

2.3 Code for Landscaping Design

PURPOSE

The purpose of this code is to ensure:

- landscaping of high quality is undertaken on development sites to retain the natural and subtropical character of the Shire and surrounds; and
- the ongoing maintenance of landscaping following establishment.

NOTES

Landscape Plan, for the purpose of this Code, means a plan prepared by an appropriately qualified person, which outlines the proposed landscaping associated with a development, and demonstrates its satisfaction of the performance criteria of this Code.

The Landscape Plan must at least contain;

- background information being scale, north point, legend, context of development (adjoining roads and land uses), photographs of site;
- existing conditions being soil types and moisture conditions, existing trees, watercourses, services and other encumbrances;
- compliance with the landscaping requirements of this Planning Scheme, including the boundaries and area of the landscape and recreation area;
- extent of works being any vegetation removal, soft and hard surface materials, structures and other details;
- levels being spot levels and/or contours;
- planting plan being locations of proposed plantings, numbers and density of plants and dimensions of planting beds;
- planting schedule being botanic and common names, numbers, planting sizes and tree canopy spread; and
- details of the person who produced the plan.

(1) Element: General Landscaping

PURPOSE

To ensure that landscaping of a high quality is undertaken for all relevant development.

PERFORMANCE CRITERIA	ACCEPTABLE MEASURES
<p>P1 Landscaping must:</p> <ul style="list-style-type: none"> • promote and guide the character of the Shire as a subtropical environment in which built form is successfully integrated with the natural environment; • recognise the importance of landscape to the continued economic prosperity of the shire, and the maintenance of pleasant visual amenity and micro-climatic conditions; 	<p>A1 For assessable development, landscaping shall be in accordance with an approved Landscape Plan which demonstrates the proposals satisfaction of the performance criteria.</p>

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PERFORMANCE CRITERIA	ACCEPTABLE MEASURES
<p>P1 continued</p> <ul style="list-style-type: none"> • be sensitive to site attributes, such as streetscape character, natural landform, existing vegetation, solar access (summer shade and winter sun), prevailing breezes (both cooling summer breezes and cold winter winds), views, privacy, security, land capability, availability of water, and drainage; • be designed to incorporate and highlight attractive natural features such as creeks, and other watercourses, areas of remnant native vegetation, healthy mature existing trees, rocky outcrops and the like; • respect natural landform by minimising major earth cuts, fill and mounding; • be an appropriate scale and type relative to the size and nature of the development and its surroundings; • not affect the structure of any proposed building; • minimises risk of damage to overhead and underground power lines and other services; and • not adversely affect the stormwater overland flow path. 	
<p>P2 Landscape siting and design must assist microclimate management to conserve energy.</p>	<p>A2.1 For assessable development, trees and vegetation are selected and located to provide as much shade as possible in summer, both on-site and on-street, without shading solar collectors on the roof during the middle 6 hours of the day, and without shading north facing windows in the winter.</p> <p>AND</p> <p>A2.2 For all development, fences are of open construction with a minimum of 15% breeze penetration when more solid construction is not needed to assist in noise mitigation.</p>
<p>P3 Public and semi-public spaces must provide a reasonable level of shade to increase pedestrian comfort.</p>	<p>A3.1 Solar protection at public or semi-public facilities is provided to meet the essential quantity of shade described in Section 2 of the “Creating Shade at Public Facilities” guidelines produced by the Australian Institute of Environmental Health, Queensland Division.</p>
<p>P4 Planting must:</p> <ul style="list-style-type: none"> • predominantly use plant species which are locally native to the Shire; and 	<p>A4.1 At least 70% of new plantings are locally native species. (Suitable species are listed in the Schedule to this code)</p> <p>AND</p>

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PERFORMANCE CRITERIA	ACCEPTABLE MEASURES																								
<p>P4 continued</p> <ul style="list-style-type: none"> • use palms in a manner which is consistent with their natural character and occurrence in the Shire; and • not use species which have potential to become environmental weeds; and • not use species which have the potential to be harmful when used in an inappropriate setting; and • be of a suitable size and density. 	<p>A4.2 Palms are used in a manner consistent with the Schedule to this code.</p> <p>AND</p> <p>A4.3 Planting does not include environmental weeds as listed in the Schedule to this code.</p> <p>AND</p> <p>A4.4 Planting does not include poisonous or allergenic species as listed in the Schedule to this code where there is high pedestrian usage, in schools, kindergartens or shopping precincts.</p> <p>AND</p> <p>A4.5 Planting sizes are at least as follows</p> <table> <tr> <td>Street and features trees</td> <td>.....45L</td> </tr> <tr> <td>Other trees</td> <td>.....300mm</td> </tr> <tr> <td>Larger shrubs</td> <td>.....200mm</td> </tr> <tr> <td>Groundcovers</td> <td>.....150mm</td> </tr> </table> <p>AND</p> <p>A4.6 Planting at approximately the following density rates:</p> <table border="1"> <thead> <tr> <th></th> <th><i>As street trees</i></th> <th><i>For buffer planting</i></th> <th><i>Other wise</i></th> </tr> </thead> <tbody> <tr> <td><i>Trees</i></td> <td>every 7 to 8 metres</td> <td>at 2 metre centres</td> <td>at 5 metre centres</td> </tr> <tr> <td><i>Large shrubs</i></td> <td>NA</td> <td>at 1 metre centres</td> <td>at 2 metre centres</td> </tr> <tr> <td><i>Groundcovers</i></td> <td>NA</td> <td>at 0.5-1 metres centres</td> <td>at 0.5-1 metres centres</td> </tr> </tbody> </table>	Street and features trees45L	Other trees300mm	Larger shrubs200mm	Groundcovers150mm		<i>As street trees</i>	<i>For buffer planting</i>	<i>Other wise</i>	<i>Trees</i>	every 7 to 8 metres	at 2 metre centres	at 5 metre centres	<i>Large shrubs</i>	NA	at 1 metre centres	at 2 metre centres	<i>Groundcovers</i>	NA	at 0.5-1 metres centres	at 0.5-1 metres centres
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(2) Element: Retention of Vegetation

PURPOSE

To ensure that landscaping retains any vegetation of environmental, aesthetic and cultural significance through integration as part of a landscape design.

PERFORMANCE CRITERIA	ACCEPTABLE MEASURES
<p>P1 Landscaping is to retain any vegetation of environmental, aesthetic and cultural significance where not affected by the works approved for the development.</p>	<p>No acceptable measures nominated</p>

(3) Element: Rehabilitation of Vegetation

PURPOSE

To ensure that the removal of vegetation on steep, sensitive or unstable land does not undermine the stability of the land or impact unnecessarily on downstream conditions.

PERFORMANCE CRITERIA	ACCEPTABLE MEASURES
<p>P1 Existing vegetation which is removed outside of the building area must be rehabilitated so as to not increase land slip or subsidence risks around:</p> <ul style="list-style-type: none"> • cut and fill areas; • sensitive elements such as the heads of gullies, watercourses and major drainage lines; • the toes of slopes; <p>and to have proper regard to the integrity and character of the surrounding vegetation, in particular:</p> <ul style="list-style-type: none"> • land stability; • waterflows and erosion, • re-establishment of native vegetation; • remediation of contamination; and • the intended use following rehabilitation. 	<p>A1 For assessable development landscaping shall be sited and designed to respond appropriately to site specific conditions in accordance with an approved Landscape Plan which demonstrates the proposals satisfaction of the performance criterion.</p>

(4) Element: Multiple Unit Residential Development

PURPOSE

To ensure high standards of landscaping for forms of development that include residential units.

PERFORMANCE CRITERIA	ACCEPTABLE MEASURES
<p>P1 The landscaping must:</p> <ul style="list-style-type: none"> • provide accessible communal open space landscaped settings for the enjoyment and appreciation of residents; • provide landscaping to the frontage of the site which complements the desired streetscape character and quality; • provide privacy between dwelling units and to adjacent dwellings; • provide screening to carparks, driveways and other service areas (such as garbage storage areas); • ensure good visibility and sightlines for vehicles and pedestrians along streets, paths and driveways for driver safety and personal security reasons; • contribute to energy efficiency and amenity by providing shade in summer particularly to western walls and open carpark areas; and 	<p>A1 For assessable development landscaping shall be sited and designed to respond appropriately to site specific conditions in accordance with an approved Landscape Plan which demonstrates the proposals satisfaction of the performance criterion.</p>

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PERFORMANCE CRITERIA	ACCEPTABLE MEASURES
<p>P1 continued</p> <ul style="list-style-type: none"> • admitting winter sunlight to outdoor and indoor living areas; • maximise the extent of vegetated, unpaved or unsealed landscaped areas to facilitate on-site infiltration of stormwater run-off; and • provide lighting to walkways and entries to ensure a high level of safety and security for residents and visitors, with lights designed to minimise light intrusion into habitable areas of dwellings. 	

(5) Element: Commercial Development

PURPOSE

To ensure high standards of landscaping for forms of development that include commercial development.

