Chapter 19:

Broken Head

Document History

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CHAPTER 19 – BROKEN HEAD

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SECTION 1 - Introduction

1.1 Citation

This plan may be cited as "*Byron Shire Development Control Plan 2010 Chapter No 19 – Broken Head*".

1.2 Commencement date

This Chapter was first made effective on 20 October 2005.

1.3 Application

This Chapter applies to the whole of the land shown edged in heavy line on Plan P4.1 – DCP Area and LEP Zones.

1.4 Authority

This Chapter has been prepared pursuant to section 74C of the Environmental Planning and Assessment Act 1979.

1.5 Relationship to statutory planning instruments

The chapter must be read in relation to the Byron LEP 1988, as amended, and other Regional and State Environmental Planning Instruments applying to the land. Statutory planning instruments prevail over this chapter in respect to any inconsistency.

1.6 Relationship to other Chapters and Specific Council policy

This chapter outlines the site-specific planning controls applicable to the development and use of land at the Blackbutt Road, Broken Head. This chapter prevails over other Chapters or Council policy documents only to the extent specified in clause 2. This Chapter should be applied in conjunction with the general provisions of Chapter 1.

1.7 Objectives

The objectives of this Chapter are as follows:

- To facilitate and provide guidelines for the development of land in Blackbutt Road consistent with the provisions of the Byron LEP 1988 and Byron Rural Settlement Strategy 1998.
- To promote innovative community title development of a high design quality, maximising the retention of environmental quality of the land.
- To facilitate the active regeneration of the area through revegetation of degraded areas and the connection of isolated vegetation remnants.
- To establish a movement system, by a hierarchy of roads, bikeways and walkways, which recognises the topography and facilities access to open space for residents.
- To protect and preserve any attractive or significant feature of the local environment.
- To promote local governance with respect to the management of individual land parcels.
- To guide development so as to minimise conflict between the residential use of rural land and routine agricultural activities associated with the legitimate use of adjoining rural lands.

SECTION 2 - Context to Site

This Chapter provides site specific guidelines for the Community Title subdivision of lands identified as having potential for closer rural settlement in the Byron Rural Settlement Strategy 1998. The lands are located in the Broken Head area and form part of the Byron Bay Town Catchment. The Strategy identifies sensitive vegetation including rainforest, density and design as key issues in the Broken Head Area.

Broken Head is characterised by very high biodiversity values and it has exceptional significance for biodiversity conservation. Four threatened plant species and eleven threatened fauna species (listed under the *Threatened Species Conservation Act 1995*) are known on the subject lands and a number of other threatened species, particularly fauna, are considered likely to occur.

The subject lands also provide an important link between Broken Head Nature Reserve and two other areas of very high conservation value – the Taylors Lake-Arakwal National Park area to the north and the Lennox Head heathlands to the south.

Past fragmentation of the area has resulted in small, isolated patches of habitat leading to a loss of some fauna species that require larger areas. The process of fragmentation sets in train a series of ecological processes which change the structure and species composition of the vegetation and ultimately result in degradation and the loss of species from ecosystems. Fragmentation of vegetation results in an overall reduction in area, an increase in the edge/unit area value, and indirect effects on species composition, such as loss of species diversity resulting from disruption of biotic interactions.

New development should be designed to minimise environmental impacts as well as contributing to the environmental repair and rehabilitation of Broken Head. Development should be clustered in areas of low environmental value that have not been identified as part of a revegetation strategy to create corridors and link existing remnants. Environmental repair works will focus on revegetating riparian zones, widening wildlife corridors and connecting isolated remnants to create more viable areas of habitat. Walkways will be designed to minimise access through areas of significant vegetation to minimise the impact of introduced and feral predators.

SECTION 3 - Constraints and Opportunities

The land is located approximated 3 km south of Suffolk Park and 9 km south of Byron Bay. It is bounded by Broken Head Road to the west and Blackbutt Road along its northern frontage.

The land is drained by 3 unnamed watercourses located in the north, central and southern sectors of the property. The drainage lines are separated by secondary ridges aligned generally in an east-west fashion but changing to a north-south spur further on the western boundary of the land. The topography of the land is characterised by a series of undulating ridges separated by drainage lines.

Previous agricultural uses resulted in almost the complete loss of native vegetation cover on the eastern side of the land and a significant canopy loss on the western side. The land is classified generally as Class 5 Agricultural land according to the Agricultural Land Suitability Mapping prepared by NSW Agriculture. Some small areas of Class 4 land are located on the property but none of the land exhibits prime crop or pasture land characteristics.

Pursuant to the provisions of the Byron Rural Settlement Strategy 1998, the land has been mapped in accordance with the requirements set out at Section 6.2 of the Strategy. The map illustrates the “developable” components of the land within the meaning of the Rural Settlement Strategy.

SECTION 4 - Guidelines

4.1 Introduction to development guidelines

The guidelines in this section generally appear under 2 headings:

Performance standard	Specific control
A description of requirements to satisfy particular site planning considerations. In each instance the performance standards are stated with the obligation upon the applicant to demonstrate compliance with the planning principle. If an applicant is unable or unwilling to demonstrate that the proposal meets the performance standard, the "specific control" shall apply.	A numerical standard, explanatory drawing or standard of workmanship to the satisfaction of a nominated officer of the Council. Such controls shall be strictly adhered to in the absence of satisfactory compliance with a performance standard.

Refer to appendices for botanical names of plants.

4.2 Vegetation Management

One of the overriding aims of the Byron Rural Settlement Strategy is to ensure that future rural settlement is directly linked to the repair, enhancement and protection of the natural environment, thereby increasing the Shire's natural capital. A prime objective of vegetation management on land to which this Chapter applies will be to reconnect existing vegetation remnants with habitats to the north, south, west and east (including the Broken Head Nature Reserve) to assist with its function of long-term biodiversity conservation. It should also ensure adequate buffers are provided between the adjoining agricultural uses.

As an out lier of the former Big Scrub, a substantial proportion of the vegetation is dominated by rainforest elements. These are currently increasing as regeneration and succession restore vegetation cover and environmental stability following extensive clearing last century. Broken Head is bordered by heathland and shrubland to the north and south and by mainly cleared land to the west. It presently supports a mosaic of different vegetation types that reflect a relatively high level of past disturbance.

Moist and wet vegetation types predominate with Hoop Pine and Brush Box-dominated rainforest occupying most of the eastern section. Smaller patches of Tuckeroo and Bangalow Palm rainforest also occur in the east but in the western section wet and moist sclerophyll forests become dominant. Blackbutt, Tallowwood, Flooded Gum and Pink Bloodwood characterise the canopies of the latter on the ridges and slopes and in low-lying areas stands of swamp sclerophyll forest are dominated by Broad-leaved Paperbark and Pink-tipped Bottlebrush. Small patches of dry sclerophyll forest occur along more exposed ridges with Red Bloodwood, Scribbly Gum and Cypress Pine prominent. Coastal shrubland is dominated by Coast Banksia and in places by Black She-oak, Wallum Banksia and teatree species.

