



LIST OF PLANT SPECIES

List of Plant Species

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Amendment history

This guidance document/list commenced on 9 November 2020. Amendments since this date are listed in the below table.

Version number	Amendment title	Summary of amendment	Effective date
1.0	Commencement	This guidance document was created.	Effective - 9 November 2020

1 Introduction

1.1 Application

The planting species recommended in this list are to be used in public open spaces and streetscapes under the control of Mackay Regional Council (MRC) as well as land used for “landscape buffers”.

This list has been created by MRC. It supports the development assessment process under the Mackay Region Planning Scheme 2017 (planning scheme) and Planning Act 2016 by providing further information about requirements within the planning scheme or a Planning Scheme Policy.

Note that the Mackay Waterfront Priority Development Area is not subject to the requirements of this document, however the Mackay Waterfront Priority Development Area Development Scheme may refer to this document for guidance.

1.2 Relationship with planning scheme

This document is referenced in the following locations:

- (a) Planning Scheme Policy – Landscape

1.3 Purpose

The purpose of this document is to recommend plant species that are known to perform well in the Mackay Region and are suitable for use in public open spaces and streetscapes.

1.4 Aim

The aim of the List of plant species is to encourage the use of plant species which are most likely to perform well in Mackay’s subtropical climate.

The List of plant species offers certainty and confidence for local wholesale nurseries and tree growers around plant species likely to be required for public open space projects and, consequently, for developers and contractors to have access to locally grown stock or stock hardened to withstand local climatic conditions.

1.5 Who should use this manual?

The List of plant species should be used by all stakeholders involved with planning, design, construction and maintenance of public open space in the Mackay region as well as those involved in preparing, and in the assessment of Development Applications involving public open space assets that will be transferred to MRC or applications involving the design of any Landscape Buffers.

2 Special consideration

Plants recommended in this list have been selected based on following criteria:

- Suited to the climate and environmental conditions in the Mackay Region;
- Proven performance in terms of growth habit (width, height and foliage cover), health and vigour when planted in the Mackay Region;
- Robust and an appropriate level of resilience to local pests and diseases, and able to cope with extreme subtropical weather patterns including tropical cyclones;
- Minimal risk of becoming an environmental weed i.e. exotic species able to self-propagate and invade local bushland areas.

In addition to the above street trees need to satisfy following:

- A mature height allowing the tree to be used under overhead powerlines, street lights or where space is restricted;
- The species typical level of leaf and fruit drop will not create excessive level of nuisance or require an elevated level of corrective maintenance; and
- Proven performance in conditions afforded in street settings such as planting in hard paved areas in highly modified soil conditions; and
- Do not produce large and heavy seed pods, fleshy fruit or flowers which may cause slip hazard or staining to surface finishes.
- Must be grown with single clear trunk.

Similarly, plant selection for public open spaces which will be used within or adjacent to natural settings should adhere to regional ecosystems (RE). The plant selection will ultimately depend on current and preclearing RE mapping and site-specific conditions such as aspect, topography, existing vegetation, soil condition and availability of appropriate plants. Visit Queensland Government website to access RE mapping tool: <https://www.qld.gov.au/>

3 Variations

MRC will consider approving the use of different plant species from those prescribed in this manual when it can be demonstrated that the proposed plant species can satisfy all the above selection criteria to be able to perform well in Mackay Region.

Development applications which propose variations in plant selection must provide justification on how they address the abovementioned requirements to Council who will assess the proposed variations and approve or decline based on merit.

Proposed plants that are not listed in this document **must not** be environmental weeds listed on *Department of Agriculture and Fisheries Queensland* (<https://www.daf.qld.gov.au/>) or listed in *Mackay Regional Council Biosecurity Plan: 2017 – 2021* as prohibited or restricted plants are not to be used in open spaces of Mackay Region.

4 Relationship

The List of plant species is to be read in conjunction with the following MRC Documents:

- a) Mackay Region Planning Scheme 2017.
- b) Planning scheme policy – landscape.
- c) Council specifications and standard drawings.

Appendix A – Explanatory notes & definitions

Vegetation layers

- **Canopy** - the uppermost branches of the trees, forming a continuous layer of foliage.
- **Understory** - an underlying layer of vegetation between the canopy and the groundcover.

Plant type

- **Trees** – a woody perennial plant, typically having a single stem or trunk growing to a considerable height and bearing lateral branches at some distance from it.
 - **Small trees** – mature height of less than 8m and suitable where space is limited, and/or overhead or underground services are present.
 - **Medium trees** – mature height of between 8m – 15m generally with a more finite growth habit than large trees. Require adequate space for optimal development, but more adaptable to special restrictions than larger trees.
 - **Tall trees** – mature height greater than 15m and suitable where space is ample.
- **Palm tree** - an unbranched evergreen tree, with a crown of very long feathered or fan-shaped leaves, and typically having old leaf scars forming a regular pattern on the trunk.
- **Shrub** - a woody or semi-woody plant which is smaller than a tree and has several main stems arising at or near the ground.
- **Perennials** - herbaceous plant that lives more than two years. The term is also widely used to distinguish plants with little or no woody growth from trees and shrubs, which are also technically *perennials*.
- **Climbing plant/Climber** - plant which vines, or other parts naturally grow vertically by supporting its weight on a tree, wall, fence or trellises. Some are also suitable as groundcovers.
- **Groundcover** - any type of plant that covers a vast amount of ground. Ground cover plants are usually short, rapid-growing perennials that don't require a lot of soil.
- **Sedges and rushes** - a grass-like plants growing typically in a wet ground.
- **Macrophyte** – an aquatic plant that grows in or near water and is either emergent, submergent, or floating.
 - **Submerged** – underwater plants that grow with their foliage totally submerged under water.
 - **Emergent** – plants with foliage both under the water and also on or above the water surface.
 - **Amphibious** – plants capable of living both on land and in the water.
- **Turf** – grass maintained at a short relatively even length, used as a groundcover or lawn.

Plant name

- **Botanical name** – formal scientific name in Latin which is unique to each plant species around the world.
- **Common name** – plant name used by local people and can be very different from region to region.

Plant origin

- **Mackay region native plant** - a native plant naturally occurring in the Mackay region.
- **Australian native plants** – species native to Australia, but not locally native to the Mackay region.
- **Exotic plant** – specie not native to Australia.
- **Cultivar (cultivated variety)** - plant raised in cultivation which differ sufficiently from their wild ancestors or, if taken into cultivation from the wild, are worthy enough of distinction from wild populations for horticultural purposes to merit special names.

Plant size

Mature **heights** and **widths** of plants shown in the tables are indicative due to natural plant variation, planting location and site conditions. Many Australian native plants are much smaller in cultivation than in their natural habitat. The table shows maximum likely size in cultivation.

Planting zones

- **Coastal** – areas immediately adjacent to the coast and subject to salt-laden winds.
- **Inland** – areas distanced from the foreshore which afford medium to full protection from salt-laden winds.
- **Riverine** – area immediately adjacent to banks of river, wetland and deep-water habitats associated with nontidal flowing water.
- **Pool** – area of a water body within a depth between 1.5 – 0.5 m below permanent pool water level.
- **Deep marsh** – area of a water body within a depth between 0.5 – 0.35 m below permanent pool water level.
- **Shallow marsh** - area of a water body within a depth between 0.2 – 0 m below permanent pool water level.
- **Lower batters** - area immediately adjacent to the water body and is permanently wet.

