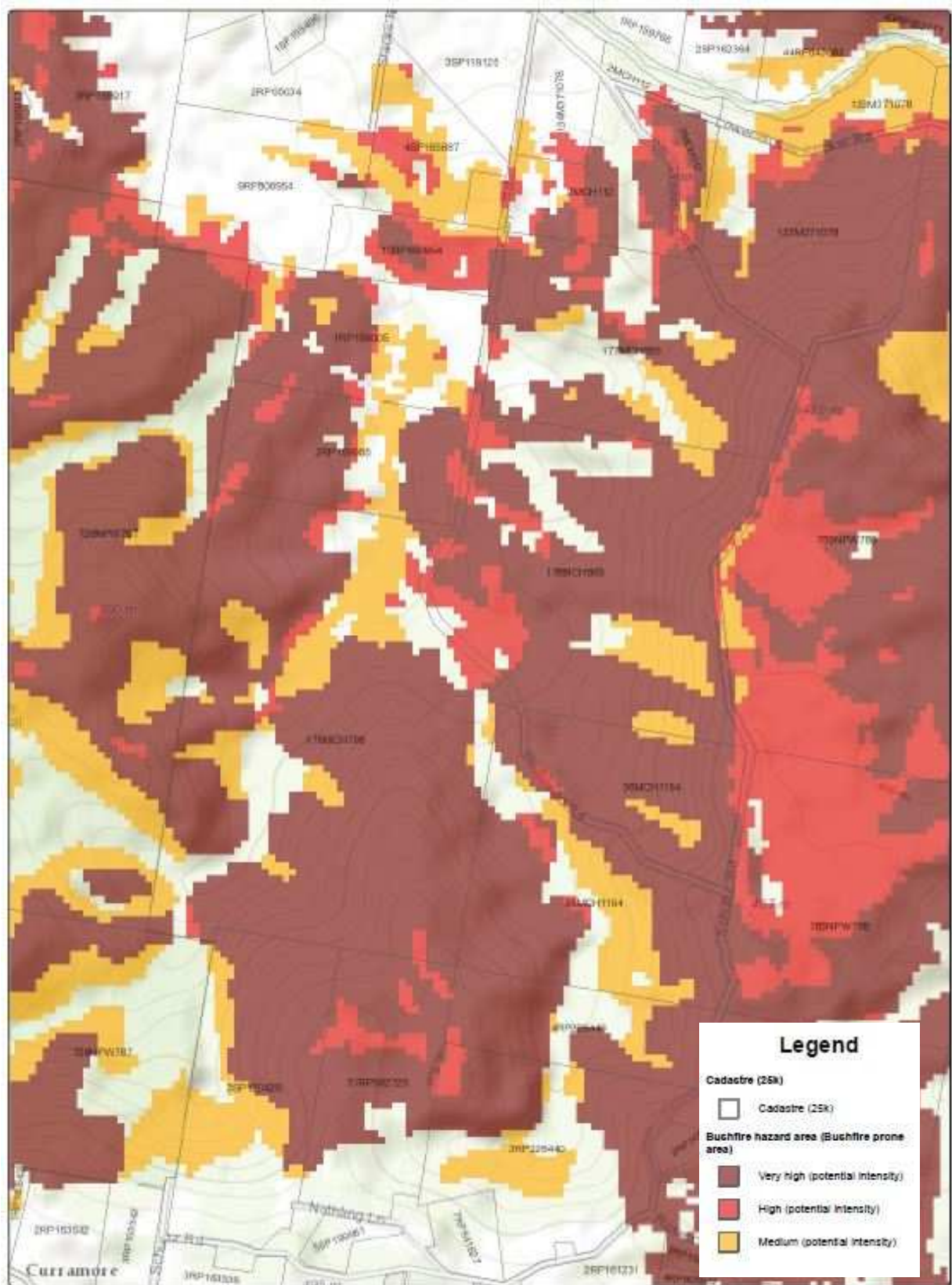
Map 2 - Vegetation Map



Map 3a - Bushfire Hazard Map (SCC)