Some of the patches of rainforest and Blackbutt forest contain high levels of old-growth elements, a scarce resource along the NSW coastline. Other attributes of the vegetation important to fauna include the high levels of nectar and fruit produced throughout the year by different sclerophyll and rainforest plants.

Past clearing of native vegetation has lead to fragmentation, whereby formerly contiguous areas of habitat are separated into a number of smaller areas. Fragmentation also leads to the loss or severe modification of interactions between species, including those interactions that are important

for their survival. Small isolated populations may be subject to local extinction from chance events. The hostility of the surrounding (cleared) environment is a major factor in limiting movement of organisms between patches. The physical environment within patches may be altered as a result of the creation of edges and human influences.

Community Title development provides an opportunity to revegetate part of the lands and to link and enlarge smaller vegetation remnants to create larger areas of more viable habitat.

Performance standard	**Specific control**
Vegetation remnants are buffered, rehabilitated and coalesced into larger habitat blocks to create corridors and to ameliorate the effects of vegetation fragmentation.	▪ Existing vegetation accurately described and mapped ▪ Areas of existing native vegetation buffered ▪ Development clustered on each property to reduce fragmentation and allow for large areas of contiguous undisturbed habitat ▪ Small patches of vegetation reconnected to larger areas of vegetation forming corridors connecting existing vegetation remnants within and between properties ▪ Environmental repair plans to be carried out as shown on **Plan P4.3**. ▪ Revegetation plantings to consist of species that occur locally (see Appendix A) and preferably of local provenance ▪ Any domestic stock excluded from areas of native vegetation and regeneration areas ▪ No buildings erected within 50m of any 7(j) or 7(k) zone ▪ No buildings erected within 50m of any external property boundary ▪ Details of this should be included in the Community or Neighbourhood Management Plan where appropriate
Use of vegetation to buffer adjoining agricultural activities.	▪ Utilise site features such as the natural topography of the land to buffer new dwellings from the surrounding agricultural environment ▪ Provide and enhance existing and strategically planned vegetation to increase the level of buffering and separation between new dwellings and adjoining agricultural activities

4.3 Habitat Restoration and Management

The Broken Head Local Environmental Study identified lands of environmental significance at Broken Head and these have subsequently been zoned for environmental protection purposes under the Byron Local Environmental Plan 1988 (Amendment No 53). These areas provide habitat for threatened species and should be managed in a manner that protects their environmental and habitat values.

The regular removal of understorey species in a remnant prevents natural regeneration and will eventually result in the loss of the remnant. Understorey vegetation provides habitat and cover for

fauna including threatened species such as Mitchell's Rainforest Snail, the Bush-hen, Common Planigale and Long-nosed Potoroo.
Clearing of leaf litter and fallen logs, often associated with clearing and/or burning of the understorey removes habitat for a wide variety of vertebrates and invertebrates which live in the leaf litter and in the fallen logs – including reptiles, small mammals, spiders, molluscs, millipedes, ants etc. These impacts may affect ecological functioning. Loss of the leaf litter also exposes bare soil which will be susceptible to soil erosion and drying, and hence affects the soil biota, and may make sites more vulnerable to weed invasion.

Existing habitat areas should be actively managed to protect and enhance biodiversity values.

Performance standard	**Specific control**
Habitat is managed to maximize use by native fauna.	▪ Understorey vegetation is retained ▪ Where degraded the understorey is rehabilitated ▪ Leaf litter, logs and stags are retained in habitat areas. ▪ Hollow fence-posts and old stumps are retained as they provide habitat for native fauna, e.g. nesting habitat for parrots. ▪ Details of this should be included in the Community or Neighbourhood Management Plan where appropriate

4.4 Environmental Weeds

The creation of edge and disturbed habitats has facilitated the establishment and spread of exotic plant species which frequently displace native species. Exotic species should be removed using methods that do not adversely impact upon existing habitat or naturally regenerating areas. Introduced weed species that present a particular problem at Broken Head include Cherry Guava, Camphor Laurel, Privet, Groundsel and Slash Pine.

However, some introduced plant species may be of value as threatened fauna habitat. For example, Camphor Laurel provides food for the Rose-crowned Fruit-dove and Lantana and grasses such as Setaria provide cover and foraging habitat for the Bush-hen. For this reason, any areas dominated by introduced plant species should be carefully assessed to determine their threatened fauna habitat value before clearing. In cases where these are found to be important as faunal habitats, introduced plant species should be progressively replaced by suitable native species.

The introduction of new weeds into the area should be avoided by minimising areas of disturbance and avoiding the use of plants in gardens and landscaping that have the potential to become environmental weeds.

Performance standard	**Specific control**
The environment is managed so as to minimise degradation through environmental weed infestation.	▪ A weed management plan prepared for each property. ▪ The property owners co-operate to eradicate environmental weeds. ▪ Particular attention paid to Cherry Guava, Camphor Laurel, Privet, Groundsel, Slash Pine. ▪ There is a ban on the planting of species known to be environmental weeds (see Appendix B).

Performance standard	Specific control
	▪ Details of this should be included in the Community or Neighbourhood Management Plan where appropriate

4.5 Riparian Zone Management

The protection and enhancement of riparian vegetation is important in terms of protecting water quality, providing fauna habitats and movement corridors and protecting aquatic biota.

Regeneration of riparian zones since past clearing has not occurred at the same rate as other vegetation types on the subject land, primarily because of past practices of allowing cattle access to these areas. Past clearing has led to bank erosion, sedimentation, reduced nutrient filtering capacity and changes to stream behaviour.

Riparian zones need to be protected through the provision of adequate building setbacks to streams and drainage lines and through appropriate revegetation of stream banks where they have been cleared or degraded.