PERFORMANCE CRITERIA	ACCEPTABLE MEASURES
<p>P1 The landscaping must:</p> <ul style="list-style-type: none"> • provide landscaped settings for the enjoyment and appreciation of business people, employees and customers; • provide landscaping to the frontage of the site which complements the desired streetscape character and quality; • provide screening to carparks, driveways, other service areas (such as garbage storage and clothes drying areas) and adverse facades of the building; • ensure good visibility and sightlines and opportunities for casual surveillance for vehicles and pedestrians along streets, paths and driveways for driver safety and personal security reasons; • contribute to energy efficiency and amenity by providing shade in summer particularly to western walls and open carpark areas and admitting winter sunlight to public areas; • provide lighting to walkways and entries to ensure a high level of safety and security; and • have planting selection and design which can endure an intensively used environment. 	<p>A1 For assessable development landscaping shall be sited and designed to respond appropriately to site specific conditions in accordance with an approved Landscape Plan which demonstrates the proposals satisfaction of the performance criterion.</p>

(6) Element: Tourism Development

PURPOSE

To ensure high standards of landscaping for forms of development for tourism purposes.

PERFORMANCE CRITERIA	ACCEPTABLE MEASURES
<p>P1 The landscaping must:</p> <ul style="list-style-type: none"> • be of a very high quality and presentation; • be based on the natural and sub-tropical character of the Shire rather than an imported theme; • retain uses and features of native vegetation as the major planting theme; • use of natural materials and colours to integrate the development into the surrounding environment; and • provide attractive landscaped settings for the enjoyment and appreciation of tourists. 	<p>A1 For assessable development landscaping shall be sited and designed to respond appropriately to site specific conditions in accordance with an approved Landscape Plan which demonstrates the proposals satisfaction of the performance criterion.</p>

(7) Element: Industrial Development

PURPOSE

To ensure high standards of landscaping for forms of development that includes industry.

PERFORMANCE CRITERIA	ACCEPTABLE MEASURES
<p>P1 The landscaping must:</p> <ul style="list-style-type: none"> • provide landscaped settings for the enjoyment and appreciation of business people, employees and customers; • provide landscaping to the frontage of the site which complements the desired streetscape character and quality; • provide screening to carparks, driveways, other service areas (such as garbage storage areas) and unarticulated facades of the building; • ensure good visibility and sightlines and opportunities for casual surveillance for vehicles and pedestrians along streets, paths and driveways for driver safety and personal security reasons; • contributes to energy efficiency and amenity by providing shade in summer particularly to western walls and open carpark areas and admitting winter sunlight to public areas; and • have planting selection and design which is low maintenance and which can endure an intensively used environment. 	<p>A1.1 A planting bed of at least three metres width is provided along the street frontage of the site.</p> <p>AND</p> <p>A1.2 For assessable development landscaping shall be sited and designed to respond appropriately to site specific conditions in accordance with an approved Landscape Plan which demonstrates the proposals satisfaction of the performance criterion.</p>

(8) Element: Landscaping for Taller Buildings, Balconies and Rooftops (vertical landscaping)

PURPOSE

To ensure high standards of landscaping for forms of development that are more than two storeys in height.

PERFORMANCE CRITERIA	ACCEPTABLE MEASURES
<p>P1 Vertical landscaping must:</p> <ul style="list-style-type: none"> • promote a more attractive facade for multi-level buildings; • soften the height of the building; • graduate the height of the building with planting; • increase privacy between upper level balconies and units; • be suited to the difficult conditions of exposure; • be able to be readily maintained; and • ensure appropriate structural support, irrigation, drainage and water proofing of planting containers. 	<p>A1.1 Species selected for planting must be suited to use for vertical landscaping. A list of suitable species is included in the Schedule to this code.</p> <p>AND</p> <p>A1.2 For assessable development, landscaping shall be sited and designed to respond appropriately to site specific conditions in accordance with an approved Landscape Plan which demonstrates the proposals satisfaction of the performance criterion.</p>

(9) Element: Open Carparks, Driveways, Pathways and other Hard Surfaces

PURPOSE

To ensure high standards of landscaping for open carparks, pathway and other hard surfaces.

PERFORMANCE CRITERIA	ACCEPTABLE MEASURES
<p>P1 Landscaping must maximise the extent of vegetated, unpaved or unsealed landscaped areas to facilitate on-site infiltration of stormwater run-off.</p>	<p>A1 For assessable development, landscaping shall be sited and designed to respond appropriately to site specific conditions in accordance with an approved Landscape Plan which demonstrates the proposals satisfaction of the Performance Criteria.</p>
<p>P2 Landscaping for open carparks and driveways must:</p> <ul style="list-style-type: none"> • provide suitable screening to street frontages, adjacent residences and other public spaces; • reduce the harsh visual effect created by open paved areas; • provide significant shade; • provide trees with suitable growing conditions; and • separate and define pedestrian and vehicular circulation routes. 	<p>A2.1 A planting bed of at least two metres (2 metres) width is provided along frontage to streets or other public areas</p> <p>AND</p> <p>A2.2 A planting bed of at least one metre width with screen fencing and dense landscaping is provided to any property boundary with adjacent residential use</p> <p>AND</p> <p>A2.3 Planting of trees and shrubs in median areas throughout the parking area and including one shade tree for every 6 parking spaces</p> <p>AND</p> <p>A2.3 Each planting bed for shade trees has minimum dimension of 1m², and designed to provide suitable drainage and exclusion of motor vehicles</p>

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2. GENERAL LAND USE AND DEVELOPMENT CODES

PERFORMANCE CRITERIA	ACCEPTABLE MEASURES
<p>P3 Paving for hard surfaces must:</p> <ul style="list-style-type: none"> • be semi-porous or graded to maximise on-site infiltration of stormwater; • be in materials and colours which complement the development; • be of adequate strength and in non slip finishes; and • provide equitable access for people with physical disabilities. 	<p>A3 For assessable development, landscaping shall be sited and designed to respond appropriately to site specific conditions in accordance with an approved Landscape Plan which demonstrates the proposals satisfaction of the Performance Criteria.</p>
<p>P4 Landscaping must include lighting to carparks, driveways and entry pathways to ensure a high level of safety and security for residents and visitors.</p>	<p>A4 For assessable development, lighting shall be sited and designed to respond appropriately to site specific conditions in accordance with an approved Landscape Plan which demonstrates the proposals satisfaction of the Performance Criteria.</p>

(10) Element: Drainage Lines and Watercourses

PURPOSE

To ensure high standards of landscaping for drainage lines and watercourses.

PERFORMANCE CRITERIA	ACCEPTABLE MEASURES
<p>P1 Any landscaping for drainage lines and watercourses must:</p> <ul style="list-style-type: none"> • achieve solutions for drainage lines which retain natural features and retain a natural appearance; • use natural materials and solutions to traditionally hard and unattractive open concrete drains; • integrate engineering and landscape solutions for stormwater management; and • rehabilitate degraded areas with removal of weed species and replanting of native species. 	<p>A1 For assessable development, landscaping shall be sited and designed to respond appropriately to site specific conditions in accordance with an approved Landscape Plan which demonstrates the proposals satisfaction of the Performance Criteria.</p>

(11) Element: Buffers

PURPOSE

To ensure high standards of landscaping for development including buffers between incompatible land use.

PERFORMANCE CRITERIA	ACCEPTABLE MEASURES
<p>P1 Any landscaping for buffers between incompatible land uses must be of suitable width and density of planting to achieve its intended effect and minimise land use conflict.</p>	<p>A1.1 Planting for buffer areas are to be at the following minimum density: Trees: 2 metre centres Shrubs: 1 metre centres Groundcovers: 0.5-1 metres centres</p> <p>AND</p> <p>A1.2 For industrial use, required buffers between conflicting uses shall be of a width compatible with ‘Acceptable Measure’ A1, in Element 4 of the Code for Industries in Urban Areas.</p> <p>AND</p> <p>A1.3 For Intensive Rural Industry and Aquaculture uses, required buffers between conflicting uses shall be compatible with ‘Acceptable Measure’ A1.3, Element 1 of the Code for Intensive Rural Industry and Aquaculture.</p> <p>AND</p> <p>A1.4 For assessable development, landscaped buffers shall be of an appropriate density, width and location in accordance with an approved Landscape Plan which demonstrates the proposals satisfaction of the Performance Criteria.</p>

(12) Element: Development in Rural Areas

PURPOSE

To ensure high standards of landscaping for development in rural areas of the Shire.

PERFORMANCE CRITERIA	ACCEPTABLE MEASURES
<p>P1 Landscaping in rural areas must:</p> <ul style="list-style-type: none"> • be consistent with the established rural character of the locality; • be well suited to low maintenance regimes; • realise opportunities for revegetation of earthworks on prominent hillsides and degraded land; and • retain the important views and aesthetics of the landscape, particularly on tourists routes. 	<p>A1 For assessable development landscaping shall be sited and designed to respond appropriately to site specific conditions in accordance with an approved Landscape Plan which demonstrates the proposals satisfaction of the Performance Criteria.</p>

(13) Element: Maintenance

PURPOSE

To ensure the landscaping is established and is properly maintained for the life of the development.