Map 3b - Bushfire Hazard Map (SPP)



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Infrastructure and Planning

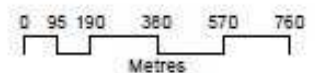
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State Planning Policy
Local government development assessment

Date: 18/12/2014

Disclaimer

This map has been prepared with due care based on the best available information at the time of publication. The department holds no responsibility for any errors, inaccuracies or omissions within this document. Any decisions made by other parties based on this document are solely the responsibility of those parties. Please note whilst Bushfire Hazard Areas have not been triggered they may still apply.



Planning methodology

Field assessment

The site assessment was undertaken in conjunction with the vegetation survey and other information such as slope, fuel loads and aspect and dominant species associations.

Fire Management Units

Fire Management Units (FMU) are those areas within which fire can be managed to achieve management objectives.

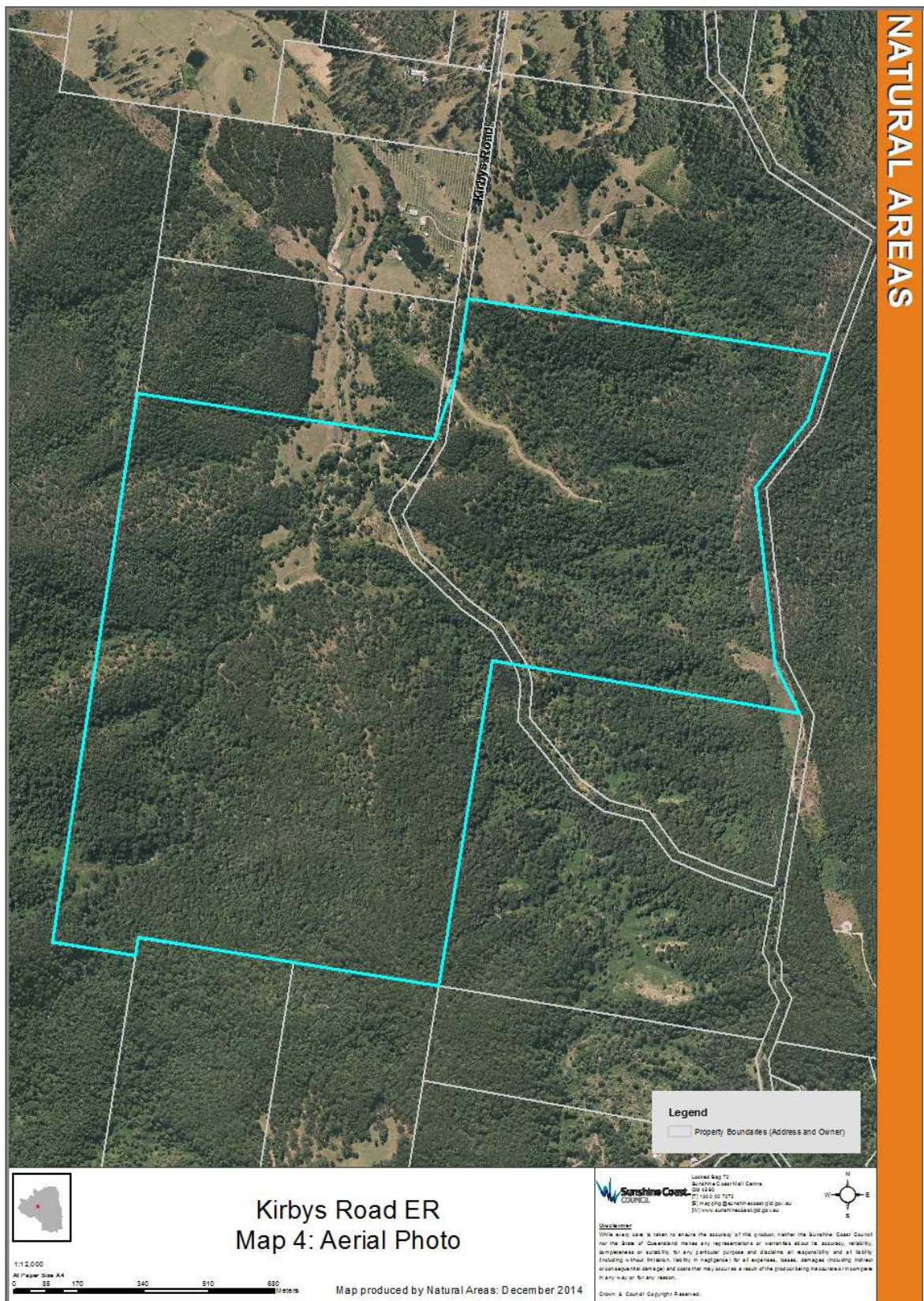
The FMUs are defined by existing firebreaks, fire trails, internal tracks and property boundaries.