Performance standard	Specific control
Adequate buffers are provided to streams and other drainage lines.	▪ No buildings erected within 40m of 1st order streams ▪ Minimum 20m from 1st order streams is densely revegetated using species known to occur in riparian vegetation in the Broken Head area. ▪ No buildings erected within 50m of 2nd order streams ▪ Minimum 30m from 2nd order streams densely revegetated using species known to occur in riparian vegetation in the Broken Head area. ▪ Plants locally sourced and include species such as *Lomandra* spp., *Gahnia* spp and rainforest trees. ▪ Domestic stock excluded from waterways (watering troughs installed). ▪ Details of this should be included in the Community or Neighbourhood Management Plan where appropriate

4.6 Domestic and Feral Animals

Domestic cats are known to predate small mammals and birds and predation by feral cats has been listed as a Key Threatening Process under the Threatened Species Conservation Act. The Common Planigale has been recorded at Broken Head and is potentially threatened by domestic and feral cats. The effects of domestic and feral dogs on small mammal populations are well-documented. Threatened species such as the Koala and Long-nosed Potoroo are highly vulnerable to predation from domestic and feral dogs. There is potential habitat for Long-nosed Potoroo at Broken Head and the Koala is known to occur in the area.
Due to the environmental sensitivity of the Broken Head area and the known and likely occurrence of threatened fauna, the keeping of domestic cats and dogs will be prohibited.

Performance standard	Specific control
Domestic cats and dogs are excluded from the area.	▪ A ban applies on the ownership of domestic cats and dogs

	▪ Details of this should be included in the Community or Neighbourhood Management Plan where appropriate

4.7 Introduced Animal Management

Red Fox
Predation by the European Red Fox has been listed as a Key Threatening Process under the Threatened Species Conservation Act. Impacts of the Red Fox on native fauna are well established. There are large numbers of Foxes present in the Broken Head area. Foxes favour disturbed areas and are known to use roads and tracks through otherwise undisturbed areas to predate native fauna.

Cane Toad
Shallow ponds and dams, grassy swales with closely mown or grazed edges, lawns, roadways and cleared land create ideal breeding and foraging areas for the Cane Toad. This species is known as a voracious predator of small terrestrial vertebrates including the Threatened Common Planigale and is also toxic to frog-eating snakes such as the Red-bellied Black Snake. Methods for controlling Cane Toad populations include the planting of dense vegetation such as sedges and rushes around dams to reduce their suitability as breeding habitat and restricting areas of mown lawns, particularly where electric lighting is installed, limits areas suitable for foraging.

Plague Minnow
Predation by the Plague Minnow has been listed as a Key Threatening Process under the Threatened Species Conservation Act. The Plague Minnow is also known as the Mosquito Fish as it was introduced into many areas for mosquito control. However, research has suggested that native fish species are as effective, if not more so, at lowering mosquito numbers. Impacts of the Plague Minnow, including predation, competition for food and habitat and aggression, have been confirmed on two native fish species.

Plague Minnow are viviparous (bear live young). Native fish species produce eggs (oviparous) rather than live young making them potentially more susceptible to predation. Other factors such as some native species not having learnt to conceal themselves from Plague Minnow, the aggressive behaviour of Plague Minnow and direct competition between Plague Minnow and native species contribute to the strong likelihood that Plague Minnow are having a negative impact on native fish species. Plague Minnow may also impact upon amphibian populations directly and indirectly, including predation of eggs and larvae.

Plague Minnow prefer warm and gently flowing or still waters, mostly around the margins and along the edges of aquatic vegetation although the species tolerates a wide range of temperatures and other habitat conditions.

Performance standard	Specific control
The environment is managed to reduce the habitat and impacts of feral animals.	▪ A Red Fox eradication plan prepared for each property. ▪ Isolated vegetation remnants reconnected. ▪ Dense understorey re-established. ▪ Paths and roads through habitat areas limited to reduce Fox access. ▪ A Cane Toad eradication plan prepared for each property. ▪ Dense plantings of sedges, rushes around dams and waterways to provide favourable habitat for native frogs and reduce habitat for Cane Toads. ▪ Waterways shaded with riparian vegetation

Performance standard	Specific control
	to lower water temperature and thus make conditions less favourable for Plague Minnow. ▪ Logs and rocks placed around dam edges and in the water to provide cover for native fish. ▪ Native fish passage is not prevented by inappropriate constructions across waterways. ▪ Details of this should be included in the Community or Neighbourhood Management Plan where appropriate

4.8 Building Design Controls

All buildings are to be compatible in design with the rural character of the Broken Head area and shall embody the principles of Ecologically Sustainable Development in terms of energy efficiency and use of materials. These guidelines are based on five main design elements – site responsive design, energy efficiency, bulk and form, material and colours.

4.8.1 Site Responsive Design

Performance standard	Specific control
That all buildings are designed to suit the existing topography so as to minimise requirements for site excavation and filling. Also location of dwellings to minimise conflict with adjoining agricultural activities.	▪ Avoid locating dwellings on slopes with a gradient of 20% or more ▪ Use pole construction or split level type designs on slopes of moderate gradient (>10%) ▪ Restrict earthworks such that cut and fill batters are minimised or incorporated into the design of split level house. ▪ Where cut or fill batters are to be retained, retaining walls are to be constructed of natural materials which will blend with the landscape (eg. stone or timber). ▪ Where batters are not retained, slopes are not to exceed 25% gradient (1 in 4) and are to be revegetated as soon as possible upon completion of the earthworks. ▪ Locate dwellings below major ridgelines to reduce visual impacts ▪ Ensure new dwellings at least 200 metres from land used for sugar cane haulage and sugar cane pads ▪ Ensure new dwellings, if possible, at least 200 metres from land used for sugar cane production. If not possible, then justification is required (as detailed in relation to buffers in Chapter 1 or its equivalent) for new dwellings to be located closer than 200 metres to land used for sugar cane production. ▪ Ensure new dwellings have a minimum buffer from agricultural activities (other than

Performance standard	Specific control
	sugar cane production) that is consistent with the buffer requirements in Chapter 1 or its equivalent.

4.8.2 Energy Efficiency

Performance standard	Specific control
To minimise requirements for household heating and cooling based on on-renewable energy sources.	▪ Avoid south or west facing slopes when locating dwelling sites. ▪ Locate habitable rooms (living rooms, dining rooms, bedrooms) on the northern and eastern sides of the house. ▪ Locate non-habitable rooms (laundry, bathroom, toilet, carports) on the southern and western sides of the house. ▪ Shade north and west facing windows and external walls from the summer sun with verandas, overhanging eaves or awnings. ▪ Maximise natural ventilation (by cross and/or vertical ventilation) through the appropriate location and sizing of doors and windows. ▪ Reduce the potential for heat transmission through the roof with insulation and by maximising the area of roof space through the avoidance of flat or low pitched roofs. ▪ Improve roof space ventilation through the use of features such as louvre vents in gable ends and Dutch gables, and/or the installation or roof top ventilators. ▪ Dwellings to be designed to comply with BASIX legislation. ▪ Where dwelling houses are connected to the reticulated electricity supply, dwellings shall be provided with a modular solar powered generating system capable of feeding into the grid system or shall purchase electricity through an accredited “Green Power” provider.