PERFORMANCE CRITERIA	ACCEPTABLE MEASURES
<p>P1 The landscaping must be designed and constructed consistent with best horticultural practices, with consideration to ease of maintenance and to ensure success of the landscaping.</p>	<p>A1.1 Planting uses locally native species which are suited to local climate and soil conditions, and therefore lower maintenance requirements. Suitable species are listed in the Schedule to this code.</p> <p>AND</p> <p>A1.2 Planting for residential, commercial and industrial development has simple planting choice with fewer massed planted species, to seek consistent and tidy growth and ease of maintenance regime.</p> <p>AND</p> <p>A1.3 Landscape works are to be designed with consideration to maintenance including:</p> <ul style="list-style-type: none"> • a landscaping scheme that has realistic maintenance requirements • with the use of extensive mulching, • edging treatment for mowing • planting has appropriate drainage • planting and fertilisation if undertaken consistent with horticultural best industry practice.
<p>P2 The landscaping must be maintained in accordance with:</p> <ul style="list-style-type: none"> • the original design intent expressed in the landscaping plan; and • horticultural industry best practice. 	<p>A2 For assessable development, landscaping shall be sited and designed to respond appropriately to site specific conditions in accordance with an approved Landscape Plan which demonstrates the proposals satisfaction of the Performance Criteria.</p>

SCHEDULE TO CODE 2.3 FOR LANDSCAPING DESIGN

Choice of Plants

The selection of plant species is of primary importance when landscaping a site. The species should be determined in relation to the locality of the site and the existing conditions and should ensure the integration of the built form into the natural environment. A predominance of natives are to be utilised in landscape design. Canopy trees, which are to develop the structure of the design, should be predominantly native species.

The use of indigenous plant species, which occur naturally in the area will generally result in healthier, faster growing, hardier plants which require little maintenance. The use of local species will also assist in the retention of the natural subtropical character of Maroochy Shire.

Schedules of suitable plants for the Shire are found in attached lists. The lists address the different regions in the Shire including: coastal and wallum areas; open forest and woodland areas; and rainforest areas. Lists of species unsuitable for planting, due to their potential to become bushland weeds or their poisonous nature, are also found.

The Use of Palms

The use of palms in landscapes within Maroochy Shire is an issue to be approached with concern and thought. Palms may either enhance a landscape design or make it appear completely out of character. Whilst the use of palms is not completely discouraged, a monoculture of palms is inappropriate.

Palms have their correct place in landscape design and some species are more appropriate than others. For instance, in tight, narrow garden beds, courtyards and beside walls, the use of palms may be appropriate. Palms may also be attractive planted as a clump, or in small groups amongst other tree types. Palms are to be an emergent, rather than dominant feature in the landscape design, and should be planted to mirror their occurrence in a natural environment. The use of Cocos palms in particular, is not supported due to its potential to be come an environmental weed, its maintenance problems and over use on the Sunshine Coast.

Suggested Palm Species

The use of these palms is particularly encouraged in areas where they occurred naturally in the Shire.

BOTANICAL NAME	COMMON NAME
<i>Archontophoenix cunninghamiana</i>	Bangalow/ Piccabeen Palm
<i>Archontophoenix alexandrae</i>	Alexandra Palm
<i>Livistonia australis</i>	Cabbage Tree Palm
<i>Linospadix monostachya</i>	Walking Stick Palm
<i>Livistonia decipens</i>	Weeping Cabbage Palm

Street Trees

Street trees contribute to the identity of the shire through the provision of pleasant streetscapes and planting themes. The character or theme in residential subdivisions, in particular, is enhanced by the selection of street trees. The utilisation of native species for use as street trees is encouraged in order to preserve and enhance the natural character of the shire. In addition, the retention and featuring of existing vegetation within the road reserve may provide a suitable established landscaped streetscape.

Careful consideration is required in the location and choice of street trees, with particular attention to:

- services and infrastructure (both underground and overhead);
- sight lines at intersections, and;
- pedestrian movements

Street trees should be chosen for their:

- non-invasive root system;
- good canopy spread and shade provision;
- low height growth nature (under 10m in height);
- colour and appeal;
- low maintenance requirements.

Street trees provided as part of a new development should be a minimum of 45 litres in size to provide an early established feel to the development. In some circumstances the use of root barriers will be required when planting trees close to kerbs, buildings and other structures under the possible threat of root damage. A species list of those plants particularly recommended for street tree planting is provided in Section 6.2.2.

Street trees are to be planted a minimum of one (1) metre away from infrastructure services such as water and sewage pipes. The location of all services, existing footpaths, driveways and street furniture should be indicated on the landscape design plan.

Coastal & Wallum Areas

Coastal and wallum areas include those parts of the Shire, which are close to the coast and are characterised by sandy soils and an often-low lying, exposed habit. The Maroochy Shire coast stretches from Mooloolaba and Mountain Creek to Peregian Beach and is made up of a variety of coastal habitats. Some of these habitats are highly exposed to salt and wind, whilst other areas are wet and low-lying. A small sample of the coastal vegetation communities are explained below:

- **Heathland Communities** are an important vegetation type associated with coastal sand plains. They occur in low-lying areas in conjunction with poorly drained soils. This vegetation type provides an attractive and much ignored landscape to an area, being rich in colour and unusual form, particularly in the Spring. The retention and enhancement of this vegetation type is highly recommended. These areas are often prone to clearing, as the canopy is less than 2 metres high.
- **Dunal and/or Headland Communities** These communities occur in a narrow strip along the coastal edge. For properties situated within this zone, the most appropriate species for planting are the frontline coastal species, which will thrive in these conditions and require little maintenance. It is recommended that the vegetation character of the dunal community is retained to enhance the natural setting of the coast.
- **Riverine Communities** The vegetation associated with coastal rivers, streams and creeks, acts as vital corridors for fauna, as a genetic link between remnant patches of rainforest, and assists in maintaining high water quality. Plants chosen for revegetating such strips of land should be tolerant of occasional inundation and be in keeping with the indigenous plant species of the area. Be sure not to plant any weed prone trees or ground covers along waterways, as the river system will further distribute the unwanted species.
- **Mountain Heathland** - Mounts Coolum and Emu (Peregian). This vegetation unit is confined to the near coastal hills and rocky outcrops of the Shire. For properties situated near such areas, it is recommended that the vegetation character is enhanced to achieve an aesthetic appeal.

Coastal & Wallum: Trees and Large Shrubs (1st preference)

Species marked “*” are those able to withstand front line exposure to salt and/or wind. Endemic species are those which occur locally on the Sunshine Coast.

BOTANICAL NAME	COMMON NAME	Height	Spread (m)	Endemic (m)
<i>Acacia complanata</i>		3	3	✓
<i>Acacia sophorae</i> *	Coastal Wattle	3	2	✓
<i>Acmena smithii</i>	Lilly Pilly	6	5	✓
<i>Acronychia imperforata</i> *	Fraser Island Apple	3	2	✓
<i>Alectryon coriaceus</i> *	Beach Birds Eye	4	2	✓
<i>Allo casuarina littoralis</i>	Black She-oak	8	5	✓
<i>Alphitonia excelsa</i>	Red Ash	6	5	✓
<i>Banksia aemula</i>	Old Man Banksia	5	3	✓
<i>Banksia integrifolia</i> *	Coastal Banksia	6	4	✓
<i>Callitris columellaris</i>	Bribie Island Pine	8	4	✓
<i>Casuarina equisetifolia</i> *	Horsetail She-oak	6	6	✓
<i>Casuarina glauca</i>	Swamp Oak	8	3	✓
<i>Corymbia intermedia</i>	Pink Bloodwood	8	4	✓
<i>Cupaniopsis anacardioides</i>	Tuckeroo/Cupania	6	6	✓
<i>Elaeocarpus reticulatis</i>	Blueberry Ash	8	3	✓
<i>Eucalyptus robusta</i>	Swamp Mahogany	10	5	✓
<i>Eucalyptus signata</i>	Scribbly Gum	8	5	✓
<i>Eucalyptus tereticornis</i>	Forest Red Gum	15	6	✓
<i>Eucalyptus tessellaris</i>	Moreton Bay Ash	10	6	✓
<i>Hibiscus tiliaceus</i> *	Cottonwood	6	6	✓
<i>Livistona australis</i>	Cabbage Tree Palm	10	3	✓
<i>Lophostemon confertus</i>	Brush Box	10	6	✓
<i>Macaranga tanarius</i>	Macaranga	4	4	✓
<i>Melaleuca quinquenervia</i>	Paperbark Tea Tree	8	3	✓
<i>Pandanus tectorius</i> *	Pandanus	5	4	✓
<i>Petalostigma pubescens</i>	Quinine Bush	5	4	✓
<i>Syzygium australe</i>	Scrub Cherry	6	4	✓
<i>Syzygium oleosum</i>	Blue Lilly Pilly	6	4	✓