The FMUs have been identified in Map 5.

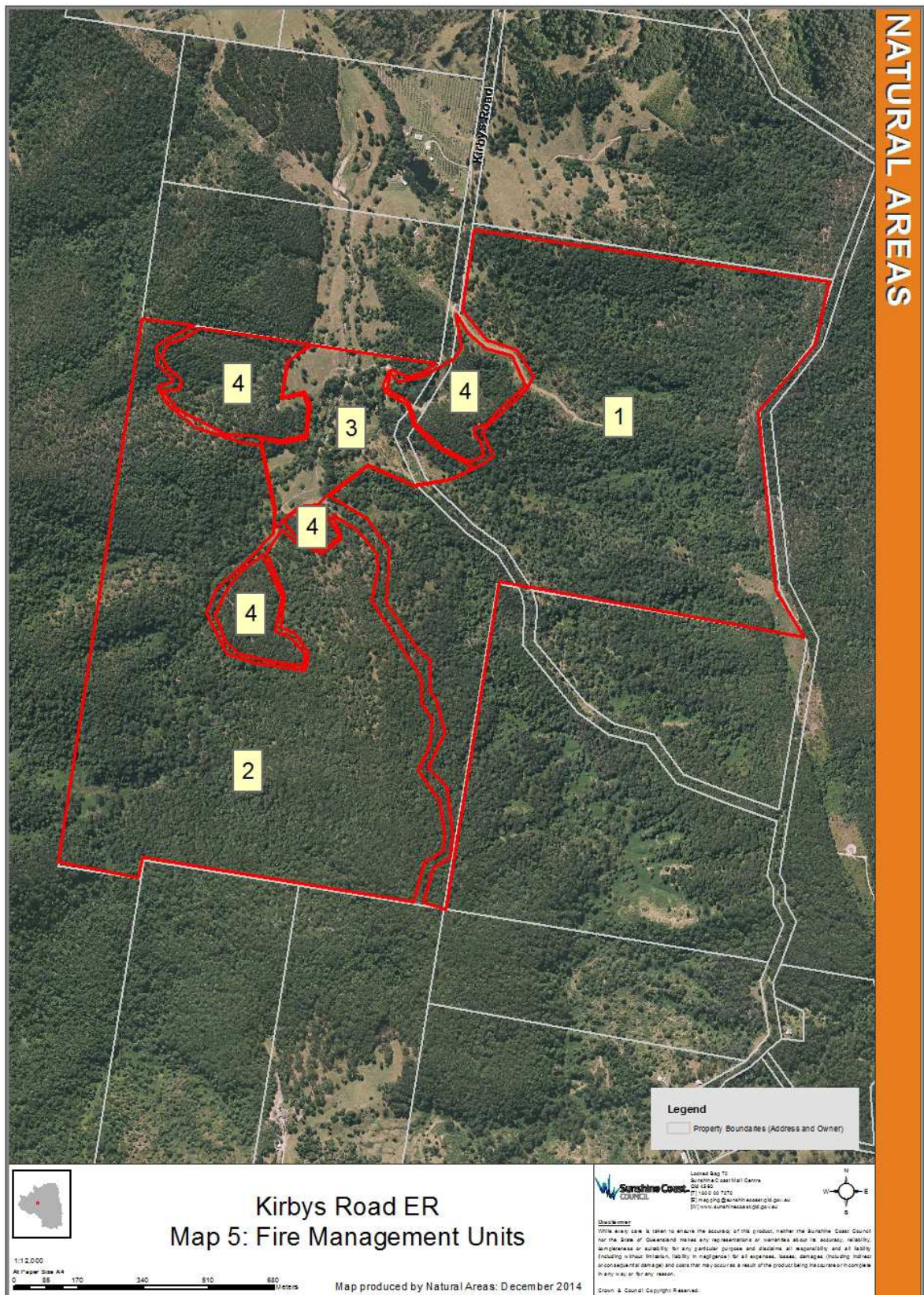
The fire management units allow for the development of management objectives which have relevance to either:

- Property protection,
 - Protection of sensitive and significant vegetation or habitats; and
 - Management of appropriate fuel loads.
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Map 4 -Aerial Photograph



Map 5 - Fire Management Units



Map 6 - Fire Management Trails



Fire Management Units - Management Prescriptions

Block Number	Management Unit 1
Description	<p>This management area is located in the north eastern section of the reserve.</p> <p>The area has a good cover of vegetation with a grassy and shrubby understorey.</p> <p>The management area is bounded by the fire trails to the west and by private properties and National Park to the north, east and south (see Map 5).</p>
Access to FMU	Access is via Kirbys Road.
Water sources	There are no fire hydrants in the area. Water may be available from the creek within the reserve or from dams on adjacent private properties. A water truck may be required during dry conditions.
Vegetation communities	This area is dominated by RE 12.12.15 - <i>Corymbia intermedia</i> +/- <i>Eucalyptus propinqua</i> , <i>E. siderophloia</i> , <i>E. microcorys</i> , <i>Lophostemon confertus</i> open forest on Mesozoic to Proterozoic igneous rocks. There are small areas of RE 12.12.1 - Simple notophyll vine forest usually with abundant <i>Archontophoenix cunninghamiana</i> (gully vine forest) on Mesozoic to Proterozoic igneous rocks
Management objectives	<ul style="list-style-type: none"> ➤ Manage all biodiversity values within the unit; ➤ Manage as a burning unit with fire frequencies between 10-25 years to protect the ecological values of the reserve and maintain the grassy to shrubby understorey. ➤ Prescribed burns may be difficult to undertake given steep terrain and lack of accessible control lines on the reserve and adjacent properties.
Management prescriptions	<ol style="list-style-type: none"> 1. Undertake planned burns every 10-25 years to maintain ecological values. 2. Extinguish all unplanned fires should they commence within the Management Unit.
Burning regime	Burning unit (10-25 years) Cooperation is required from residents on neighbouring properties as it is not practical to contain a burn within the reserve.

Block Number	Management Unit 2
Description	<p>This management area is located in the south western section of the reserve.</p> <p>The area has a good cover of vegetation with a grassy and shrubby understorey.</p> <p>The management area is bounded by the fire trails to the east and by private properties and National Park to the north, west and south (see Map 5).</p>
Access to FMU	Access is via Kirbys Road.
Water sources	There are no fire hydrants in the area. Water may be available from the creek within the reserve or from dams on adjacent private properties. A water truck may be required during dry conditions.
Vegetation communities	This area is dominated by RE 12.12.15 - <i>Corymbia intermedia</i> +/- <i>Eucalyptus propinqua</i> , <i>E. siderophloia</i> , <i>E. microcorys</i> , <i>Lophostemon confertus</i> open forest on Mesozoic to Proterozoic igneous rocks. There are