Landscape use

- **Recreational Park** – species suitable to be used in one or more of the following spaces: large recreational spaces, conservation reserves, bush regeneration, shade, feature, habitat, cultural or memorial significance. Most large trees which are not suitable for roadside/streetscape aspect will be suited to parks and large road reserves where constraints are fewer.
- **Nature strip/median planting** – species suitable to be used on a public land between the paved footpath and the kerb or in the road medians that are not providing conflicts with sightlines or pedestrian access at mature height and spread and are low growing species to a maximum height of 500mm.
- **Buffer planting** – species suitable for planting in linear strips in urban environments. Buffers provide visual screening, reduce noise and provide privacy for properties.
- **Signature plants** – species suitable to be used for themed or character planting with the aim to enhance individual local community identity. These are the species which will complement locality or street name, or have a cultural heritage value, etc.
- **Revegetation planting** – species suited for habitat restoration i.e. to restore cleared or degraded areas to the condition they were in before disturbance. Species are to be predominantly Mackay region native plants.
- **Water Sensitive Urban Design (WSUD) planting** - species suitable to be planted in constructed wetlands, bioretention/infiltration basins, naturalised/ infiltration swales, raingardens. Species are to be predominantly Mackay region native plants.

Plant habit

Plant habit is captured only for street trees.

- **Blossom** – tree species which flowers have an eye-appealing impact within a streetscape.
- **Deciduous** – tree species which are shedding their old foliage annually.
- **Semi-deciduous** – tree species that lose their foliage for a very short period, when old leaves fall off and new foliage growth is starting.

Plant root system

- **Extensive root system** – tree species which have extensive root system and could therefore pose a significant risk of damaging concrete hardstands and footpaths or underground infrastructure (e.g. water, sewer, stormwater, Telstra, Ergon, NBN). To reduce the risk

minimum planting distance from any infrastructure (in meters) for certain tree species has been recommended.

Soil type

- **Sandy soil** – well-drained soil, low in organic matter and may be alkaline in soil pH.
- **Alluvial soil** – well-drained fine-grained fertile soil deposited by water flowing over flood plains or in river beds.
- **Clay Soil** - a soil that contains a high percentage of fine particles and becomes sticky when wet, relatively fertile and poorly drained.
- **Skeletal soil** – a soil that contains 35% or more of rock fragments, cobbles, gravel, with shallow depths (less than 500mm). Poor in organic matter and well-drained.

Plant tolerance

Plant tolerance to soil compaction and/or water content has been captured only for understory planting.

- **Drought tolerant** – once established plant tolerates lengthy periods of little to no water.
- **Well drained** – plant tolerates free draining soils with lower organic matter content (usually sand).
- **Moist** – plant tolerates soil which is moist for lengthy periods but has reasonable drainage.
- **Poorly drained** – plant tolerates soil which is frequently to permanently boggy (often clay).
- **Compacted and/or poorly aerated** – plant tolerates soil which has been compacted and consequently poorly aerated and resulting in soil being either moisture-resistant or overly moisture-retentive (usually clays or subsoils displaced by prior site works).

Aspect

- **Full sun** - plant that require direct, unfiltered sunlight for at least 6 hours a day as a minimum amount of light to thrive.
- **Semi shade** – plant grows needs approximately 2 -3 hours of full sun (usually morning sun) per day to thrive.
- **Full shade** – plants that require only reflected, indirect light but not exposure to full sun.

Maintenance

Level of maintenance, being **low, medium and high** has been captured only for turf to inform mowing frequency regime during warm/rain season.

Definitions

- **Prohibited invasive plant** - a plant which **is not** established in Queensland but would seriously threaten Queensland's primary industries, natural environment, livestock, human health and people's livelihoods. The plant must be reported to Biosecurity Queensland within 24 hours of the sighting.
- **Restricted invasive plant** - a plant which **is** established in Queensland and seriously threatens Queensland's primary industries, natural environment, livestock, human health and people's livelihoods.
- **QLD environmental weed*** – a plant that causes or has the potential to cause negative environmental, social or economic impact in Queensland.
- **Naturalised plant** – a non-native plant that does not need human help to reproduce and maintain itself over time in an area where it is not native.
- **Regional ecosystem (RE)** - a distinct vegetation community that occurs in association with a particular combination of geology, landform and soil in a specific bioregion in Queensland.
Bioregion - a region defined by characteristics of the natural environment rather than by man-made divisions. Mackay Region is within Central Queensland Coast (CQC) bioregion.

Note:

*QLD environmental weed species which are still available commercially in Mackay region through local retail have been listed in a table in Appendix 3. The purpose of this table is to identify common plants that have now become environmental weeds in Mackay regional area, and to suggest better, alternative plants that benefit plant diversity while lessening their potential to become weeds of the future. This is also to provide more effective management of invasive plants as a weed management in public open spaces and streetscapes is costly and labour intensive.

Other

Blue dots and text in the street tree list table indicates that the specie is being currently trialled and the information on its successfulness in Mackay Region is uncertain. The planting list will be updated on a yearly basis to reflect the success rate of any trialled specie.

