

Barratta Creek Catchment

Fire Management Strategy

The fire strategy for Barratta Creek Catchment provides the on ground detail for fire management in concert with the Barratta Creek Catchment Fire Management Guidelines.

The strategy will provide the basis for using fire in the catchment to improve hazard reduction and conservation outcomes.



Australian Government

Department of Sustainability, Environment,
Water, Population and Communities



The Barratta Creek Catchment Fire Strategy

Background

The Barratta Creek Catchment Fire Management Plan intends to start the conversation in regard to community level fire planning within the region.

This document combines the concerns and ideas of key members of the community, government and industry partners as to what constitutes appropriate fire to manage fire hazard, production and conservation values.

It must be read in conjunction with the Barratta Creek Catchment Fire Management Guidelines that describe the most appropriate fire regime (fire interval, intensity and season of burn), burn methods and appropriate fuel loads in which to burn for the key values.

It is intended to be a living document, changes will be required as more fires are applied within the catchment and ultimately more is learnt.

Barratta Creek Catchment Fire
Management Guidelines

Map 1: The Barratta Creek Catchment Fire Plan Area

Regional Overview

The Barratta Creek Catchment

The study area utilised by the Wetland Care Australia project "Delivering biodiversity dividends for the Barratta Creek Catchment", is shown in Map 1 above. Essentially the study area for the fire project is an estimated 11,500ha of cane, cattle and remnant riparian vegetation, floodplain woodlands of eucalypt/tea-tree or beefwood/bull oak and very small areas of other vegetation types that occur primarily in its southern and northern extremities.

Surrounding Barratta Creek and its tributaries, the Burdekin River mainly forms the boundary of the planning area in the southeast, the Bruce Highway bisects the northern 5th and Woodhouse Station takes up almost a third of the southern portion. Jerona Station forms part of the northern region (Map 1). The main Rural Fire Brigade is Clare Rural, however Barrattas and Horseshoe Lagoon Rural form the northern portion.

The Barratta Creek Catchment is part of the Northern Brigalow Belt Bioregion of Queensland. A bioregion is characterised by its climate and soils that influence the vegetation, animal habitats and ultimately the industries and communities this environment can support.

Economy

Originally settled as grazing land, sugarcane was first crushed in the region in Airdmillan Mill in 1883, however it wasn't until two years later that irrigation was introduced (Burdekin Shire Council) that the area became established as a sugar-growing region. However the major driver of cane expansion was the introduction of broad scale irrigation initiated by the approval of the Burdekin River Irrigation Area, granted in 1980. It is Queensland's largest land and water conservation scheme and supplied water to a thriving sugarcane industry. The large size of an individual farm in the Burdekin, due to the regularity of the water supply, is a feature of the region:

In most sugar growing regions of Queensland the question is asked "How many farms in a harvesting group. In the Burdekin it's, how many harvesters on the farm."

Horticulture and tourism also feature to a small extent within the region but play an important role in the area's industrial diversity.

Climate

Monsoonal with distinct wet and dry seasons. Average daytime temperature range 14–26°C during the dry season and 24–33°C in the wet. Cyclones, and localised flooding occur periodically.

These can alter the fuel structure, load and ability of fires to carry over fire breaks and should be considered in fire planning.

Environment

The wetlands of the Barratta Catchment are of high ecological and functional value and flow into the Great Barrier Reef lagoon. Their environmental health is important to the local community both socially for its aesthetic and recreational value and as a valued commodity for future generations to enjoy.



Grazing Land



Sugarcane



Wetlands

Environmentally, they are relatively intact and while some impacts such as limited seasonal flows and other hydrological changes, changed fire regimes, the presence of aquatic and terrestrial weeds, increased in-stream nutrient flows and a loss of habitat connectivity due to the land use change associated with the major industries, some endangered vegetation communities, and rare and threatened flora and fauna persist. Ephemeral brackish swamps and deep-water lagoons provide diverse range of adult and nursery fish habitats that are important environmentally both locally and within the Great Barrier Reef lagoon and form important elements of lifestyle for recreational fishermen.