2. GENERAL LAND USE AND DEVELOPMENT CODES

Coastal & Wallum: Trees and Large Shrubs (2nd preference)

BOTANICAL NAME	COMMON NAME	Height	Spread (m)	Endemic (m)
<i>Acacia concurrens</i>		6	6	✓
<i>Acacia sophorae</i>	Coastal Wattle	5	5	✓
<i>Acmena hemilampra</i>	Lilly Pilly	6	5	✓
<i>Albizia lebbek</i>	Woman's Tongue Tree	10	8	✓
<i>Angophora leiocalyx</i>	Smooth Barked Apple	10	4	✓
<i>Baeckea</i> spp (suggested <i>B. la petite, camphorata, virgata, mt tozer</i>)		various	sizes	
<i>Banksia ericifolia</i>	Heath Banksia	4	4	
<i>Banksia oblongifolia</i>		2	2	✓
<i>Banksia robur</i>	Swamp Banksia	2	2	✓
<i>Banksia serrata</i>	Saw Banksia	5	6	
<i>Banksia spinulosa</i>	Honeysuckle Banksia	3	2	✓
<i>Buckinghamia celcissima</i>	Ivory Curl	6	4	
<i>Caesalpinia ferrea</i>	Leopard Tree	10	5	
<i>Callistemon</i> spp		various	sizes	✓
<i>Clerodendron inerme</i>	Lolly Bush	3	2	✓
<i>Commersonia bartramii</i>	Brown Kurrajong	6	2	✓
<i>Cryptocarya glaucescens</i>	Brown Beech	10	4	✓
<i>Cryptocarya triplinervis</i>	Brown Laurel	8	4	✓
<i>Delonix regia</i>	Royal Poinciana	8	10	
<i>Elaeocarpus obovatus</i>	Blueberry Ash	10	6	✓
<i>Endiandra discolor</i>	Tickwood	7	3	✓
<i>Endiandra sieberi</i>	Corkwood	10	4	✓
<i>Eucalyptus bancroftii</i>	Orange Gum	6	3	✓
<i>Eucalyptus conglomerata</i>	Swamp Stringybark	6	4	✓
<i>Eucalyptus microcorys</i>	Tallow Wood	15	8	✓
<i>Eucalyptus ptychocarpa</i>	Swamp Bloodwood	6	4	
<i>Gmelina leichhardtii</i>	White Beech	12	6	✓
<i>Grevillea</i> spp (suggested <i>G. banksii, coastal glow, honey gem, majestic, moonlight, orange marmalade, pink surprise, sandra gordon - shrubs; and G. baileyana, hilliana, robusta - trees</i>)		various	sizes	
<i>Harpullia pendula</i>	Tulipwood	6	4	✓
<i>Jacaranda mimosifolia</i>	Jacaranda	8	10	

Continued over page.

Coastal & Wallum:
Trees and Large Shrubs (2nd preference)
Continued

BOTANICAL NAME	COMMON NAME	Height	Spread (m)	Endemic (m)
<i>Leptospermum cardwell</i>	Cardwell Tea Tree	2	2	
<i>Leptospermum flavescens</i>	Tea Tree	3	2	✓
<i>Leptospermum laevigatum</i>	Coast Tea Tree	4	2	
<i>Leptospermum petersonii</i>	Lemon Scented Tea Tree	4	2	✓
<i>Mallotus discolor</i>	Yellow Kamala	6	4	✓
<i>Mallotus philipensis</i>	Red Kamala			✓
<i>Melaleuca bracteata</i>	Revolution Goal and Green	7	5	✓
<i>Melaleuca irbyana</i>	Swamp Tea Tree	4	3	
<i>Melaleuca linariifolia</i>	Snow in Summer	4	3	✓
<i>Melaleuca linariifolia</i> “snowstorm”		2	2	
<i>Melaleuca nodosa</i>	Prickly Heath Paperbark	3	2.5	✓
<i>Melaleuca sieberi</i>	Swamp Tea Tree	6	3	✓
<i>Melaleuca stypheloides</i>	Prickly Leaf Paperbark	6	3	
<i>Melaleuca viridiflora</i>	Red Flowering Paperbark	6	4	
<i>Melia azedarach</i>	White Cedar	8	4	✓
<i>Melicope elleryana</i>	Pink Euodia	6	4	✓
<i>Metrosideros thompsonii</i>	New Zealand Christmas Bush	6	4	
<i>Pandanus tectorius</i>		5	4	✓
<i>Pararchidendron priunosum</i>	Snow Wood	6	4	✓
<i>Peltophorum pterocarpum</i>	Golden Flame Tree	8	4	
<i>Phebalium woombye</i>	Woombye	2	2	✓
<i>Pittosporum rhombifolium</i>	White Holly	6	2	✓
<i>Pittosporum undulatum</i>	Mock Orange	6	4	✓
<i>Podocarpus elatus</i>	Plum Pine/Brown Pine	10	5	✓
<i>Polyscias elegans</i>	Celerywood	6	2	✓
<i>Polyscias murrayi</i>	Pencil Cedar			✓
<i>Pongamia pinnata</i>	Indian Beech	6	4	
<i>Rhodosphaera rhodanthema</i>	Deep Yellow Wood	8	4	✓
<i>Syzygium australe</i>	Scrub Cherry (sth form)	4	2	
<i>Syzygium fibrosum</i>	Fibrous Satinash	4	3	
<i>Syzygium francissii</i>	Water Gum	6	4	
<i>Syzygium leuhmanii</i>	Small Leaved Lilly Pilly	6	4	✓
<i>Terminalia sericocarpa</i>	Indian Almond	10	5	
<i>Tristaniopsis laurina</i>	Water Gum	4	2	✓
<i>Westringia fruticosa</i>	Coastal Rosemary	2	2	
<i>Xanthorrhoea spp</i>	Grass Trees	2	1	✓
<i>Xanthostemon chrysanthus</i>	Golden Penda	4	2	✓

2. GENERAL LAND USE AND DEVELOPMENT CODES

Coastal and Wallum: Small Shrubs, Vines and Groundcovers

BOTANICAL NAME	COMMON NAME	Height	Spread (m)	Endemic (m)
<i>Adiantum spp</i>	Maidenhair Ferns	0.5	0.5	
<i>Aristolochia deltantha</i> (exotic species are poisonous to the Richmond Birdwing Butterfly)			vine	
<i>Aristolochia praevnosavine</i>			vine	✓
<i>Austromyrtus dulcis</i>	Midyim	1	2	✓
<i>Baeckea virgata miniature</i>		3	3	
<i>Bauera rubioides</i>	Wiry Dog Rose	1	1	
<i>Bauera ruby glow</i>		1	1	
<i>Brachysome spp</i>	River Daisies	0.5	0.5	
<i>Callistemon little john</i>		1	1	
<i>Carpobrotus glaucescens</i>	Pigface	0.3	1	✓
<i>Crinum pedunculatum</i>	Spider Lily	1	1	✓
<i>Cymbopogon ambiguus</i>	Lemon Scented Grass	1	1	
<i>Cymbopogon refractus</i>	Barbed Wire Grass	1	1	✓
<i>Dampiera hederacea</i>		0.3	1	
<i>Dampiera stricta</i>		0.3	0.5	✓
<i>Danthonia racemosa</i>	Wallaby Grass	1	1	
<i>Dianella caerulea</i>	Flax Lily	0.5	0.3	✓
<i>Dicanthium sericeum</i>	Queensland Blue Grass	0.5	0.5	
<i>Dietes bicolor</i>		1	1	
<i>Dietes grandiflora</i>		1	1	
<i>Erigeron karvinskianus</i>	Seaside Daisy	0.3	1.5	
<i>Goodenia spp</i>		0.3	1	✓
<i>Grevillea bronze Rambler</i>		0.3	3	
<i>Grevillea forest Rambler</i>		0.3	3	
<i>Grevillea royal mantle</i>		0.3	3	
<i>Hardenbergia violacea</i>	Native Sarsparilla	vine		✓
<i>Helichrysum amplexans</i>	Golden Buttons	0.3	1	
<i>Helichrysum rosmarinifolium</i>	Everlasting Daisy	0.3		
<i>Hibbertia scandens</i>	Snake Vine	0.2	2.5	✓
<i>Hibbertia vestita</i>		0.3	0.5	✓
<i>Lomandra confertifolia</i>		0.3	1	✓
<i>Lomandra histrix</i>	Mat Rush	1	1	✓
<i>Lomandra longifolia</i>	Mat Rush	1	1	✓
<i>Myoporum ellipticum</i>		0.5	3	✓

Continued over page.