Appendix B – Canopy Planting

Street Trees

Botanical Name	Common Name	Origin			Size		Zone			Landscape Use					Habit			Soil Type			
		Mackay Native	Australian Native	Exotic	Height (m)	Width (m)	Coastal	Inland	Riverine	Recreational Park	Buffer	Signature	Revegetation	WSUD	Blossom	Deciduous	Semi Deciduous	Sandy	Alluvial	Clay	Skeletal
<i>Acmena hemilampra</i> Compact Form	Broadleaf Lilly Pilly		●		15	4	●	●	●	●	●						●	●		●	
<i>Brachychiton discolor</i>	Queensland Lacebark		●		15	5	●	●		●		●		●	●		●	●			
<i>Brachychiton rupestris</i>	Queensland Bottle Tree		●		15	5	●	●		●		●			●		●	●			
<i>Buckinghamia celsissima</i>	Ivory Curl Tree		●		8	5	●	●		●	●						●	●			
<i>Caesalpinia ferrea</i>	Leopard Tree			●	10	15	●	●		●	●					●	●	●			
<i>Corymbia ficifolia</i>	Dwarf Orange		●		3	3	●	●		●	●			●			●	●	●		
<i>Corymbia ficifolia</i>	Little Sweetie		●		5	5	●	●		●	●			●			●	●	●		
<i>Corymbia ficifolia</i>	Lollypops		●		5	5	●	●		●	●			●			●	●	●		
<i>Corymbia ficifolia</i>	Summer Beauty		●		6	5	●	●		●	●			●			●	●	●		
<i>Cupaniopsis anacardioides</i> **	Tuckeroo	●			8	5	●	●	●	●	●		●				●	●			
<i>Deplanchea tetraphylla</i>	Golden Banquet Tree		●		12	3	●	●		●	●	●		●		●	●	●			
<i>Euroschinus falcata</i> var. <i>falcata</i> **	Ribbonwood	●			17		●	●		●							●	●	●	●	
<i>Glochidion ferdinandi</i> **	Cheese Tree	●			10	5	●	●	●	●		●						●			
<i>Fraxinus graffitii</i>	Evergreen Ash			●	7	4	●			●				●			●	●	●		
<i>Hibiscus tiliaceus</i> 'Rubra'	Red Cottonwood		●		6	6	●	●	●	●				●			●	●	●		
<i>Melaleuca linariifolia</i>	Snow-in-Summer		●		8			●	●	●				●			●	●	●	●	
<i>Melaleuca viminalis</i> **	Weeping Bottlebrush	●			9	3	●	●	●	●		●		●			●	●	●	●	
<i>Melaleuca viridiflora</i> var. <i>attenuata</i> **	Weeping Swamp Paperbark	●			8		●		●	●	●	●	●				●	●	●		
<i>Saraca thaipingensis</i>	Yellow Saraca			●	6	5		●		●	●			●				●			
<i>Sesbania grandiflora</i>	Hummingbird Tree			●	7	3				●				●		●	●	●			
<i>Schotia brachypetala</i>	Parrot Tree			●	8	5		●		●	●			●	●		●	●			
<i>Syzygium angophoroides</i>	Yarrabah Satinash		●		6	5		●		●						●		●			
<i>Syzygium australe</i> **	Creek Cherry	●			8	6	●	●	●	●		●	●				●	●			
<i>Syzygium luehmannii</i>	Small-Leaf Lilly Pilly		●		7	3	●		●	●								●	●		
<i>Tabebuia pallida</i>	Pink Trumpet Tree			●	7	5				●	●			●		●	●	●	●		
<i>Tabebuia argentea</i>	Silver Trumpet Tree			●	10	6		●		●					●	●	●	●	●		
<i>Xanthostemon chrysanthus</i>	Golden Penda		●		8	5		●	●	●	●			●		●	●	●			
<i>Cryptocarya triplinervis</i> **	Brown Laurel	●			10	4		●	●			●					●	●			
<i>Flindersia australis</i> **	Australian Teak	●			15	4		●				●					●	●			
<i>Flindersia collina</i>	Leopard Ash		●		4	4		●		●							●	●			
<i>Magnolia champaca</i>	Golden Champak			●	10	5				●	●						●	●			
<i>Mimusops elengi</i> **	Red Coonoo	●			10	6	●	●	●	●		●					●	●		●	
<i>Podocarpus elatus</i> **	Brown Pine	●			11	5		●		●		●					●	●		●	

** Grown as tube stock in Mackay Natural Environment Centre or Mackay Botanic Gardens

STREET TREES



Tabebuia pallida



Tabebuia argentea



Buckinghamia celsissima



Melaleuca viminalis



Xanthostemon chrysanthus



Hibiscus tiliaceus 'Rubra'



Cupaniopsis anacardioides



Flindersia australis

Open Spaces Trees

Botanical Name	Common Name	Origin			Size		Zone			Landscape Use					Root System		Soil Type			
		Mackay Native	Australian Native	Exotic	Height (m)	Width (m)	Coastal	Inland	Riverine	Recreational Park	Buffer	Signature	Revegetation	WSUD	Extensive	Distance from Services (m)	Sandy	Alluvial	Clay	Skeletal
<i>Acacia leptocarpa</i> **	North Coast Wattle	●			8		●				●		●			●			●	
<i>Acacia mangium</i> **	Brown Salwood	●			25	10	●	●	●	●			●				●			
<i>Acacia oraria</i> **	Coastal Wattle	●			7	4	●			●	●		●				●	●	●	
<i>Acacia simsii</i> **	Sim's Wattle	●			2	1	●			●	●		●				●	●		
<i>Acronychia laevis</i> **	Lemon Aspen	●			8	5	●		●	●			●				●	●	●	
<i>Agathis robusta</i>	Queensland Kauri Pine		●		25	3		●		●				●	10	●	●	●	●	
<i>Allocasuarina littoralis</i> **	Black She-Oak	●			8	4		●	●	●			●				●	●	●	
<i>Alphitonia excelsa</i> **	Soap Tree	●			6	4	●	●			●		●				●	●	●	
<i>Angophora costata</i>	Smooth-Barked Apple		●		20	10	●	●		●							●	●	●	
<i>Araucaria bidwillii</i>	Bunya Bunya Pine		●		20	10		●						●					●	
<i>Araucaria heterophylla</i>	Norfolk Island Pine			●	22	15	●			●	●			●	10	●	●			
<i>Archidendron lucyi</i>	Scarlet Bean		●		7	3		●	●	●			●				●			
<i>Arytera divaricata</i> **	Rose Tamarind	●			12	5		●	●	●	●		●					●	●	
<i>Atractocarpus fitzalanii</i> **	Brown Gardenia	●			6	5	●	●	●	●			●				●	●	●	
<i>Backhousia citriodora</i> **	Lemon-Scented Myrtle	●			8	4		●	●	●	●		●					●	●	
<i>Banksia integrifolia subsp. compar</i> **	Coastal Banksia	●			6	5	●						●				●			
<i>Banksia integrifolia var. integrifolia</i> **	Coastal Banksia	●			10	4	●			●	●		●		4		●		●	
<i>Banksia serrata</i>	Old-Man Banksia		●		3	3	●	●		●				●	4		●		●	
<i>Brachychiton compactus</i>	Whitsunday Bottle-Tree		●		5	3	●	●		●							●	●	●	
<i>Brachychiton discolor</i> **	Lacebark	●			10	5		●		●	●		●				●	●	●	
<i>Calodendrum capense</i>	Cape Chestnut			●	10	6	●	●	●	●	●				1	●	●	●	●	
<i>Calophyllum inophyllum</i> **	Beach Calophyllum	●			10	5	●			●			●				●		●	
<i>Capparis lucida</i> **	Coastal Caper	●			3		●	●		●	●		●				●	●	●	
<i>Carallia brachiata</i> **	Freshwater Mangrove	●			10			●	●				●				●			
<i>Castanospermum australe</i>	Black Bean		●		16	13	●	●	●	●				●	10					
<i>Casuarina cunninghamiana</i> **	River She-Oak	●			15	6		●	●	●	●		●	●	20		●	●		
<i>Casuarina equisetifolia</i> **	Coastal She-Oak	●			8	4	●			●	●		●				●			
<i>Ceratonia siliqua</i>	Carob Tree			●	10	5	●	●						●	6	●	●		●	
<i>Chionanthus ramiflorus</i> **	Northern Olive	●			8	3	●	●	●	●			●	●			●	●		
<i>Cleistanthus apodus</i>	Weeping Cleistanthus		●		7	3	●		●	●							●	●		
<i>Colvillea recemosa</i>	Colville's Glory			●	15	8	●	●		●	●						●	●		
<i>Commersonia bartramia</i> **	Brown Kurrajong	●			15	10		●	●	●				●			●	●	●	