"...the Barratta creek sub-catchment is a high priority for projects aimed at protecting existing riparian habitat diversity because they have been subjected to the greatest degree of change and have the potential to provide a wide range of riparian habitats. Assessing the condition of Riparian Vegetation in the Burdekin Catchment using Satellite Imagery and Field Surveys" (Lynburner and Dowe, 2007).

Fire is used extensively in areas set aside for sugarcane production land. In the Barratta Creek Catchment, a significant portion of sugarcane is still burnt pre-harvest in comparison with other areas, but a small amount is cut as green cane, leaving a trash blanket to act as mulch and weed mat.

Fire is used at times in grazing lands for reasons such as; removing old, rank grass, to control weeds (such as Chinee apple) and for the control of thickening or suckers.

Fire use within grazing lands usually occurs either early in the dry season or after the first storm of the wet season.

Land Use and Management

Sunwater is a major landholder in the catchment. Sunwater is a statutory government owned corporation whose primary charter is to provide water for commercial returns. Sunwater's use of fire is generally restricted to hazard reduction to reduce fuel loads where they abut neighbouring property, to achieve conservation outcomes for fire dependant species and vegetation communities and to accommodate reasonable requests from their lessees.

The rest of the Barratta Creek Catchment is divided almost equally between cattle and cane country and comprises individual, family and corporate land holdings.

The township of Clare is located within the Barratta catchment. The township requires some use of fire for the purpose of hazard reduction and is capably protected from wildfire events by the Clare Rural volunteer fire brigade. Other volunteer brigades within the catchments are Barattas, Horseshoe Lagoon, North Brandon and Maidavale rural fire brigades. They work in partnership with other brigades within close proximity, whose input into the project should be recognised.