Coastal and Wallum:
Small Shrubs, Vines and Groundcovers
Continued

BOTANICAL NAME	COMMON NAME	Height	Spread (m)	Endemic (m)
<i>Poa australis</i>		0.5	0.5	
<i>Poa labillardierii</i>	Tussock Grass	1	1	
<i>Pultenea spp</i> (suggested <i>P. villosa</i> , <i>wallum gold</i>)		1	1	✓
<i>Restio tetraphyllus</i>	Foxtails	1	0.5	✓
<i>Ricinocarpus pinifolius</i> <i>prostrate form</i>	Wedding Bush	0.3	2	✓
<i>Scaevola spp</i> (suggested <i>S. aemula</i> , <i>albida</i> , <i>calendulaceae</i> , <i>purple clusters</i>)		0.3	1	
<i>Stipa verticillata</i>	Slender Bamboo Grass			
<i>Sowerbaea juncea</i>	Vanilla Lily	0.3	0.5	✓
<i>Tetratheca thymifolia</i>		0.5	0.5	✓
<i>Tecomanthe hillii</i>	Fraser Island Creepervine			✓
<i>Tecomanthe spp</i> <i>roaring meg</i>		vine		
<i>Themeda triandra</i>	Kangaroo Grass	1	1.5	✓
<i>Tibouchina jules</i>		1	1	
<i>Viola hederacea</i>	Native Violet	0.3	1	✓
<i>Vitex ovata (compact)</i>		0.5	2	

2. GENERAL LAND USE AND DEVELOPMENT CODES

Open Forest/Woodland Areas

The open forest woodland areas include those sections of Maroochy Shire inland and away from the coast and up to the foothills of the range areas and in the western portion of the shire. This type of vegetation generally occurs in the rural areas. The canopy tree is often Eucalyptus, although in the wetter areas on the coastal plains, the dominant tree species will be Melaleuca / Paper barks. Much of this area of the Shire has been cleared for urban development and agricultural land uses.

Open Forest/Woodland: Trees (1st preference)

BOTANICAL NAME	COMMON NAME	Height	Spread (m)	Endemic (m)
<i>Acmena smithii</i>	Lilly Pilly	6	5	✓
<i>Allocasuarina torulosa</i>	Forest She-oak	6	5	✓
<i>Casuarina cunninghamiana</i>	River She-oak	12	6	✓
<i>Corymbia intermedia</i>	Pink Bloodwood	8	4	✓
<i>Eucalyptus grandis</i>	Flooded Gum	12	5	✓
<i>Eucalyptus microcorys</i>	Tallow Wood	10	8	✓
<i>Eucalyptus tereticornis</i>	Queensland Blue Gum	10	5	✓
<i>Flindersia australis</i>	Crows Ash	10	4	✓
<i>Flindersia schottiana</i>	Bumpy Ash	12	3	✓
<i>Livistona australis</i>	Cabbage palm	12	3	✓
<i>Lophostemon confertus</i>	Brush Box	12	6	✓
<i>Melaleuca quinquenervia</i>	Broad Leaved Paper Bark	10	4	✓
<i>Syncarpia glomulifera</i>	Turpentine	8	3	✓
<i>Syzygium australe</i>	Scrub Cherry	6	4	✓
<i>Syzygium oleosum</i>	Blue Lilly Pilly	6	4	✓
<i>Tristaniopsis laurina</i>	Water Gum	7	3	✓
<i>Waterhousea floribunda</i>	Weeping Lilly Pilly	8	4	✓

Continued over page.

Open Forest/Woodland:
Trees (2nd preference)

BOTANICAL NAME	COMMON NAME	Height	Spread (m)	Endemic (m)
<i>Acacia fimbriata</i>	Brisbane Wattle	5	4	
<i>Angophora leiocalyx</i>	Smooth Barked Apple	10	4	✓
<i>Backhousia citriodora</i>	Lemon Scented Myrtle	4	2	✓
<i>Backhousia myrtifolia</i>	Sweet Carro	14	2	✓
<i>Baeckea spp</i>		various	sizes	✓
<i>Banksia spp</i>		various	sizes	✓
<i>Callistemon spp</i> (<i>Allocasuarina spp</i>) suggested <i>C. anzac</i> , captain cook, candy pink, dawson river, endeavour, formosus, pachyphyllus, pink champagne, <i>salignus viminalis</i> , wildfire)		various	sizes	✓
<i>Casuarina spp</i> (suggested <i>C. glauca</i> , <i>littoralis</i> , <i>cunninghamiana</i> , <i>torulosa</i>)		various	sizes	✓
<i>Corymbia intermedia</i>		8	4	✓
<i>Elaeocarpus sp</i>		various	sizes	✓
<i>Grevillea spp</i>		various	sizes	✓
<i>Kunzea spp</i>		various	sizes	
<i>Leptospermum spp</i>		various	sizes	✓
<i>Macaranga tanarius</i>		4	4	✓
<i>Melaleuca spp</i>		various	sizes	✓
<i>Pultenea spp</i>		various	sizes	✓
<i>Xanthorrhoea spp</i>	Grass Trees	2	1	✓

2. GENERAL LAND USE AND DEVELOPMENT CODES

Open Forest/Woodland: Small Shrubs, Vines and Groundcovers

BOTANICAL NAME	COMMON NAME	Height	Spread (m)	Endemic (m)
<i>Adiantum spp</i>	Maidenhair Ferns	0.5	0.5	
<i>Aristolochia delatantha</i> (exotic species are poisonous to the Richmond Birdwing Butterfly)			vine	
<i>Aristolochia praevenosavine</i>			vine	✓
<i>Austromyrtus dulcis</i>	Midyim	1	2	✓
<i>Baeckea virgata miniature</i>		3	3	
<i>Bauera rubioides</i>	Wiry Dog Rose	1	1	
<i>Brachysome spp</i>	River Daisies	0.5	0.5	
<i>Callistemon little john</i>		1	1	
<i>Crinum pedunculatum</i>	Spider Lily	1	1	✓
<i>Cymbopogon ambiguus</i>	Lemon Scented Grass	1	1	
<i>Cymbopogon refractus</i>	Barbed Wire Grass	1	1	✓
<i>Dampiera hederacea</i>		0.3	1	
<i>Dampiera stricta</i>		0.3	0.5	✓
<i>Danthonia racemosa</i>	Wallaby Grass	1	1	
<i>Darwinia spp</i> (suggested <i>D. citriodora</i>)		0.5	1	✓
<i>Dianella caerulea</i>	Flax Lily	0.5	0.3	✓
<i>Dietes bicolor</i>		1	1	
<i>Dietes grandiflora</i>		1	1	
<i>Erigeron karvinskianus</i>	Seaside Daisy	0.3	1.5	
<i>Goodenia spp</i>		0.3	1	✓
<i>Grevillea bronze Rambler</i>		0.3	3	
<i>Grevillea forest Rambler</i>		0.3	3	
<i>Grevillea royal mantle</i>		0.3	3	
<i>Hardenbergia violacea</i>	Native Sarsparilla	vine		✓
<i>Helichrysum amplexans</i>	Golden Buttons	0.3	1	
<i>Helichrysum rosmarinifolium</i>	Everlasting Daisy	0.3		
<i>Hibbertia scandens</i>	Snake Vine	0.2	2.5	✓
<i>Lomandra confertifolia</i>		0.3	1	✓
<i>Lomandra histrix</i>	Mat Rush	1	1	✓
<i>Lomandra longifolia</i>	Mat Rush	1	1	✓
<i>Myoporum ellipticum</i>		0.5	3	✓
<i>Phebalium woombye prostrate form</i>		0.3	1	✓
<i>Poa australis</i>		0.5	0.5	
<i>Pultenea spp</i> (suggested <i>P. villosa</i> , wallum gold)		1	1	✓

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Open Forest/Woodland:
Small Shrubs, Vines and Groundcovers
Continued

BOTANICAL NAME	COMMON NAME	Height	Spread (m)	Endemic (m)
<i>Restio tetraphyllus</i>	Foxtails	1	0.5	✓
<i>Ricinocarpus pinifolius prostrate form</i>	Wedding Bush	0.3	2	✓
<i>Scaevola spp (suggested S. aemula, albida, calendulaceae, purple clusters)</i>		0.3	1	
<i>Sowerbaea juncea</i>	Vanilla Lily	0.3	0.5	✓
<i>Tetratecha thymifolia</i>		0.5	0.5	✓
<i>Tecomanthe billii</i>	Fraser Island Creepervine			✓
<i>Themeda triandra</i>	Kangaroo Grass	1	1.5	✓
<i>Tibouchina jules</i>		1	1	
<i>Viola hederacea</i>	Native Violet	0.3	1	✓
<i>Vitex ovata (compact)</i>		0.5	2	

Closed Forest/Rainforest Areas

The closed forest and rainforest areas have particular significance to Maroochy Shire and South East Queensland for their floristic and structural diversity. They range from tall, structurally complex species, rich communities on the fertile, well watered plateaus of the Blackall and Conondale Ranges, to the dry, stunted rainforests and vine forests on the rockier sites of the western section of the Shire. Remaining areas of this vegetation type are often remnants from previously cleared land, and for this reason their conservation and/or re-establishment is highly encouraged. The once widespread lowland subtropical rainforests of the coastal plain are also significant relics to be retained, wherever possible.