4.8.3. Bulk and Form

Performance standard	Specific control
That no building be visually intrusive when viewed from any place from within or outside the site, or be of a form or character which is not compatible with the rural nature of the property or surrounding landscape.	▪ Reduce the bulk and scale of large dwellings by designing as smaller interconnected components. ▪ Avoid large expanses of roof and wall surface by creating variations in roof and wall line. ▪ Keep roof lines below the level of the main ridge-lines of the property. ▪ Incorporate elements into the design which

Performance standard	Specific control
	are traditional and appropriate design responses to local climatic conditions (e.g. verandas and pitched roofs)

4.8.4. Building Materials

Performance standard	Specific control
That all buildings be constructed of materials which are in keeping with the natural character of the Broken Head area and which satisfy criteria for ecologically sustainable development with regard to their source and nature of manufacture.	▪ Avoid the use of brush-box and imported rainforest timbers. ▪ Give preference to materials derived from a renewable or sustainable source. ▪ Avoid materials which use high levels of non-renewable energy in their manufacture. ▪ Use recycled building materials wherever practicable. ▪ Avoid materials such as concrete, clay or metal roof tiles which are incompatible with the rural character of the area (external walls made from brick, concrete block, formed concrete or concrete based masonry products should be finished in a rendered or painted surface).

4.8.5. Colours

Performance standard	Specific control
That the external colours of all buildings blend with the surrounding landscape.	▪ Avoid highly reflective colours and finishes. ▪ Use colours on roofs and external walls which are compatible with the colours of the surrounding environment (no restriction applies to colours used for trim such as guttering, window frames, doors, veranda posts and railings etc).

4.9 Road and Movement Systems

The objective is to create a functional internal movement network that services the community in a pleasant, safe, accessible, socially and environmentally acceptable manner.
Internal roads are designed to reduce traffic speed and minimise vehicle/pedestrian conflict. Constructed with grass verges, swales and landscaped edges to provide picturesque corridors and increase infiltration rates for stormwater run-off.

Cycle and walkways provide a range of options for recreational and task-oriented journeys.

4.9.1 Integrated Movement Networks

Performance standard	Specific control
To provide movement networks for vehicles, pedestrians and cyclists that are integrated,	▪ Streets within any neighbourhood do not operate as through traffic routes for

cost-effective and environmentally acceptable, and minimise the impact of traffic on the residential environment.	externally generated traffic (other than for pedestrians and cyclists.

4.9.2 Road Networks

Performance standard	Specific control
To create street networks in which the function of each internal road is clearly identified providing acceptable levels of access, safety and convenience for all users.	▪ Access to the site (Lot 7) from Broken Head Road must be in accordance with the requirements of the RTA. ▪ The road network takes account of the topography and vegetation, respects any existing site assets, and takes advantage of opportunities for views and vistas. ▪ The road network takes account of natural drainage and open space systems ▪ Provision of a public transport stop, as per RTA requirements, that can be accessed by the residents and the general public. ▪ Roads do not operate as through-traffic routes for externally generated traffic, while limiting the length of time local drivers need to spend in a low-speed environment. ▪ Roads and lots are located so that dwellings are not subject to unacceptable levels of traffic noise. ▪ Carriageway widths and road lengths optimise the cost effectiveness of the road network.

4.9.3 Pedestrian and Cyclist Facilities

Performance standard	Specific control
To encourage walking and cycling by providing safe, convenient and legible movement networks to points of attraction within and beyond the site.	▪ Footpaths and/or cycle paths. ▪ A pedestrian (only) footpath, where required, is 1.2 metres wide and has a maximum grade of 15 per cent. ▪ Cycle paths and footpaths are constructed of stabilised crushed rock or boardwalk.

4.10 Stormwater Management

The major drainage system consists of the arrangement of streams, floodways, retarding basins, and open areas. It should be designed to protect people and indoor property from the effects of an extreme flood with an average recurrence interval (ARI) of 100 years (i.e. the 1% probability flood).

The minor drainage system consists of the arrangement of roadside channels, swales, sumps and underground pipes. It should fully contain and convey a design flow of specified frequency (e.g.

ARI = 2 years) within the major system. The minor drainage system operates to control "nuisance" flows which occur on a day-to-day basis.

The broad objectives of drainage design are therefore to:

- provide safety for the public in major storm events;
- protect property from damage by flooding;
- provide for the safe passage of minor floods and minimise the inconvenience they cause the public
- improve amenity through maintenance of natural drainage lines;
- ensure cost effectiveness in construction and maintenance of storm drainage works.

4.10.1 Storm Drainage

Performance standard	**Specific control**
To provide major and minor drainage systems which adequately protect people and the natural and built environments in a cost effective manner, and which contribute positively to environmental enhancement.	**Major system** ▪ The design and construction of the major storm drainage system are in accordance with the general requirements of the Byron Shire Council. ▪ The major system has the capacity to safely convey stormwater flows under normal operating conditions and partial minor system blockage for ARI = 100 years. ▪ The major system design is based on the provisions of Australian Rainfall and Run-off. ▪ Habitable rooms have freeboard above the ARI = 100 years flood level of 500 mm ▪ Floodways are developed such that there is a low risk of property damage. ▪ The major system is designed to ensure that there are no flow paths which would increase risk to public safety and property. **Minor System** ▪ The rainfall intensity derived for the area in which the design is proposed, is based on ARI = 2 years. ▪ Drainage networks are well defined to ensure there are no hidden flow paths which could reduce their capacity to convey design flows. ▪ The minor system design minimises undesirable ponding for a prolonged period resulting from the relevant design storm. ▪ The minor system allows for the safe passage of vehicles at reduced operating speeds on streets which have been affected by run-off from an ARI = 2 years storm event. ▪ Where swale drains on access streets are

Performance standard	Specific control
	used, ponding for greater than 1 hour after cessation of rainfall is unlikely and the turf used is resistant to scour and erosion, and tolerant to submersion when operating flow velocities are less than 1.5 m/s. **Site drainage** ▪ Provision is made for on-site drainage which does not cause damage or nuisance flows to adjoining properties.

4.10.2 Water Quality Management

Performance standard	Specific control
To provide water quality management systems which ensure that disturbance to natural stream systems is minimised and stormwater discharge to surface and underground receiving waters, both during construction and in developed catchments, does not degrade the quality of water in the receiving domains.	▪ Sewage overflows into the stormwater system are prevented. ▪ Point sources of pollution in the catchment should be identified and their impact minimised until they can be eliminated. ▪ The design and proposed implementation of the water quality control system are in accordance with the Byron Shire Water Quality Management Plan. ▪ The design of the water pollution minimisation system is undertaken and certified by properly qualified personnel using recognised and locally accepted hydrological, hydraulic, hydrogeological, soils, water quality and biological data and design methodologies. ▪ Water pollution control ponds or wetlands should be developed (where appropriate) for final treatment before discharge to the wider environment and should be sited to minimise impacts on the natural environment.