Botanical Name	Common Name	Origin			Size		Zone			Landscape Use					Root System		Soil Type			
		Mackay Native	Australian Native	Exotic	Height (m)	Width (m)	Coastal	Inland	Riverine	Recreational Park	Buffer	Signature	Revegetation	WSUD	Extensive	Distance from Services (m)	Sandy	Alluvial	Clay	Skeletal
<i>Corymbia intermedia</i> **	Pink Bloodwood	2			30	13	2	●		●			2			2	2		●	
<i>Corymbia ptychocarpa</i>	Swamp Bloodwood		●		10	4	●		●	●	●					●	●	●		
<i>Corymbia tessellaris</i> **	Moreton Bay Ash	●			18	15	●	●	●	●	●	●	●			●	●			
<i>Darlingia darlingiana</i>	Brown Silky-Oak		●		8	4		●		●							●			
<i>Delarbrea michieana</i>	Blue Nun		●		6	3		●	●	●							●			
<i>Dillenia alata</i>	Queensland Red Beach		●		10	8	●	●		●						●	●			
<i>Diospyros geminata</i> **	Scaly Ebony	●			6	3	●	●	●	●	●	●				●			●	
<i>Diploglottis obovata</i> **	Native Tamarind	●			8			●	●	●	●	●				●	●			
<i>Drypetes deplanchei</i> **	Yellow Tulipwood	●			8	3	●	●	●	●	●	●				●	●			
<i>Elaeocarpus eumundi</i> **	Eumundi Quandong	●			10	8	●	●	●	●	●	●				●	●	●	●	
<i>Elaeocarpus grandis</i> **	Blue Quandong	●			15	10		●	●			●	●				●	●		
<i>Eucalyptus fibrosa</i>	Red Ironbark		●		15			●		●				●	20	●	●		●	
<i>Eucalyptus miniata</i>	Darwin Woollybutt		●		20	6	●	●		●						●	●		●	
<i>Eucalyptus phoenicea</i>	Scarlet Gum		●		12		●	●	●	●	●					●	●	●		
<i>Eucalyptus raveretiana</i> **	Black Ironbox	●			20	6	●	●	●	●		●	●			●	●			
<i>Eucalyptus scoparia</i>	Wallangara White Gum		●		12	3		●		●						●	●		●	
<i>Eucalyptus tereticornis</i> **	Queensland Blue Gum	●			30		●	●	●			●	●			●	●			
<i>Eugenia reinwardtiana</i> **	Beach Cherry	●			6	4	●				●	●				●	●		●	
<i>Euroschinus falcata</i> var. <i>falcata</i> **	Ribbonwood	●			10		●	●		●		●				●	●		●	
<i>Ficus adenosperma</i> **	Water Fig	●			15	6			●			●	●	●	20		●	●		
<i>Ficus microcarpa</i>	Curtain Tree Fig		●		20			●	●	●				●	20		●			
<i>Ficus racemosa</i> **	Cluster Fig	●			12	6	●	●	●	●		●		●		●	●			
<i>Flindersia brayleyana</i>	Queensland Maple		●		8	4	●	●		●	●					●	●			
<i>Flindersia collina</i>	Broadleaf Leopard Tree		●		4	4		●		●		●								
<i>Flindersia iffaiana</i>	Cairns Hickory		●		25	10	●	●	●	●	●					●	●			
<i>Ganophyllum falcatum</i> **	Scaly Bark Ash	●			10	5	●	●	●	●	●	●	●			●	●			
<i>Grevillea hilliana</i> **	Hill Silky Oak	●			6	4		●	●	●	●	●				●	●		●	
<i>Gymnostoma australianum</i>	Daintree Pine		●		6	3		●	●	●	●						●		●	
<i>Hakea salicifolia</i>	Willow-Leaved Hakea		●		8					●	●						●			
<i>Handroanthus impetiginosus</i>	Pink Trumpet Tree			●	10	5		●		●				6		●				
<i>Harpephyllum caffrum</i>	Wild Plum			●	8	5	●	●	●	●	●			●	20		●			
<i>Harpullia hillii</i>	Blunt-Leaved Tulipwood		●		8	4				●	●					●	●			
<i>Harpullia pendula</i> **	Tulipwood	●			7	4	●	●	●	●	●	●				●	●			
<i>Helitropium foertherianum</i> **	Octopus Bush	●			3	5	●					●				●			●	
<i>Homalanthus populifolius</i> **	Queensland Bleeding Heart	●			5	4		●	●			●		●	4		●			

Botanical Name	Common Name	Origin			Size		Zone			Landscape Use					Root System		Soil Type			
		Mackay Native	Australian Native	Exotic	Height (m)	Width (m)	Coastal	Inland	Riverine	Recreational Park	Buffer	Signature	Revegetation	WSUD	Extensive	Distance from Services (m)	Sandy	Alluvial	Clay	Skeletal
<i>Jagera pseudorhus</i> **	Foambark Tree	●			8	5	●	●							●				●	
<i>Lagerstroemia indica</i>	Crepe Myrtle			●	5	3		●	●	●	●			●	4	●	●			
<i>Lagerstroemia archeriana</i>	Queensland Crepe Myrtle		●		10	8		●	●	●	●					●	●			
<i>Leptospermum brachyandrum</i>	Weeping Tea-Tree		●		5	3	●		●	●	●									
<i>Libidibia ferrea</i>	Leopard Tree			●	10	6		●		●	●			●	6		●			
<i>Lophostemon suaveolens</i> **	Messmate	●			25	5	●	●	●	●		●	●				●	●		
<i>Macaranga tanarius</i> **	Macaranga	●			12		●		●			●					●	●		
<i>Melia azedarach</i> **	White Cedar	●			7		●	●	●						●			●		
<i>Mallotus philippensis</i> **	Kamala Tree	●			8	4	●	●	●			●				●	●			
<i>Maniltoa lenticellata</i>	Handkerchief Tree		●		10		●	●		●	●									
<i>Maniltoa schefferi</i>	Dove Tree			●	35		●	●	●	●				●						
<i>Melaleuca (Callistemon) viminalis</i> **	Weeping Bottlebrush	●			10		●	●	●			●	●							
<i>Melaleuca bracteata</i> **	Black Tea-Tree	●			7	3	●	●		●		●		●	6	●	●	●		
<i>Melaleuca citrina</i>	Crimson Bottlebrush		●		4		●	●	●	●	●			●	4	●	●	●		
<i>Melaleuca 'Dawson River Weeper'</i>	Dawson River Weeper		●		5	3		●	●	●				●	6	●	●	●		
<i>Melaleuca dealbata</i> **	Blue Leaved Paperbark	●			22	10	●	●	●	●		●	●				●	●		
<i>Melaleuca 'Harkness'</i>	Harkness Bottlebrush		●		5	4	●	●		●				●	4	●	●	●	●	
<i>Melaleuca leucadendra</i> **	White Tea-Tree	●			21	18	●	●	●	●		●	●	●	20		●			
<i>Melaleuca nervosa</i> **	Paperbark	●			4	3	●	●	●	●	●			●	6	●	●		●	
<i>Melaleuca paludicola</i> **	Eungella Bottlebrush	●			5	3		●	●	●	●	●		●	6		●	●		
<i>Melaleuca salignus</i>	Willow Bottlebrush		●		7	5	●	●	●	●	●				6	●	●	●	●	
<i>Melaleuca viridiflora 'Burgundy'</i>	Melaleuca Burgundy		●		8			●	●	●	●	●		●	6	●	●			
<i>Melaleuca viridiflora var. attenuata</i> **	Weeping Swamp Paperbark	●			8		●		●	●	●	●	●			●	●			
<i>Melicope elleryana</i> **	Pink Evodia	●			10		●	●	●	●		●	●			●	●			
<i>Mischocarpus pyriformis subsp. pyriformis</i>	Pear Fruited Tamarind		●		16	8	●		●	●										
<i>Nauclea orientalis</i> **	Leichhardt Tree	●			20	20	●	●	●	●		●	●	●	30		●			
<i>Olea paniculata</i> **	Australia Olive	●			15			●		●		●		●	6		●			
<i>Pararchidendron pruinosum</i> **	Snow Wood	●			8	3			●	●	●		●				●			
<i>Peltophorum pterocarpum</i>	Yellow Flame Tree			●	15	10		●		●				●		●	●		●	
<i>Phyllanthus cuscutiflorus</i>	Pink Phyllanthus		●		5			●	●	●	●						●	●		●
<i>Pittosporum ferrugineum</i> **	Rusty Pittosporum	●			10	6	●		●	●	●		●				●	●		●
<i>Planchonia careya</i> **	Cocky Apple	●			7	3	●	●	●	●		●	●			●	●	●	●	
<i>Pleiogynium timorense</i> **	Burdekin Plum	●			12	7	●	●	●	●		●					●	●		
<i>Polyalthia longifolia 'Pendula'</i>	Weeping Mast Tree			●	30	3				●						●	●			
<i>Saraca thaipingensis</i>	Yellow Saraca			●	6	5		●		●	●									