Closed forest and related rainforest areas have been identified within Maroochy Shire as one of the most significant vegetation types and habitats in the area. There is potential for considerable revegetation of these species in rural and the Range areas. Closed forest / rainforest species are remarkably adaptable to a wide range of conditions and will generally grow best in moist well-drained soils. Due to the fire retardant nature of rainforest species, their use in such a setting is encouraged.

Rainforest areas provide valuable habitat areas for a range of flora and fauna, including the Richmond Birdwing Butterfly. The Butterfly is now listed a “vulnerable”, and its continued rate of decline may lead to extinction.

The on-going destruction of rainforest has seen a decline in the butterfly’s larval food plant; the vines *Aristolochia praevenosa* and *Aristolochia deltantha var. leheyana*. The female butterfly lays eggs on the leaves of the vines, which provide food for the hatched larvae. The planting of the Richmond Birdwing Butterfly vine in all suitable areas of the Shire is encouraged.

Another significant threat to the Richmond Birdwing Butterfly, is the introduced Dutchman’s Pipe Vine (*Aristolochia elegans*) which is common in backyard gardens and has become a weed in many bushland areas. The female butterfly lays its eggs on the Dutchman’s Pipe Vine and the emerging larvae feed on the leaves, killing the larvae. The removal of the Dutchman’s Pipe Vine from gardens is recommended.

The Richmond Birdwing Butterfly population is so depleted, that there are no longer any butterfly colonies north of Coolum and there is a large area from Caboolture to Nerang where no butterflies are found at all. However, in Maroochy Shire, butterflies have been confirmed in Coolum, Yandina, Nambour, Palmwoods, Maleny, Peachester, Beerwah, Woodford, Mt Eerwah and Mt Cooroy.

2. GENERAL LAND USE AND DEVELOPMENT CODES

Closed Forest/Rainforest:
Trees (1st preference)

BOTANICAL NAME	COMMON NAME	Height	Spread (m)	Endemic (m)
<i>Archontophoenix cunninghamiana</i>	Bangalow/Piccabeen Palm	12	3	✓
<i>Brachychiton acerifolius</i>	Flame Tree	8	4	✓
<i>Brachychiton discolor</i>	Queensland Lace Bark	6	3	✓
<i>Castanospermum australe</i>	Black Bean	10	6	✓
<i>Cryptocaria glaucescens</i>	Laurel	8	4	✓
<i>Elaeocarpus grandis</i>	Blue Quandong	12	6	✓
<i>Elaeocarpus reticulatus</i>	Blueberry Ash	8	6	✓
<i>Melicope elleryana</i>	Pink Euodia	6	4	✓
<i>Euroschinus falcata</i>	Ribbonwood	12	6	✓
<i>Ficus hillii</i>	Hills Weeping Fig	12	5	✓
<i>Ficus macrophylla</i>	Moreton Bay Fig	10	6	✓
<i>Ficus obliqua</i>	Small Leaved Fig	15	5	✓
<i>Ficus platypoda</i>	Small Leaved Moreton Bay Fig	10	4	✓
<i>Flindersia australis</i>	Crows Ash	10	4	✓
<i>Grevillea robusta</i>	Silky Oak	15	6	✓
<i>Glochidion ferdinardi</i>	Cheese Tree	8	5	✓
<i>Hymenosporum flavum</i>	Native Frangipani	8	3	✓
<i>Livistonia australis</i>	Cabbage Palm	12	3	✓
<i>Lophostemon confertus</i>	Brush Box	12	6	✓
<i>Omalanthus populifolius</i>	Bleeding Heart	5	3	✓
<i>Stenocarpus sinuatus</i>	Firewheel Tree	10	4	✓
<i>Waterhousea floribunda</i>	Weeping Lilly Pilly	8	4	✓

Closed Forest/Rainforest:
Trees & Large Shrubs (2nd preference)

BOTANICAL NAME	COMMON NAME	Height	Spread (m)	Endemic (m)
<i>Acmena brachyandra</i>	Red Apple	12	6	✓
<i>Acmena graveolens</i>	Cassowary Satinash	12	6	
<i>Acmena hemilampra</i>	Bush Satinash	6	5	✓
<i>Acmena smithii</i>	Lilly Pilly	6	5	✓
<i>Agathis robusta</i>	Queensland Kauri	20	6	✓
<i>Aleurites moluccana</i>	Candle Nut	12	6	
<i>Alloxylon flammeum</i>	Tree Waratah	8	4	
<i>Alphitonia excelsa</i>	Red Ash	8	5	✓
<i>Alphitonia petriei</i>	Pink Ash	12	8	✓
<i>Araucaria bidwillii</i>	Bunya Pine	20	6	✓
<i>Araucaria cunninghamii</i>	Hoop Pine	20	6	✓
<i>Archidendron hendersonii</i>	White Lace Flower	12	6	
<i>Archontophoenix alexandrae</i>	Alexander Palm	15	5	✓
<i>Argyrodendron spp</i>		various	sizes	✓
<i>Arytera distilis</i>	Twin Leaved Coogera	8	4	✓
<i>Arytera lautereriana</i>	Corduoy Tamarind	8	4	✓
<i>Backhousia citriodora</i>	Lemon Scented Myrtle	4	2	✓
<i>Backhousia myrtifolia</i>	Sweet Carrol	4	2	✓
<i>Barklya syringifolia</i>	Crown of Gold	8	5	
<i>Buckinghamia celsissima</i>	Ivory Curl	6	4	
<i>Caldcluvia paniculosa</i>	Rose Leaf Marara	8	6	✓
<i>Callicarpa pedunculata</i>	Velvet Leaf	4	2	
<i>Callicoma serratifolia</i>	Black Wattle	4	4	✓
<i>Cassia brewsteri</i>	Leichhardt Bean	8	4	
<i>Castanospora asphandii</i>	Brown Tamarind	10	5	✓
<i>Cinnamomum oliveri</i>	Oliver's Sassafras	10	6	✓
<i>Clerodendrum floribundum</i>	Lolly Bush	3	2	✓
<i>Commersonia bartramii</i>	Brown Kurrajong	6	3	✓
<i>Cordyline spp</i>		various	sizes	✓
<i>Cryptocarya spp</i>	Laurels	various	sizes	✓
<i>Cupaniopsis spp</i>	Tuckeroo	6	4	✓
<i>Cyathea cooperi</i>	Tree Fern	4	3	✓
<i>Darlingia darlingiana</i>	Brown Silky Oak	10	4	
<i>Davidsonia pruriens</i>	Davidson Plum	8	3	✓
<i>Diploglottis australis</i>	Native Tamarind	10	6	✓

2. GENERAL LAND USE AND DEVELOPMENT CODES

Closed Forest/Rainforest:
Trees & Large Shrubs (2nd preference)
Continued

BOTANICAL NAME	COMMON NAME	Height	Spread (m)	Endemic (m)
<i>Dysoxylum spp</i> (suggested <i>D. fraserianum, muelleri</i>)	Rosewood	10	6	✓
<i>Elaeocarpus sp</i> (suggested <i>E. angustifolius, eumundi, grandis, obovatus, reticulatis</i>)	Quandongs	various	sizes	✓
<i>Endiandra spp</i> (suggested <i>E. discolor, globosa, sieberi</i>)	Walnut	12	4	✓
<i>Eugenia reinwardtiana</i>	Beach Cherry	2	1	✓
<i>Ficus spp</i> (including sandpaper figs but excluding <i>F. elastica</i>)		various	sizes	✓
<i>Flindersia australis</i>	Crow's Ash / Australian Teak	30	4	✓
<i>Flindersia brayleyana</i>	Queensland Maple	8	4	✓
<i>Flindersia collina</i>	Leopard Wood	8	4	
<i>Geissois benthami</i>	Red Carabeen	8	4	
<i>Glochidion spp</i> (suggested <i>G.ferdinandi</i>)	Cheese Tree	8	5	✓
<i>Gmelina leichhardtii</i>	White Beech	15	6	✓
<i>Graptophyllum excelsum</i>	Scarlet Fuchsia	2	1	
<i>Grevillea baileyana</i>	White Oak	8	4	
<i>Grevillea hilliana</i>	Yiel Yiel	8	5	✓
<i>Grevillea robusta</i>	Silky Oak	15	6	✓
<i>Harpullia pendula</i>	Tulipwood	6	4	✓
<i>Hymenosporum flavum</i>	Native Frangipani	8	3	✓
<i>Jacksonia scoparia</i>	Dogwood/Native Broom	4	2	✓
<i>Jagera pseudorhus</i>	Foambark Tree	6	3	✓
<i>Licuala ramsayi</i>	Fan Palm	8	3	
<i>Livistona australis</i>	Cabbage Palm	12	3	✓
<i>Livistona decipiens</i>	Weeping Cabbage Palm	8	3	
<i>Macadamia spp</i>		various	sizes	✓
<i>Macaranga tanarius</i>	Macaranga	4	4	✓
<i>Mallotus spp</i> (suggested <i>M. discolor</i>)				
<i>Yellow Kamala</i>		6	4	✓
<i>Melia azedarach</i>	White Cedar	8	4	✓
<i>Melicope elleryana</i>		6	4	✓
<i>Nauclea orientalis</i>	Leichhardt Tree	8	6	
<i>Neolitsea dealbata</i>	White Bolly Gum	8	4	✓