4.10.3 Stormwater Harvesting

Performance standard	Specific control
To develop the resource potential of stormwater to supply all water uses.	▪ Minimum 45,000 litre roof rainwater tanks per lot. ▪ Use of first flush water diversion systems on all rainwater roof capture systems to maximise the quality of water captured for potable supplies ▪ Run-off from roofs and/or paved surfaces which has been filtered may be passed to surface storage devices for slow release into the surrounding soil mass for take-up in the root zone of trees and shrubs.

4.11 Community or Neighbourhood Management

The management statement must include by-laws, plans and other particulars about:

1. The location, control, management, use and maintenance of any part of the neighbourhood property that is a roadway, including public access and maintenance of public transport stop,
2. Maintenance of bushfire management trails, APZ's and equipment,
3. The control, management, use and maintenance of any other part of the neighbourhood property, including any special facilities provided on the community property. This shall include, for example, environmental management of the scheme,
4. Matters affecting the provision of, and payment for, internal fencing on the community or neighbourhood scheme,
5. The storage and collection of garbage,
6. The maintenance of water, sewerage, drainage, gas, electricity, telephone and other services,
7. Insurance of the community or neighbourhood property, including public liability and damage and destruction insurance,
8. The executive committee and its office bearers and functions,
9. Meetings of the executive committee,
10. Voting on motions by the executive committee,
11. Keeping records of the executive committee,
12. Safety and security measures,
13. The prohibition on the keeping of dogs and cats and management of other of pets,
14. Obligations not to interfere with the quiet enjoyment of another lot or community or neighbourhood property,
15. Control of unacceptable noise levels,
16. Details of any business or trading activity to be carried on by the Association and the method of distributing and sharing any profit or loss,
17. The control or preservation of the essence or theme of the development under the scheme,
18. Architectural and landscaping guidelines to be observed by all lot owners,
19. Any agreements entered into for the provision of services or recreational facilities.

The Association must prescribe an environmental policy that binds every one including: the Association; each proprietor or occupier of a Lot; each mortgagee in possession of a Lot; and each lessee of a Lot. The Association may from time to time add to or alter its environmental policy. The minimum environmental policy must address:

1. Architectural standards
2. Landscape standards
3. Maintenance of bushfire APZ's
4. All residential buildings on the site must have at least a 4.5 star NatHERS design standard and must comply with BASIX legislation
5. All premises shall install AAA water rated appliances and have a bushfire service fitting applied to any domestic water supply tank.
6. Maximising the use of energy efficient appliances (5 star energy ratings)
7. The procedure for architectural standard "sign-off by a peer review architect"
8. Management of the audit for hazardous or potentially hazardous activities
9. Policy in relation to the keeping of stock
10. Ensuring that those who reside at the property are "inducted" in relation to the various bylaws, policies and responsibilities relevant to an occupier
11. Managing the "spill effect" of lights and motor vehicle headlights
12. Maintaining contemporary documentation with respect to specific environmentally sustainable materials able to be used at the site
13. Policies in relation to wood fire heating and air pollution abatement technology
14. Long term management of the weed removal program and environmental repair program
15. Servicing confirmation agreements with Statutory Authorities

Despite any contrary provisions contained in this Management Statement nothing shall result:

(a) The rights and privileges which the Byron Shire Council, its agents, servants and workers
(b) The rights and privileges which Country Energy or other electricity supplier, its agents, servants and workers are entitled to exercise; and
(c) The rights and privileges which Telstra and/or Optus or other telecommunications supplier, their agents, servants and workers are entitled to exercise; and
(d) The obligations imposed on the proprietors of land within the Neighbourhood Scheme.

APPENDIX A

Species list for Revegetation

Subtropical rainforest on hill slopes	
Acmena hemilampra	Broad-leaved Lilly Pilly
Acmena smithii	Lilly Pilly
Archontophoenix cunninghamiana	Bangalow Palm
Cordyline congesta	Palm Lily
Cordyline petiolaris	Broad-leaved Palm Lily
Cordyline rubra	Palm Lily
Cupaniopsis anacardioides	Tuckeroo
Cyathea australis	Rough Tree Fern
Cyathea cooperi	Straw Tree Fern
Elaeocarpus obovatus	Hard Quandong
Elaeocarpus reticulates	Blueberry Ash
Endiandra discolour	Rose Walnut
Ficus coronata	Creek Sandpaper Fig
Ficus fraseri	Sandpaper Fig
Ficus oblique	Small-leaved Fig
Ficus virens	White Fig
Ficus watkinsiana	Strangling Fig
Flindersia australis	Australian Teak
Flindersia schottiana	Cudgerie
Flindersia xanthoxyla	Yellowwood
Livistona australis	Cabbage Palm
Melaleuca quinquenervia	Paperbark
Melicope elleryana	Pink-flowered Doughwood
Mischocarpus pyriformis	Woody Pear-fruit
Pittosporum revolutum	Hairy Pittosporum
Pittosporum undulatum	Pittosporum
Polyscias elegans	Silver Basswood
Rhodomyrtus psidioides	Native Guava
Synoum glandulosum	Scentless Rosewood
Syzygium luehmanii	Riberry
Syzygium oleosum	Blue Lilly Pilly
Waterhousea floribunda	Weeping Lilly Pilly
Swamp Sclerophyll Forest-Rainforest (on low-lying flats)	
Archontophoenix cunninghamiana	Bangalow Palm
Callistemon salignus	Pink-tipped Bottlebrush
Corymbia intermedia	Pink Bloodwood
Elaeocarpus reticulates	Blueberry Ash
Eucalyptus resinifera	Red Mahogany
Lophostemon suaveolens	Swamp Box
Melaleuca quinquenervia	Paperbark
Melicope elleryana	Pink-flowered Doughwood
Riparian Rainforest (along the main creekline)	
Araucaria cunninghamii	Hoop Pine
Elaeocarpus reticulatus	Blueberry Ash
Ficus coronata	Creek Sandpaper Fig
Ficus macrophylla	Moreton Bay Fig
Ficus obliqua	Small-leaved Fig

Ficus superba	Deciduous Fig
Ficus watkinsiana	Strangling Fig
Gahnia clarkei	Tall saw sedge
Lomandra longifolia	Mat Rush
Melaleuca quinquenervia	Paperbark
Syzygium luehmannii	Riberry
Waterhousea floribunda	Weeping Lilly Pilly

APPENDIX B

ENVIRONMENTAL WEEDS
Common garden plants which are Environmental Weeds not to be used in landscaping or garden planting.