Botanical Name	Common Name	Origin			Size		Zone			Landscape Use					Root System		Soil Type			
		Mackay Native	Australian Native	Exotic	Height (m)	Width (m)	Coastal	Inland	Riverine	Recreational Park	Buffer	Signature	Revegetation	WSUD	Extensive	Distance from Services (m)	Sandy	Alluvial	Clay	Skeletal
<i>Scolopia braunii</i> **	Flintwood	●			15	5	●	●	●	●	●		●				●	●	●	●
<i>Stenocarpus sinuatus</i> **	Wheel Of Fire	●			10	3		●		●	●		●		●	4		●	●	●
<i>Sterculia quadrifida</i> **	Peanut Tree	●			10	4	●	●	●	●		●					●	●		●
<i>Syzygium alliligneum</i>	Onionwood		●		25	18	●	●		●	●									
<i>Syzygium angophoroides</i>	Yarrabah Satinash		●		6	5	●	●		●	●							●		
<i>Syzygium australe</i> **	Creek Cherry	●			8	6			●				●					●		
<i>Syzygium hemilampra</i>	Malay Apple		●		30	15	●	●		●										
<i>Syzygium malaccense</i>	Malay Rose Apple		●		15	10		●		●	●									
<i>Syzygium oleosum</i> **	Blue Lilly-Pilly	●			9	3			●	●	●		●						●	
<i>Syzygium tierneyanum</i>	River Cherry		●		12	6		●	●	●								●	●	
<i>Tabebuia ochracea</i>	Greater Golden Trumpet Tree			●	8	6		●		●				●			●	●		
<i>Tabebuia rosea</i>	Pink Trumpet Tree			●	25	8											●	●	●	
<i>Tectona grandis</i>	Teak			●	14	10		●	●	●				●	20					
<i>Terminalia muelleri</i> **	Mueller's Damson	●			8	6	●			●		●					●			
<i>Terminalia sericocarpa</i> **	Damson	●			15	8		●	●	●			●					●	●	
<i>Thespesia populnea</i> **	Tulip Tree	●			10		●		●	●			●	●				●	●	
<i>Waterhousea floribunda</i> **	Weeping Lilly-Pilly	●			10	5			●	●	●		●	●				●		
<i>Actephila championiae</i> **	Champion Actephila	●			8			●					●							
<i>Brachychiton bidwillii</i>	Little Kurrajong		●		8	4	●	●		●	●			●				●		●
<i>Eucalyptus moluccana</i> **	Grey Box	●			15		●	●		●			●					●	●	
<i>Euroschinus falcata</i> var. <i>angustifolia</i> **	Ribbonwood	●			10			●		●			●					●	●	●
<i>Flindersia australis</i> **	Australian Teak	●			15	4		●					●					●	●	
<i>Flindersia maculosa</i> **	Leopardwood	●			10	5		●		●			●					●		●
<i>Flindersia schottiana</i> **	Bumpy Ash	●			8			●	●	●	●		●					●	●	●
<i>Araucaria cunninghamii</i> **	Hoop Pine	●			30	20	●	●	●	●	●			●	10					●
<i>Brachychiton populneus</i> subsp. <i>trilobus</i> **	Kurrajong	●			20			●		●								●	●	
<i>Brachychiton rupestris</i> **	Queensland Bottle Tree	●			15	7		●		●								●	●	●
<i>Cassia</i> sp. (<i>Paluma Range</i>)	Golden Shower		●		6	3	●	●		●	●							●	●	
<i>Cassia brewsteri</i> **	Leichhardt Bean	●			10			●		●		●						●	●	
<i>Cassia tomentella</i> ** (syn. <i>C. brewsteri</i> var. <i>tomentella</i>)	Velvet Bean	●			12	2		●		●	●		●					●		●
<i>Dimorphocalyx australiensis</i> **	Shiptons Glory	●			6	4		●		●	●		●							
<i>Erythrina vespertilio</i> **	Batswing Coral Tree	●			10			●		●	●		●							
<i>Corymbia maculata</i>	Spotted Gum		●		15		●	●		●	●							●	●	●
<i>Eucalyptus resinifera</i> **	Red Mahogany	●			45			●										●		
<i>Ficus benjamina</i>	Weeping Fig		●		15	15	●	●	●	●		●		●	20			●	●	●

Botanical Name	Common Name	Origin			Size		Zone			Landscape Use					Root System		Soil Type			
		Mackay Native	Australian Native	Exotic	Height (m)	Width (m)	Coastal	Inland	Riverine	Recreational Park	Buffer	Signature	Revegetation	WSUD	Extensive	Distance from Services (m)	Sandy	Alluvial	Clay	Skeletal
<i>Ficus microcarpa</i> var. <i>hillii</i>	Weeping Fig		●		20	12		●	●	●	●				●	20		●		
<i>Hymenosporum flavum</i> **	Native Frangipani	●			10	3	●	●	●	●	●						●	●		
<i>Lophostemon confertus</i> **	Queensland Brush Box	●			10	5		●	●	●	●		●				●	●		
<i>Melaleuca trichostachya</i> **	Paperbark	●			10			●	●		●		●				●	●		
<i>Plumeria obtusa</i>	Evergreen Frangipani			●	8	5		●		●							●	●		●
<i>Syzygium smithii</i> ** (syn. <i>Acmena smithii</i>)	Lilly-Pilly	●			8	4							●		●	20	●	●	●	