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Closed Forest/Rainforest:
Trees & Large Shrubs (2nd preference)
Continued

BOTANICAL NAME	COMMON NAME	Height	Spread (m)	Endemic (m)
<i>Omolanthus populifolius</i>	Native Bleeding Heart	8	6	✓
<i>Pararchidendron pruinosum</i>	Snow Wood	10		✓
<i>Phaleria clerodendron</i>	Scented Daphne	4	4	
<i>Pilidiostigma glabra</i>	Plum Myrtle	3		
<i>Pilidiostigma rhytisperma</i>	Plum Myrtle	2	1	✓
<i>Pittosporum spp</i>		various	sizes	✓
<i>Podocarpus elatus</i>	Plum Pine	10	4	✓
<i>Polyscias elegans</i>	Celerywood	6	3	✓
<i>Polyscias murrayi</i>	Pencil Cedar	8	3	✓
<i>Pongamia pinnata</i>	Indian Beech	8	3	
<i>Pullea stutzeri</i>	Hard Alder	4	3	
<i>Randia spp</i> (suggested <i>R. chartacea, fitzalanii</i>)		various	sizes	✓
<i>Rhodammia maideniana</i>	Smooth Scrub Turpentine	8	4	
<i>Rhodosphaera rhodanthema</i>	Yellow Wood	8	4	✓
<i>Sloanea woollsii</i>	Yellow Carabeen	6	3	✓
<i>Syzygium spp</i>		various	sizes	✓
<i>Terminalia sericocarpa</i>	Indian Almond	10	5	
<i>Toona australis</i>	Red Cedar	12	6	✓
<i>Tristaniopsis laurina</i>	Water Gum	8	3	✓
<i>Waterhousia floribunda</i>	Weeping Lilly Pilly	6	4	✓
<i>Waterhousea unipunctata</i>	Roly Poly Satinash	5	3	
<i>Xanthorrhoea spp</i>	Grass Tree	various	sizes	✓
<i>Xanthostemon chrysanthos</i>	Golden Penda	various	sizes	

2. GENERAL LAND USE AND DEVELOPMENT CODES

Closed Forest/Rainforest: Small Shrubs, Vines and Groundcovers

BOTANICAL NAME	COMMON NAME	Height	Spread (m)	Endemic (m)
<i>Adiantum spp</i>	Maidenhair Ferns	0.5		
<i>Alpinia caerulea</i>	Native Ginger		1	✓
<i>Aristolochia deltantha</i> (exotic species of aristolochia are poisonous to the Richmond Birdwing Butterfly)		vine		✓
<i>Aristolochia pravenosa</i>	Birdwing Butterfly Vine	vine		✓
<i>Aristolochia tagala</i>		vine		
<i>Cissus antarctica</i>	Kangaroo vine	vine		✓
<i>Cordyline spp</i>		2	0.5	✓
<i>Crinum pedunculatum</i>	Crinum Lily	1	1	✓
<i>Davallia pyxidata</i>	Fleur Lily	0.5	0.5	
<i>Hibbertia scandens</i>	Guinea Flower	0.2	2.5	✓
<i>Hoya australis</i>		vine		✓
<i>Kreysigia multiflora</i>	Sarsparilla Lily	0.5	0.5	
<i>Lobelia membranacea</i>		0.3	0.5	✓
<i>Lomandra longifolia</i>	Mat Rush	1	1	✓
<i>Orthosiphon aristatus</i>	Cats Whiskers	2	1	
<i>Peperomia tetraphylla</i>		0.3	1	
<i>Proiphys cunninghamii</i>	Brisbane Lily	0.5	0.5	✓
<i>Smilax australis</i>	Sarsparilla			✓
<i>Tecomanthe hillii</i>	Fraser Island Creeper	vine		✓
<i>Tecomanthe sp</i> "roaring meg"		vine		
<i>Viola hederacea</i>	Native Violet	0.3	1	

Species with Restrictions

According to the rural Lands Protection Act (1985-1990) many trees, often selected for use in everyday planting situations, have the potential to become environmental weeds. Whilst this information applies to rural areas, it is strongly believed that the undesirable plants listed here can assist contactors in making prudent choices of plant material for particular projects.

6.1.1 Plants not to be used

The schedule below contains those species not to be used in the Shire of Maroochy. Those species indicated with a "*" after their common name, should not be used under any circumstances.

BOTANICAL NAME	COMMON NAME
<i>Anredera cordifolia</i>	Madeira Vine
<i>Ardisia crispa</i>	Coral Berry*
<i>Ardisia humilis</i>	Spice Berry*
<i>Arecastrum romanzoffianum</i>	Cocos Palm
<i>Aristolochia elegans</i>	Dutchman's Pipe*
<i>Callisia fragrans</i>	Purple succulent
<i>Canna species</i>	Canna Lily*
<i>Cardiospermum grandiflorum</i>	Balloon Vine*
<i>Celtus sinensis</i>	Chinese Elm*
<i>Cinnamomum camphora</i>	Camphor Laurel*
<i>Coffea arabica</i>	Coffee Bush
<i>Cotoneaster pannosus</i>	Cotoneaster
<i>Datura species</i>	Angel's Trumpets
<i>Duranta repens</i>	Skyflower
<i>Eucalyptus torelliana</i>	Cadagi*
<i>Hypoestes sanguinolenta</i>	Freckle Face
<i>Ipomoea cairica</i>	Mile a Minute
<i>Ipomoea indica</i>	Morning Glory
<i>Lantana camara</i>	Lantana*
<i>Leucaena leucophala</i>	Leucaena
<i>Ligustrum lucidum</i>	Privet Broad Leaf*
<i>Ligustrum sinense</i>	Privet, Small leaf*
<i>Lonicera japonica</i>	Honeysuckle
<i>Macfadyena unuis-cati</i>	Cats Claw Creeper*
<i>Morus spp.</i>	Mulberry
<i>Nephrolepis cordifolia</i>	Fish bone Fern
<i>Ochna serrulata</i>	Mickey Mouse Bush
<i>Olea africana</i>	African Olive
<i>Passiflora suberosa</i>	Corky Passion Vine
<i>Phyllostachys spp.</i>	Running Bamboo
<i>Phytolacca dioica</i>	Packalacca
<i>Pinus elliotti, pinus radiata</i>	Pine trees
<i>Protasparagus sprengeri</i>	Asparagus fern*
<i>Radermacheria spp.</i>	Asian Bell Tree
<i>Raphiolepis indica</i>	Indian Hawthorn*
<i>Sansevieria trifasciata</i>	Mother in Laws Tongue*
<i>Sasa spp.</i>	Dwarf Bamboo*
<i>Scheffera actinophylla</i>	Umbrella Tree*
<i>Schinus terebinthifolia</i>	Broad Leafed Pepper Tree
<i>Senna floribunda</i>	Arsenic Bush
<i>Senna pendula var. glabrata</i>	Easter Cassia
<i>Tamarix aphylla</i>	Athel Pine
<i>Tithonia diversifolia</i>	Japanese sunflower
<i>Wedelia trilobata</i>	Singapore Daisy

6.1.2 Use of the Pandanus Species

The future health of the Pandanus (*Pandanus tectorius var. pedunculatus*) species on the Sunshine coast is in jeopardy with the presence of an insect causing the plants to die. The problem is a leaf hopper (*Jamella australis*) which is responsible for the ill health and eventual death of many of the region's Pandanus species.

The leaf hopper is a predator to the Pandanus brought into south east Queensland from northern Queensland. As the leaf hopper has been introduced to this part of the State, there is no natural predator in this area to ensure natural control of the pest.

Due to the number of large and very significant Pandanus dying in key areas, and to ensure the survival of the species on the sunshine coast, Maroochy Shire has resolved to take a positive stand in the control of the leaf hopper. The Council is presently trialing a control method and plants throughout the Shire are being monitored. The transportation of Pandanus from north Queensland into the shire will not be permitted.

The use of the Pandanus species is encouraged, however it will be the responsibility of the applicant to ensure that stock chosen is not carrying the leaf hopper. Certification from the nursery is to be submitted to Council, and plants used in the landscape design should be monitored and controlled for any presence of the leaf hopper prior to planting. The Shire Arborist should be contacted to issue advice on the care of these specimens and to confirm the absence of the leaf hopper.

Council would appreciate your cooperation in the control of the leaf hopper in Maroochy Shire.

6.1.3 Poisonous Plants

This table (below) includes poisonous plants, which are considered harmful when ingested or that may irritate or burn the skin on contact. The use of such plants is not recommended, in particular in areas where there is high pedestrian usage, in schools, kindergartens or shopping precincts.