Environmental Weeds to be listed in the Community or Neighbourhood Management Statement

Common garden plants that are Environmental Weeds

Crabs Eye Creeper	*Abrus precatorius*
Golden Willow Wattle	*Acacia saligna*
Century Plant	*Agave* sp.
Tree of Heaven	*Ailanthus altissima*
Elephant Ears	*Alocasius aroides*
Aloe	*Aloe* sp.
Cardamom Ginger	*Alpinia calcarate*
Madeira Vine	*Anredera cordifolia*
Moth Vine	*Araujia hortorum*
Ardisia	*Ardisia crenata*
Cocos Palm	*Arecastrum romanzoffianum*
Dutchman's Pipe	*Aristolochia elegans*
Dutchman's Pipe	*Aristolochia littoralis*
Bridal Creeper	*Asparagus asparagoides*
Climbing Asparagus	*Asparagus plumosus*
Running Bamboo	*Bambusa* spp.
Mother of Millions	*Bryophyllum daigremontiana*
Resurrection Plant	*Bryophyllum pinnatum*
Mother of Millions	*Bryophyllum* spp.
Butterfly Bush	*Buddleja davidii*
Butterfly Bush	*Buddleja madagascarensis*
Thorny Poinciana	*Caesalpinia decapetala*
Canna Lily	*Canna indica*
Balloon Vine	*Cardiospermum grandiflorum*
Celtis	*Celtis sinensis*
Orange Cestrum	*Cestrum aurantiacum*
Lady of the Night	*Cestrum nocturnum*
Green Cestrum	*Cestrum parqui*
Cocrosmia	*Cocrosmia x cocrosmia*
Coffee	*Coffea Arabica*
Hairy Commelina	*Commelina benghalensis*
Cotoneaster	*Cotoneaster spp.*
Cuphea	*Cuphea carthagenensis*
Cape Ivy	*Delairea odorata*
Shasta Daisy	*Dendranthema maxima*
Aerial Yam	*Dioscorea bulbiferum*
Duranta	*Duranta repens*
Crucifix Orchid	*Epidendrum* sp
Loquat	*Eriobotrya japonica*
Cockspur Coral Tree	*Erythrina crista-galli*
Orange Coral Tree	*Erythrina nigra*
Coral Tree	*Erythrina x sykesii*
Cadaghi	*Eucalyptus torreliana*
Dombeya	*Eugenia dombeya*
Brazilian Cherry	*Eugenia uniflora*

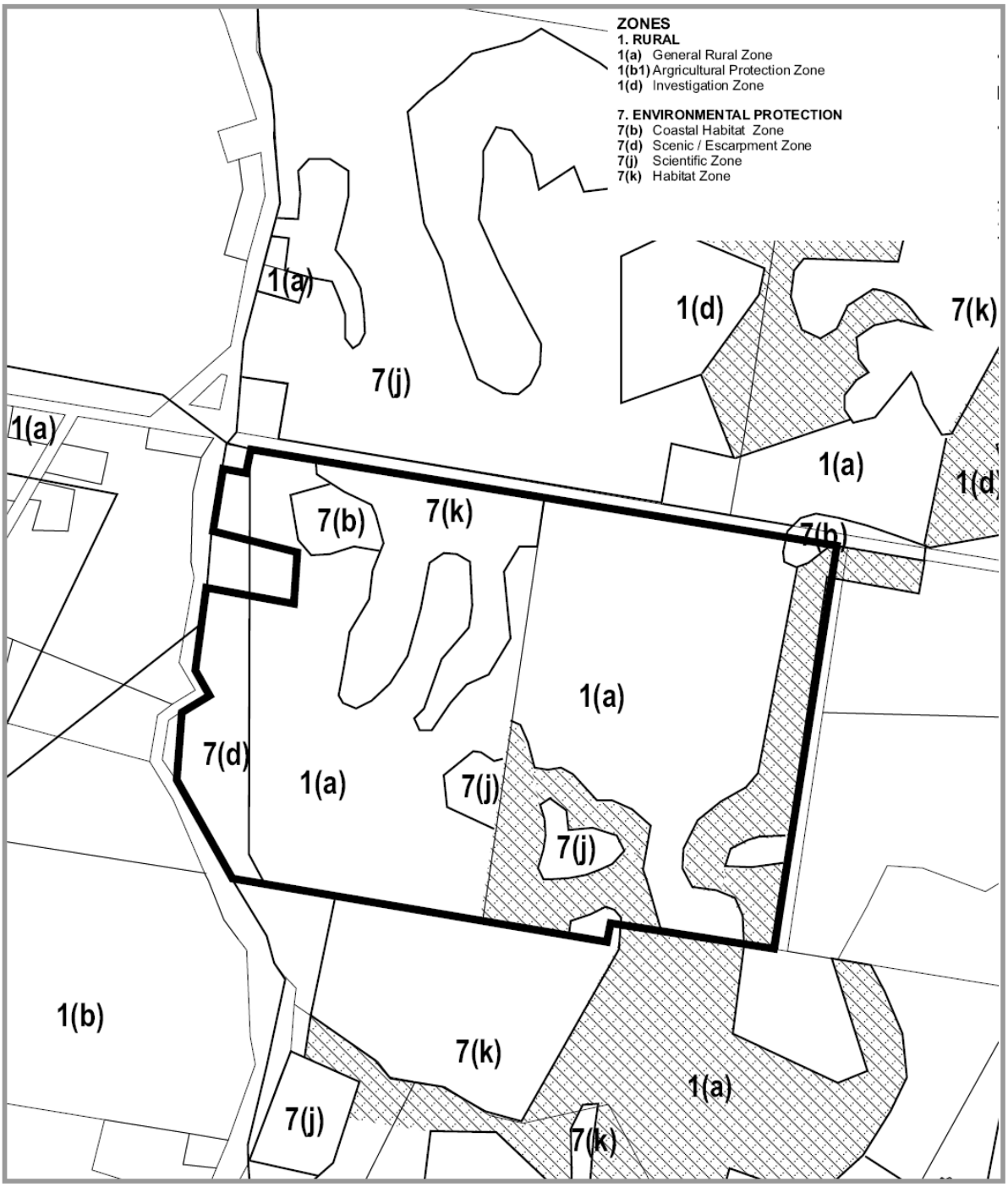
Climbing Fig	*Ficus pumila*
Honey Locust	*Gleditsia triacanthos*
Gloriosa Lily	*Gloriosa superba*
White Ginger	*Hedychium coronarium*
Pink-flowered Ginger	*Hedychium coxinium*
Kahili Ginger	*Hedychium gardnerianum*.
White-flowered Ginger	*Hedychium spicatum*
Glush Weed	*Hygrophila costata*
Freckle Face	*Hypoestes sanguinolenta*
Balsam, Busy Lizzie	*Impatiens walleriana*
Ice cream Bean	*Inga* spp
Moon Flower	*Ipomoea alba*
Moon Flower	*Ipomoea bona-nox*
Coastal Morning Glory	*Ipomoea cairica*
Blue Morning Glory	*Ipomoea indica*
Purple Morning Glory	*Ipomoea purpurea*
Jasmine	*Jasminum polyanthum*
Chinese Golden Rain Tree	*Koelreuteria paniculata*
Lantana	*Lantana camara*
Formosum Lily	*Lilium formosum*
Leucena	*Leucena leucephala*
Honeysuckle	*Lonicera japonica*
Cats Claw Creeper	*Macfadyena unguis-cati*
Monstera	*Monstera deliciosa*
Murraya	*Murraya exotica*
Orange Jessamine	*Murraya paniculata* (seeding form)
Parrots Feather	*Myriophyllum aquaticum*
Florists Smilax	*Myrsiphyllum asparagoides*
Fish-bone Fern	*Nephrolepis cordifolia*
Fishbone Fern	*Nephrolepis exalta*
Ochna	*Ochna serrulate*
Olive	*Olea Africana*
Paulownia	*Paulownia fortunei*
Paulownia	*Paulownia tomentosa*
Barner Grass	*Pennisetum purpureum*
Fountain Grass	*Pennisetum setaceum*
Philodendron	*Philodendron sp.*
Slash Pine	*Pinus elliottii*
Radiata Pine	*Pinus radiata*
Asparagus Fern	*Protasparagus aethiopicus*
Asparagus Fern	*Protasparagus africanus*
Climbing Asparagus Fern	*Protasparagus plumosus*
Cherry Guava	*Psidium cattleianum*
Kudzu	*Pueraria lobata*
Orange Firethorn	*Pyracantha fortuneana*
Coral Berry	*Rivina humilis*
Black Locust	*Robinia pseudoacacia*
Mother-in-Law's Tongue	*Sansevieria trifasciata*
Umbrella Palm	*Schefflera actinophylla*
Pepper Tree	*Schinus areira*
Broad-leaf Pepper Tree	*Schinus terebinthifolius*
Schizolobium	*Schizolobium parahibum*
Cape Ivy	*Senecio mikanioides*
Winter Senna	*Senna pendula var. glabrata*