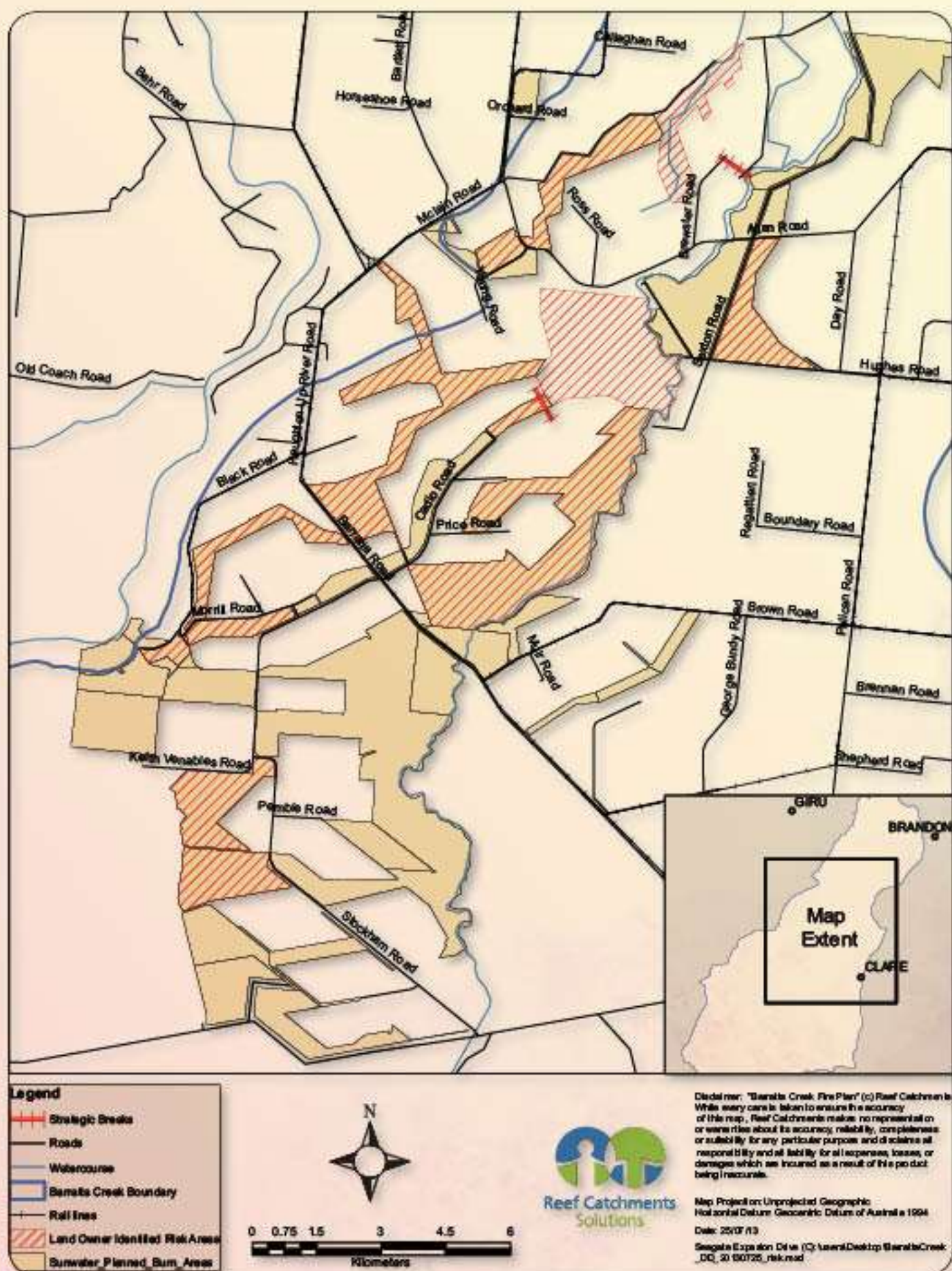
Wetlands



Estuarine Wetlands



Riverine Woodlands



Map 2: Risk Areas as Identified by the Fire Management Group

What are the Fire Management Risks and our Managment Options

Fire Management Options to reduce risks

Map 2 above represents risks identified by the Barratta Creek Fire Management Group (BCFMG) and the major land manager Sunwater. The BCFMG has only been established this year and therefore their risk areas are identified on historical experience. Sunwater has only recently released their fire strategy for tender. The formation of the BCFMG and release of Sunwater's fire plan have occurred later in the fire season than preferred, and this has reduced the options for fire management this year. The opportunity for early burning has expired and hazard reduction burning should occur when a low to moderate fire intensity can be achieved such as after sunset, with little wind.

Fire management options vary according to the purpose of using fire.

Hazard Reduction

The management strategies for hazard reduction are centred on reducing the accumulated grass and leaf material (fuel load), that has developed since the last treatment. The variations of rainfall, vegetation growth, proximity to assets are all considered before defining a treatment of the fuel load to reduce the likelihood of a wild fire. A range of treatment options include controlled burning, slashing, grazing and preparation of mineral earth fire lines. Generally hazard reduction should begin as soon as possible after the wet season.

Primary Production

The use of fire for primary production purposes in the Barratta Creek catchment is confined to the two main industries of sugar and beef cattle production. Sugarcane production requires the use of fire to burn standing cane for harvest, tops for removal and trash for replanting. The predominant time for fire use is during the harvest season from June until October/ November each year. Beef cattle production may use fire for a range of purposes including removing old dead grass, evening out grazing pressures, woody weed control and to control woody regrowth. The preferred time for using fire in grazing lands is either after the wet season for hazard reduction or after the first storms late in the year November/ December.

Conservation

Conservation burning for fire dependant species generally aims to reduce fuel loads and thereby wildfire damage, germinate seedlings, keep country open by controlling woody regrowth and maintain habitats. The key with conservation burning is the aim to achieve a fine scale mosaic of burnt and unburnt areas. A series of fire events in one area over time rather than a single fire event is a common strategy.

Fire regimes appropriate for different land types and land uses are provided in the draft Barratta Creek Catchment Fire Management Guidelines. Map 3 below shows the vegetation groupings used in the Barratta Creek Catchment Fire Management Guidelines. The landscape types are groupings based on soil and vegetation types.