BOTANICAL NAME	COMMON NAME
<i>Abrus precatorius</i>	Gigee Gigee
<i>Agave spp</i>	
<i>Allamanda cathartica</i>	Yellow Allamanda
<i>Alocasia macrorrhiza</i>	Cunjevoy
<i>Brugmansia spp.</i>	Angel's Trumpet
<i>Calophyllum inophyllum</i>	Beauty Leaf
<i>Castanospermum australe</i>	Black Bean
<i>Dendrocnide sp.</i>	Stinging Tree
<i>Duranta repens</i>	Skyflower
<i>Hoya australis</i>	Wax Flower
<i>Lantana camara</i>	Common Lantana
<i>Nerium oleander</i>	Oleander

6.2 Species for Special Situations

The following tables included species, which are suitable for specific uses including Koala habitat street trees and on building rooftops.

6.2.1 Rooftops & Balconies

BOTANICAL NAME	COMMON NAME
<i>Acanthus mollis</i>	
<i>Actinotus helianthi</i>	
<i>Adenandra uniflora</i>	
<i>Agapanthus africanus</i>	
<i>Anigozanthos spp.</i>	
<i>Atriplex cinerea</i>	
<i>Austromyrtus dulcis</i>	Midyim
<i>Baeckea ramosissima</i>	
<i>Bauera rubiodes</i>	Dog Roses
<i>Boronia megastigma</i>	
<i>Brachyscome spp</i>	River Daisy
<i>Calytrix tetragona</i>	
<i>Carpobrotus glaucescens</i>	Pig face
<i>Clivia miniata</i>	
<i>Correa reflexa</i>	
<i>Crinum pendunculatum</i>	Spider Lily
<i>Crocea exalta</i>	
<i>Dampiera purpurea</i>	
<i>Darwinia citriodora</i>	
<i>Dianella caerulea</i>	Flax Lily
<i>Dianthus hybrids</i>	
<i>Dietes spp.</i>	
<i>Echinopogon ovatus</i>	Hedgehog Grass
<i>Erigeron karvinskianus</i>	Seaside Daisy
<i>Frankenia paucifolia</i>	
<i>Grevillea lanigera - dwarf</i>	
<i>Helichrysum rosmarinifolium</i>	
<i>Hibbertia spp</i>	
<i>Hoya australis</i>	
<i>Indigofera australis</i>	
<i>Ipomea pes-caprae</i>	Goats Foot
<i>Lagerostroemia indica</i>	
<i>Lavandula angustifolia</i>	
<i>Leptosperum sericeum</i>	
<i>Lomandra longifolia</i>	Mat Rush

2. GENERAL LAND USE AND DEVELOPMENT CODES

BOTANICAL NAME	COMMON NAME
<i>Mabonia aquifolia</i>	
<i>Metrosideros spp.</i>	
<i>Mimulus prostratus repens</i>	
<i>Myoporum ellipticum</i>	
<i>Pelargonium peltatum</i>	
<i>Phebalium woombye</i>	
<i>Plumbago auriculata</i>	
<i>Poa australis</i>	
<i>Scaevola spp</i>	
<i>Scleranthus biflorus</i>	
<i>Sowerbaea juncea</i>	Vanilla Lily
<i>Stipa verticillata</i>	
<i>Strelitzia reginae</i>	Bird of Paradise
<i>Stylidium graminifolium</i>	
<i>Syzygium paniculatum</i>	Lilly Pilly
<i>Vitex ovata (compact)</i>	
<i>Westringia fruticosa</i>	Native Rosemary

6.2.2 Street Trees

The following species are all suitable for planting as street trees. Some species have particular features which render them appropriate for specific locations (such as under power lines for example). Selection of the appropriate tree will be dependant on constraints such as;

adjacent structures and services, site character, growing conditions, safety and maintenance considerations. The feature codes are as follows:

- C – exposed coastal
- PWR – appropriate for under power lines
- Can – canopy tree

BOTANICAL NAME	COMMON NAME	Height	Spread (m)	Endemic (m)	Features
<i>Araucaria cunninghamii</i>	Hoop Pine	15	6	3	
<i>Araucaria heterophylla</i>	Norfolk Island Pine	15	6		
<i>Backhousia citriodora</i>	Lemon Scented Myrtle	4	2	3	PWR
<i>Backhousia myrtifolia</i>	Grey Myrtle	4	2	3	PWR
<i>Banksia integrifolia</i>	Coastal Banksia	6	4	3	C
<i>Brachychiton acerifolius</i>	Flame Tree	8	4	3	
<i>Brachychiton discolor</i>	Lace Bark Tree	6	3	3	
<i>Buckinghamia celcissima</i>	Ivory Curl Tree	6	4		PWR
<i>Callistemon species</i>	Bottlebrush	4	2	3	PWR
<i>Cassia brewsteri</i>	Leichhardt Bean	8	4		
<i>Castanospermum australe</i>	Black Bean	10	6	3	Can
<i>Corymbia intermedia</i>	Pink Bloodwood	8	4	3	Can, C
<i>Cupaniopsis anacardiodes</i>	Tuckeroo	6	6	3	C, PWR
<i>Delonix regia</i>	Poinciana	8	10		Can
<i>Diploglottis campbelli</i>	Small Leaved Tamarind	10	6	3	Can
<i>Dysoxylum muelleri</i>	Red Bean	10	5	3	Can
<i>Elaeocarpus eumundii</i>		10	6	3	Can
<i>Elaeocarpus grandis</i>	Quandong	12	6	3	Can
<i>Elaeocarpus obovatus</i>	Blueberry Ash	8	4	3	C
<i>Eucalyptus ptychocarpa</i>	Red Flowing Bloodwood	6	4		Can, C
<i>Ficus species</i>	Fig Trees	varies	varies	3	Can
<i>Flindersia brayleana</i>	Queensland Maple	8	4		
<i>Grevillea banksii</i>		3	2		C
<i>Grevillea baileyana</i>	White Oak	8	4		
<i>Grevillea robusta</i>	Silky Oak	15	6	3	
<i>Harpullia pendula</i>	Tulipwood	6	4	3	Can
<i>Hymenosporum flavum</i>	Native Frangipani	8	3	3	
<i>Jacaranda mimosifolia</i>	Jacaranda	8	10		C, Can
<i>Jagera pseudorhus</i>	Foam Bark Tree	6	3	3	PWR, Can
<i>Leptospermum longifolium</i>	Weeping Tea Tree	5	5		
<i>Leptospermum petersonnii</i>	Lemon Scented Tea Tree	4	2	3	C
<i>Lophostemon confertus</i>	Brush Box	10	6	3	PWR, C
<i>Melaleuca quinquinervia</i>	Paperbark Tea Tree	8	3	3	C
<i>Melaleuca viridifolia</i>	Broad Leaved Paperbark	4			

Continued over page.

2. GENERAL LAND USE AND DEVELOPMENT CODES

BOTANICAL NAME	COMMON NAME	Height	Spread (m)	Endemic (m)	Features
<i>Melicope elleryana</i>	Pink Euodia	6	4	3	C
<i>Pandanus tectorius</i>	Screw Pine	5	4	3	PWR, C
<i>Peltophorum pterocarpum</i>	Yellow Flame Tree	8	4		
<i>Pittosporum rhombifolium</i>	White Holly	6	2	3	PWR
<i>Plumeria obtusa</i>	Frangipani	3	3		PWR, C
<i>Podocarpus elatus</i>	Plum Pine	10	4	3	
<i>Pongamia pinnata</i>	Indian Beech	8	3		PWR, C
<i>Stenocarpus sinuatus</i>	Firewheel Tree	10	4	3	
<i>Syzygium species</i>	Lilly Pilly	varies	varies	3	
<i>Terminalia cattappa</i>	Indian Almond	8	6		C, Can
<i>Waterhousea floribunda</i>	Weeping Lilly Pilly	6	4	3	PWR

6.2.3 Koala Habitats

There are a number of remnant bushland parcels throughout Maroochy Shire that are considered important habitat and corridor linkages for koalas. The planting of additional koala food trees is greatly encouraged in suitable areas and to complement these existing habitat areas.

The following is a list of koala food trees suitable for planting in Maroochy Shire.

BOTANICAL NAME	COMMON NAME
<i>Corymbia citriodora</i>	Spotted Gum
<i>Eucalyptus crebra</i>	Narrow-Leaf Red Ironback
<i>Eucalyptus drepanophylla siderophloea</i>	Queensland Grey Ironbark
<i>Eucalyptus grandis</i>	Rose Gum
<i>Eucalyptus major</i>	Grey Gum
<i>Eucalyptus microcorys</i>	Tallow Wood
<i>Eucalyptus resinifera</i>	Red mahogany
<i>Eucalyptus robusta</i>	Swamp Mahogany
<i>Eucalyptus seeana</i>	Narrow-Leaf Red Gum
<i>Eucalyptus signata</i>	Scribbly Gum
<i>Eucalyptus tereticornis</i>	Queensland Blue Gum
<i>Lophostemon confertus</i>	Brush Box