Smooth Cassia	*Senna floribunda*
Cocos Palm	*Syagrus romanzoffianum*
Golden Trumpet Tree	*Tabebuia chrysantha*
Yellow Bells	*Tecoma stans*
Black-eyed Susan	*Thunbergia alata*
Blue Sky Flower	*Thunbergia grandiflora*
Japanese Sun Flower	*Tithonia diversifolia*
Rhus tree	*Toxicodendron succedaneum*
Wandering Dew	*Tradescantia albiflora*
Wandering Dew	*Tradescantia fluminensis*
Striped Wandering Dew	*Tradescantia zebrine*
Chinese Tallow	*Triadica sebifera*
Blue Periwinkle	*Vinca major*
Watsonia	*Watsonia bulbillifera*
Bulbil Watsonia	*Watsonia meriana*
Singapore Daisy.	*Wedelia* sp
Arum Lily	*Zantedeschia aethiopica*
Striped Wandering Dew	*Zebrina pendula*
Plants which are not identified as environmental weeds but will not be grown in proximity to regeneration areas and will be carefully monitored. No disposal of cuttings or clippings of <u>any</u> exotic species will be permitted on the property except by a contained composting system.	
Bougainvillea	*Bougainvillea* sp.
Frangipani	*Plumeria* sp.
Jacaranda	*Jacaranda mimosifolia*
Hibiscus	*Hibiscus* sp.
Jaboticaba	*Eugenia jaboticaba*
White Sapote	*Casimiroa edulis*
Passionfruit	*Passiflora edulis*
Environmental weeds that are not usually grown as garden plants	
Camphor Laurel	*Cinnamomum camphora*
Crofton Weed	*Ageratina adenophora*
Bitou Bush	*Chrysanthemoides monilifera* ssp. *rotundata*
Groundsel	*Baccharis halimifolia*
Large-leaved Privet	*Ligustrum lucidum*
Lantana	*Lantana camara*
Mist Weed	*Ageratina riparia*
Ragweed	*Ambrosia artemisiifolia*
Red-Head Cotton Bush	*Asclepias curassavica*
Small-leaved Privet	*Ligustrum sinense*
Winter Senna	*Senna pendula* var. *glabrata*
Woolly Rattlepod	*Crotalaria incana* ssp. *incana*