Woodlands

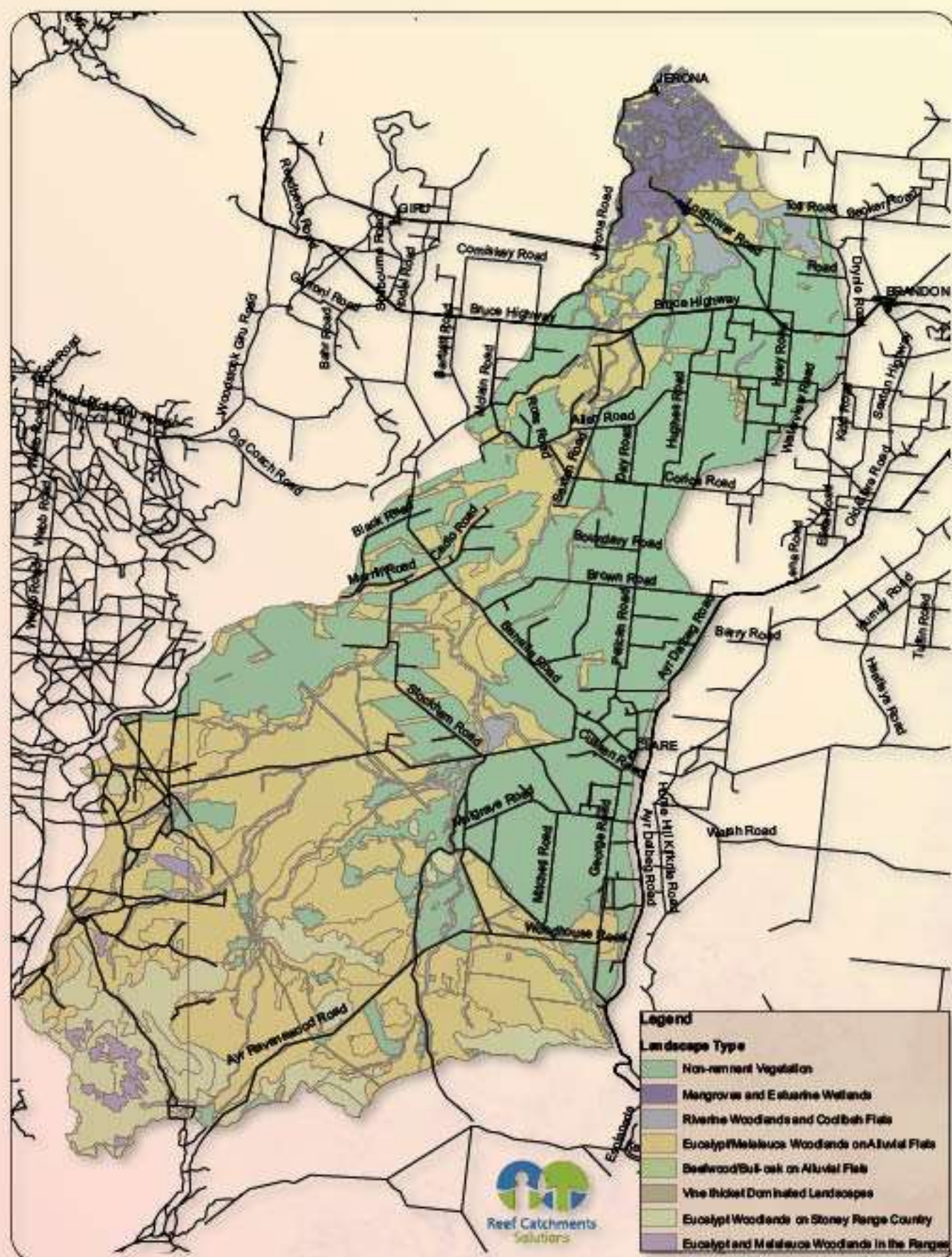


Eucalypt/Melaleuca



Burning sugarcane pre-harvest

Landscape Types of the Barratta Creek Catchment



Map 3: Landscape Types of the Barratta Creek Catchment



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