** Grown as tube stock in Mackay Natural Environment Centre or Mackay Botanic Gardens

Palm Trees

Botanical Name	Common Name	Origin			Size		Zone			Landscape Use					Root System		Soil Type			
		Mackay Native	Australian Native	Exotic	Height (m)	Width (m)	Coastal	Inland	Riverine	Recreational Park	Buffer	Signature	Revegetation	WSUD	Extensive	Distance from Services (m)	Sandy	Alluvial	Clay	Skeletal
<i>Archontophoenix alexandrae</i> **	Alexander Palm	●			15	3		●	●	●			●			6		●		
<i>Bismarckia nobilis</i>	Bismark Palm			●	10	8	●	●		●					6	●	●			
<i>Licuala ramseyi</i>	Australian Fan Palm		●		8	4	●		●	●					6	●	●			
<i>Livistona decora</i> **	Weeping Cabbage Palm	●			15	3	●	●	●	●		●	●		6	●	●			
<i>Normanbya normanbyi</i>	Black Palm		●		20	4	●	●		●					6	●	●		●	
<i>Pandanus brookei</i> **	Screw Pine	●			8				●			●	●				●	●		
<i>Pandanus cookii</i> **	Cook's Pandan	●			6	5	●	●	●			●					●	●		
<i>Pandanus tectorius</i> **	Screw Pine	●			6		●			●		●				●			●	
<i>Ptychosperma elegans</i> **	Solitaire Palm	●			10	3	●		●	●		●				●		●		
<i>Ptychosperma macarthurii</i>	Macarthur Palm		●		9	6		●	●	●				●			●	●	●	
<i>Wodyetia bifurcata</i>	Foxtail Palm		●		10	4	●	●		●				●	6	●	●		●	
<i>Livistona australis</i> **	Cabbage Tree Palm	●			25	8	●	●	●	●				●	6	●	●			

** Grown as tube stock in Mackay Natural Environment Centre or Mackay Botanic Gardens

Appendix C – Understory planting

Shrubs

Botanical Name	Common Name	Origin			Size		Zones			Aspect			Landscape Use					Tolerance				
		Mackay Native	Australian Native	Exotic	Height (m)	Width (m)	Coastal	Inland	Riverine	Full Sun	Semi Shade	Shade	Recreational Park	Buffer	Signature Plants	Revegetation	WSUD	Drought	Well Drained	Moist	Poorly Drained	Compacted
<i>Adenium obesum</i>	Desert Rose			●	3				●			●					●	●				
<i>Allamanda</i>	'Sunnee'			●	6	1				●	●							●	●			
<i>Allamanda blanchetii</i>	Purple Allamanda			●	4				●	●									●	●		
<i>Allamanda cathartica</i>	Yellow Allamanda			●	10				●	●								●	●			
<i>Alchornea thozetiana</i>	Thozet's Holly		●		3					●												
<i>Breynia oblongifolia</i> **	Coffee Bush	●			3	2	●		●	●	●		●		●	●						
<i>Brunfelsia pauciflora</i>	Yesterday-Today-Tomorrow			●	3				●	●												
<i>Callicarpa pedunculata</i> **	Velvet Leaf	●			4	2	●	●		●	●	●	●		●		●	●				
<i>Callistemon</i> 'Little John'	Little John		●		1	1			●	●							●	●	●			
<i>Carissa macrocarpa</i> 'Desert Star'	Desert Star			●	1	1		●	●			●					●	●				
<i>Clerodendrum floribundum</i> **	Lolly Bush	●					●								●			●				
<i>Clerodendrum inerme</i> **	Coastal Lollybush	●			2	2	●								●			●				
<i>Codiaeum variegatum</i>	Croton			●	2	2	●	●		●	●	●	●	●			●	●				
<i>Colubrina asiatica</i> **	Colubrina	●			2		●		●						●	●						
<i>Cordyline</i> 'Peter Buck'	Peter Buck			●			●	●		●		●		●				●				
<i>Cordyline manners-suttoniae</i> **	Giant Palm Lilly	●			5			●		●		●	●		●			●	●			
<i>Cordyline rubra</i>	Palm Lilly		●		4		●	●		●		●	●	●				●	●			
<i>Crossandra sp.</i>	Fireglow			●	1	1			●	●								●	●			
<i>Crotalaria mitchellii</i> **	Sand Rattlepod	●			20		●								●			●				
<i>Cyathea cooperi</i>	Lacy Tree Fern		●		4	3	●	●		●	●							●				
<i>Cycas sp.</i>	Cycad varieties				3		●	●		●	●						●	●	●			
<i>Dodeonaea viscosa subsp. viscosa</i> **	Sticky Hop Bush	●			3		●	●							●			●	●			
<i>Dracaena marginata</i>	Dragon Tree			●	5	3	●	●		●	●		●				●	●				
<i>Ficus congesta</i> **	Red-Leaved Fig	●			6		●	●	●						●	●			●			
<i>Gaillardia grandiflora</i>	Blanket Flower				1				●	●							●	●				
<i>Gardenia jasminoides</i>	Cape Jasmine				2	2	●	●		●	●							●				
<i>Glycosmis trifoliata</i> **	Lime Berry	●			4	4			●	●					●			●				
<i>Graptophyllum illicifolium</i> **	Mount Blackwood Holly	●			4			●		●					●			●	●			
<i>Graptophyllum pictum</i>	Graptophyllum varieties			●	3	1	●	●		●	●							●				
<i>Grevillea</i>	'Coconut Ice'				2	2	●			●	●						●	●	●			
<i>Grevillea</i>	'Moonlight'				5	4	●			●	●						●	●	●			