APPENDIX C – Plans

Bruce Blackford with j connelly pty limited

Byron Shire Development Control Plan No 17
- Broken Head



North
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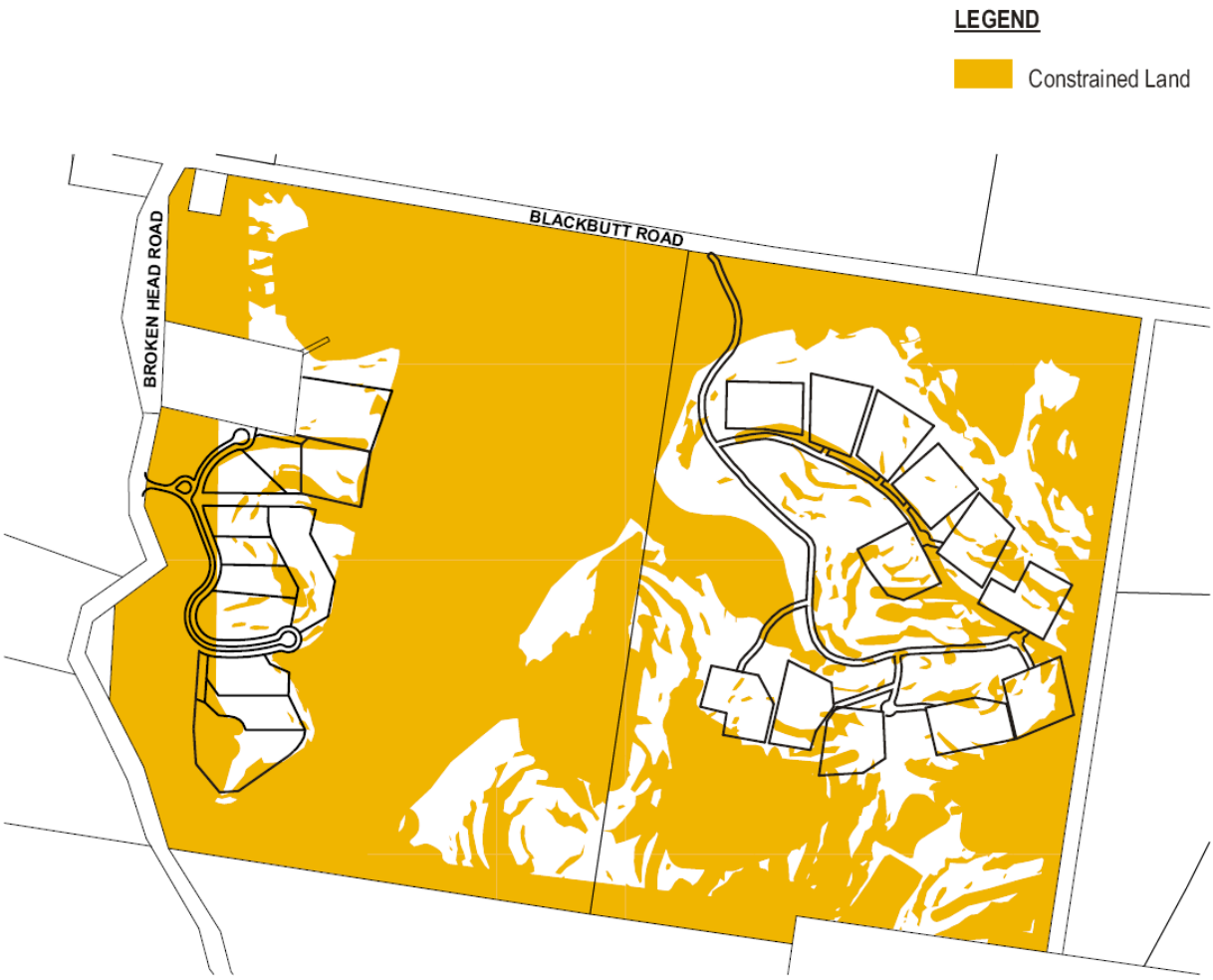
Source: Byron LEP 1988
Date: June 2003
SJC01006077

P4.1

DCP AREA & LEP ZONES



North

0 250m

Source: S J Connelly Pty Ltd
and Bruce Blackford
Date: October 2004
SJC01006282A 26/5/5

P4.2A

CONSTRAINTS

Source: S J Connelly Pty Ltd
and Bruce Blackford
Date: May 2005
SJC01006983.a

P4.3A

REVEGETATION

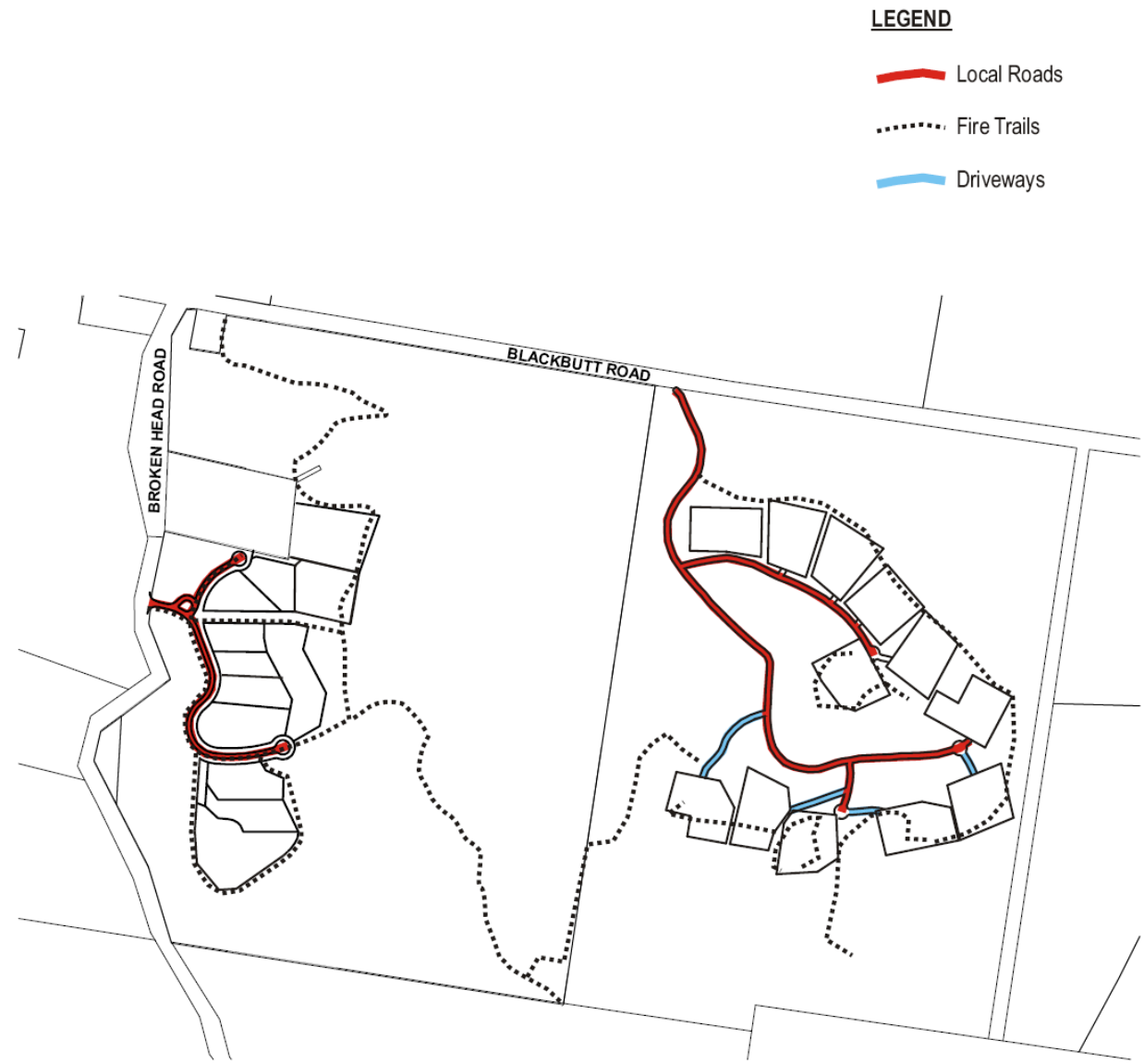
North

0 250m

Source: S J Connelly Pty Ltd
and Bruce Blackford
Date: May 2005
SJC0100624A

P4.4A

REIPARIAN ZONES



North
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250m

Source: S J Connelly Pty Ltd
and Bruce Blackford
Date: May 2005
SJC01006285A

P4.5A

ROAD HIERARCHY