	small areas of RE 12.12.1 - Simple notophyll vine forest usually with abundant <i>Archontophoenix cunninghamiana</i> (gully vine forest) on Mesozoic to Proterozoic igneous rocks
Management objectives	<ul style="list-style-type: none"> ➤ Manage all biodiversity values within the unit; ➤ Manage as a burning unit with fire frequencies between 10-25 years to protect the ecological values of the reserve and maintain the grassy to shrubby understorey. ➤ Prescribed burns may be difficult to undertake given steep terrain and lack of accessible control lines on the reserve and adjacent properties.
Management prescriptions	<ol style="list-style-type: none"> 1. Undertake planned burns every 10-25 years to maintain ecological values. 2. Extinguish all unplanned fires should they commence within the Management Unit.
Burning regime	Burning unit (10-25 years) Cooperation is required from residents on neighbouring properties as it is not practical to contain a burn within the reserve.

Block Number	Management Unit 3
Description	<p>This management area covers the mostly cleared area in the northern section of the reserve.</p> <p>The management area is bounded to the north by private property and the east, west and south by the FMU1, FMU2 and FMU4 (see Map 5).</p>
Access to FMU	Access is via Kirbys Road.
Water sources	There are no fire hydrants in the area. Water may be available from the creek within the reserve or from dams on adjacent private properties. A water truck may be required during dry conditions.
Vegetation communities	<p>This area is mostly cleared and ongoing revegetation and regeneration projects will be undertaken.</p> <p>A small portion is mapped as RE 12.12.15 - <i>Corymbia intermedia</i> +/- <i>Eucalyptus propinqua</i>, <i>E. siderophloia</i>, <i>E. microcorys</i>, <i>Lophostemon confertus</i> open forest on Mesozoic to Proterozoic igneous rocks.</p>
Management objectives	<ul style="list-style-type: none"> ➤ Manage all biodiversity values within the unit; ➤ Manage as a non-burning unit due to revegetation projects and to protect the ecological values of the reserve
Management prescriptions	<ol style="list-style-type: none"> 1. Extinguish all unplanned fires should they commence within the Management Unit.
Burning regime	Non-burning unit

Block Number	Management Unit 4
Description	<p>This management area includes 4 small forestry coupes located in the northern area of the reserve. As the management for all 4 areas is the same they have all been identified as a single FMU.</p> <p>The management area is bounded by FMU1, FMU2, and FMU3 and by private property to the north. (see Map 5).</p>
Access to FMU	Access is via the access trail off Annie Hehir Road (unmade road).
Water sources	There are no fire hydrants in the area. Water may be available from dams on adjacent properties off River Road. Stanley River on the property

	boundary may provide water if it is flowing. A water truck may also be required.
Vegetation communities	This area is a mixed hardwood timber plantation established by a previous landowner.
Management objectives	<ul style="list-style-type: none">➤ Manage all forestry values within the unit;➤ Manage as a non-burning unit to maintain the timber plantation.
Management prescriptions	1. Extinguish all unplanned fires should they commence within the Management Unit.
Burning regime	Non-burning unit

General recommendations

- Cooperation is required from owners of neighbouring properties to facilitate prescribed burns, as it is not practical to contain a burn within the reserve.
- Prescribed burns, where possible, will generally be undertaken to maintain ecological values within the reserve.
- Liaison with Queensland Parks and Wildlife Service is required to coordinate with their management of the adjacent National Parks.

Action Required	By whom	Priority	Timeframe
Undertake prescribed burn where possible as per this FMP	SCC and RFB	low	2020 - 2030
Liaise with adjacent property owners.	SCC and RFB	Medium	To be coordinated prior to conducting prescribed burns