Botanical Name	Common Name	Origin			Size		Zones			Aspect			Landscape Use					Tolerance				
		Mackay Native	Australian Native	Exotic	Height (m)	Width (m)	Coastal	Inland	Riverine	Full Sun	Semi Shade	Shade	Recreational Park	Buffer	Signature Plants	Revegetation	WSUD	Drought	Well Drained	Moist	Poorly Drained	Compacted
<i>Grevillea</i>	'Robyn Gordon'				2	2	●			●	●						●	●	●			
<i>Grevillea</i>	'Sandra Gordon'				8	5	●			●	●						●	●	●			
<i>Grevillea</i>	'Strawberries and Cream'				2	2	●			●	●						●	●	●			
<i>Grevillea rosmarinifolia</i>	'Rosemary'				2	2	●			●	●						●	●	●			
<i>Hibiscus</i>	'Rio Clara'				2	2				●	●							●				
<i>Hibiscus heterophyllus</i> **	Native Rosella	●			6		●	●			●	●		●				●	●	●		
<i>Hibiscus tiliaceus</i> **	Cotton Wood	●			7		●		●					●	●				●			
<i>Hovea longipes</i> **	Brush Hovea	●			3	3	●	●		●				●				●				
<i>Ixora</i>	'Coral Fire'			●	1	1				●	●		●				●	●	●			
<i>Ixora coccinea</i>	Flame of The Woods			●	2	2	●	●		●	●		●	●			●	●				
<i>Ixora</i>	'Dwarf Orange'			●	4	2	●	●		●	●		●	●	●							
<i>Justica sp. (aurea)</i>	Brazilian Plume			●	2	2		●		●	●						●	●				
<i>Kalanchoe blossfeldiana</i>	Madagascar Widow's-Thrill				1	1				●	●						●	●	●			
<i>Leptospermum 'Cardwell'</i>	Cardwell Leptospermum		●		3	3		●				●	●									
<i>Leucophyllum frutescens</i>	Lavender Lights				2	2	●			●	●						●	●				
<i>Liriope muscari 'Variegata'</i>	Lily Turf					0				●	●						●	●	●			
<i>Loropetalum sp.</i>	Plum Gorgeous			●	1	2				●	●						●	●	●			
<i>Lysiphyllum hookeri</i> **	Hookers Bauhinia	●			8	5								●								
<i>Nerium oleander</i>	Oleander			●	5	5	●	●●		●	●		●				●	●				
<i>Macaranga tanarius</i> **	Macaranga	●			5		●							●				●				
<i>Mackinlaya macrosciadea</i>	Blue Umbrella		●		1			●			●			●				●	●			
<i>Megaskepasma erythrochlamys</i>	Red Clock			●	3	3		●		●	●		●					●				
<i>Melaleuca hemisticta</i> **	Gold-Dusted Bottlebrush	●			6	6	●			●			●	●	●	●	●					
<i>Melaleuca paludicola</i> **	Eungella Bottlebrush	●			5	3		●	●				●	●	●	●	●	●	●	●		
<i>Melaleuca viridiflora var. viridiflora</i> **	Broad-Leafed Paperbark	●			7		●		●					●	●				●			
<i>Melastoma malabathricum</i> **	Native Lasiandra	●			4	2	●	●	●		●	●	●	●	●	●			●			
<i>Memecylon pauciflorum</i> **	Poor Flower Tree	●			2	2				●	●				●			●	●			
<i>Metrosideros thomasi</i>	NZ Christmas Bush			●	5	5				●	●						●	●				
<i>Morinda citrifolia</i> **	Cheese Fruit	●			7		●								●			●				
<i>Murraya ovatifoliolata</i> **	Native Mock Orange	●			4					●	●				●							
<i>Myoporum acuminatum</i> **	Coastal Boobialla	●			3		●	●	●	●	●				●	●						
<i>Nandina domestica</i>	Nandina Species		●		1	1	●	●		●	●							●				
<i>Plumeria pudica</i>	Hammerhead Fragipani			●	5					●								●				
<i>Polygala myrtifolia x oppositifolia</i>	Little Bibi		●		1	1		●		●	●							●				

Botanical Name	Common Name	Origin			Size		Zones			Aspect			Landscape Use					Tolerance				
		Mackay Native	Australian Native	Exotic	Height (m)	Width (m)	Coastal	Inland	Riverine	Full Sun	Semi Shade	Shade	Recreational Park	Buffer	Signature Plants	Revegetation	WSUD	Drought	Well Drained	Moist	Poorly Drained	Compacted
<i>Premna serratifolia</i> **	Creek Premna	●			7	6		●	●	●	●	●	●		●	●	●	●	●			
<i>Raphiolepis indica</i>	Cosmic Pink/White			●	2	2	●	●		●	●						●	●	●			
<i>Rosmarinus officinalis</i>	Rosemary		●		2		●	●		●							●	●				
<i>Ruellia colorata</i>	Red Ruellia			●	2					●		●						●	●			
<i>Scaevola taccada</i> **	Sea Lettuce	●			3		●			●	●	●			●			●	●			
<i>Schefflera arboicola</i>	'Madam De Smet'				2	1				●	●						●	●	●			
<i>Sophora tomentosa</i> **	Silver Bean	●			3		●			●					●			●	●			
<i>Strelitzia regina</i>	Bird of Paradise			●	2	2	●	●		●	●	●	●	●			●	●				
<i>Strobilanthes dyerianus</i>	Persian Shield			●	1			●		●	●							●	●			
<i>Synostemon albiflorus</i>	Showy Sauropus		●		2			●		●	●				●			●	●	●		
<i>Syzygium 'Aussie Boomer'</i>	Lilly Pilly 'Aussie Boomer'			●	3	2	●	●		●	●	●	●				●	●	●			
<i>Syzygium 'Resilience'</i>	Lilly Pilly 'Resilience'			●	5	3	●	●		●	●	●	●				●	●				
<i>Syzygium wilsonii</i>	Powderpuff Lilly Pilly		●			3	●	●		●	●	●	●				●	●				
<i>Tibouchina urvilleana</i>	Purple Glory Tree				6	3				●	●							●	●			
<i>Vitex trifolia</i> **	Common Blue Vitex	●			3	3	●								●			●	●			
<i>Wrightia antidysenterica</i>	Arctic Snow			●	1	1				●	●							●	●			
<i>Zamia furfuracea</i>	Cardbord Palm			●	1			●		●	●	●	●					●	●	●		
<i>Argusia argentea</i> **	Octopus Bush	●			4		●								●			●	●			
<i>Acacia holosericea</i> **	Silky Wattle	●			4	3	●	●		●		●	●		●		●	●				
<i>Banksia spinulosa var. collina</i> **	Hairpin Banksia	●			2																	
<i>Cupaniopsis wadsworthii</i> **	Duckfoot	●			3	2		●		●	●	●	●		●		●	●				
<i>Pittosporum revolutum</i> **	Rough Fruited Pittosporum	●			3	3	●	●		●		●	●		●		●					
<i>Polyscias australiana</i> **	Ivory Basswood	●			6	3		●				●	●		●							
<i>Xanthorrea johnsonii</i> **	Grass Tree	●			5	2				●	●							●				

** Grown as tube stock in Mackay Natural Environment Centre or Mackay Botanic Gardens

Herbaceous

Botanical Name	Common Name	Origin			Size		Zones			Aspect			Landscape Use					Tolerance					
		Mackay Native	Australian Native	Exotic	Height (m)	Width (m)	Coastal	Inland	Riverine	Full Sun	Semi Shade	Shade	Recreational Park	Buffer	Signature Plants	Revegetation	Nature Strip / Median	WSUD	Drought	Well Drained	Moist	Poorly Drained	Compacted
<i>Agleonema sp.</i>	Agleonema sp.			●		0.5		●			●	●								●			
<i>Alocasia sp.</i>	Alocasia sp.			●	1	0.5		●			●	●								●	●		
<i>Alpinia caerulea**</i>	Native Ginger	●			2	1		●			●	●	●	●	●					●	●		
<i>Aspidistra elatior</i>	Cast Iron Plant			●		0.1		●	●			●	●	●		●				●	●		
<i>Blechnum 'Silver Lady'</i>	Silver Lady			●	1.2	1	●				●	●	●	●						●	●		
<i>Brachycome multifida</i>	Swan River Daisy		●			0.5		●		●	●									●	●		
<i>Crinum angustifolium**</i>	Field Lilly	●				0.5			●						●		●						
<i>Crinum flaccidum**</i>	Field Lilly	●			1	1	●		●						●		●						
<i>Crinum pedunculatum**</i>	Swamp Lilly	●			2		●	●	●	●	●				●	●	●			●	●		
<i>Curcuma australasica</i>	Cape York Lily		●		0																		
<i>Dianella caerulea**</i>	Blue Flax-Lily	●			0.6		●	●	●		●		●		●		●	●	●	●			
<i>Dianella longifolia**</i>	Smooth Flax-Lily	●			0.8		●	●	●		●	●			●		●		●	●			
<i>Dietes bicolor</i>	Peacock Flower			●	1	1.5																	
<i>Dietes grandiflora</i>	Large Wild Iris			●	1.2	1.2				●	●								●	●	●		
<i>Dietes iridoides</i>	Butterfly Iris			●	1.2	0.9				●	●								●	●	●		
<i>Erigeron glaucus</i>	Seaside Daisy			●	0.6	0.5		●		●	●									●			
<i>Hemigraphis sp.</i>	Hemigraphis			●				●			●	●								●			
<i>Hymenocallis carbaea</i>	Variiegated Spider Lily				0.6	0.3				●	●									●	●		
<i>Iris domestica</i>	Leopard Lily			●	0.7			●		●	●		●			●			●	●			
<i>Lavandula augustifolia</i>	Lavender			●	1	0.6		●		●										●			
<i>Lomandra 'Echidna'</i>	Echidna Grass		●		0.3	0.5	●	●		●	●		●			●			●	●			
<i>Lomandra confertifolia**</i>	Lomandra Confertifolia	●			0.4	0.7	●	●		●	●		●			●			●	●	●		
<i>Lomandra longifolia x confertifolia subsp. pallida</i>	Lime Tuff Lomandra			●	0.9	0.8	●	●		●	●								●	●			
<i>Lomandra multiflora**</i>	Multi-Flower Mat-Rush	●			0.5	0.3				●	●				●				●	●			
<i>Microsorium punctatum</i>	Calves Tongue		●		1.2			●				●	●						●	●	●		
<i>Ophiopogon japonicus</i>	Mondo Grass			●	0.2	0.2				●	●	●	●	●		●			●	●	●		
<i>Ophiopogon japonicus Variegata</i>	Mondo Grass Variegated			●	0.2	0.2						●	●	●		●			●	●	●		
<i>Orthosiphon aristatus</i>	Cat's Whiskers			●	1.5	1		●		●	●		●						●	●			
<i>Peperomia sp.</i>	Peperomia Sp.			●		0.3		●			●	●								●			
<i>Philodendron Xanadu</i>	Xanadu			●	0.6	0.6				●	●	●	●			●			●	●	●		
<i>Plectranthus diversus**</i>	Native Coleus	●							●		●	●	●			●							
<i>Plectranthus graveolens</i>	Bush Basil		●		1.5	2					●	●							●	●			
<i>Plectranthus sp.</i>	Velvet Elvis			●	2.4	1.2		●		●	●								●	●			
<i>Spathoglottis paulinae</i>	Ground Orchid			●																			
<i>Spathiphyllum wallisii</i>	Peace Lilly			●	0.5	0.5		●			●	●	●							●	●		
<i>Tulbaghia violacea</i>	Society Garlic			●	0.3	0.5		●	●	●	●					●			●	●			

Botanical Name	Common Name	Origin			Size		Zones			Aspect			Landscape Use					Tolerance					
		Mackay Native	Australian Native	Exotic	Height (m)	Width (m)	Coastal	Inland	Riverine	Full Sun	Semi Shade	Shade	Recreational Park	Buffer	Signature Plants	Revegetation	Nature Strip / Median	WSUD	Drought	Well Drained	Moist	Poorly Drained	Compacted
<i>Wahlenbergia gracilis</i> **	Blue Bells	●													●								
<i>Ajuga australis</i> **	Australian Bugle	●			0.2	0.2			●	●	●	●			●	●			●	●			
<i>Alocasia brisbanensis</i> **	Cunjevoi	●			1.5				●	●	●				●						●		
<i>Alpinia arctiflora</i>	Pleated Ginger		●		2	1		●			●				●						●		
<i>Alpinia modesta</i>	Narrow-Leaf Ginger		●		1			●	●		●	●									●		
<i>Asplenium australasicum</i> **	Bird's Nest Fern	●			1	1		●			●	●	●	●				●	●	●			
<i>Coronidium lanuginosum</i> **	White Paper Daisy	●			0.2	0.3	●			●					●	●		●	●			●	
<i>Dianella caerulea variegata</i>	Variegated Flax Lily		●					●		●													
<i>Polia macrophylla</i> **	Large Leaf Polia	●			0.5			●	●	●	●				●					●	●		
<i>Pteridium esculentum</i> **	Bracken Fern	●						●		●	●	●	●							●	●		
<i>Xerochrysum bracteatum</i> **	Golden Everlasting	●			0.5	0.5	●	●		●		●	●	●	●	●		●	●				

** Grown as tube stock in Mackay Natural Environment Centre or Mackay Botanic Gardens

Climbers

Botanical Name	Common Name	Origin			Zones			Aspect			Landscape Use					Tolerance				
		Mackay Native	Australian Native	Exotic	Coastal	Inland	Riverine	Full Sun	Semi Shade	Shade	Recreational Park	Buffer	Signature Plants	Revegetation	Nature Strip / Median	WSUD	Drought	Well Drained	Moist	Poorly Drained
<i>Bougainvillea sp.</i>	Bougainvillea sp.			●	●	●	●	●		●	●					●	●			●
<i>Caesalpinia bonduc</i> **	Nicker Nut	●			●			●	●				●			●	●			
<i>Eustrephus latifolius</i> **	Wombat Berry	●			●	●	●	●	●				●			●	●	●		
<i>Hibbertia scandens</i> **	Snake Vine	●			●	●		●	●			●	●			●	●	●		
<i>Hardenbergia violacea</i> **	Purple Coral Pea	●			●	●		●	●		●		●			●	●			
<i>Jasminum didymum</i> **	Native Jasmine	●			●	●	●	●	●	●			●			●	●	●		
<i>Jasminum polyanthum</i>	Jasmine			●	●	●	●	●	●	●						●	●	●		
<i>Mandevilla</i>	Sundail		●		●	●		●	●	●		●				●	●			
<i>Mucuna bennettii</i>	Scarlet Jade Vine			●		●		●	●	●							●			
<i>Pandorea floribunda</i> **	Yellow Wonga Vine	●			●	●	●	●	●	●			●			●	●	●		
<i>Pandorea jasminoides</i> **	Bower of Beauty	●			●	●	●	●	●	●		●	●			●	●	●		
<i>Pandorea pandorana</i> **	Wonga Vine	●			●	●	●	●	●	●			●			●	●	●		
<i>Petrea volubilis</i>	Purple Wreath			●		●		●		●	●					●	●	●		●
<i>Stephania japonica</i> **	Tape Vine	●			●	●		●	●				●			●	●			
<i>Strongylodon macrobotrys</i>	Jade Vine			●				●	●	●						●	●			
<i>Trachelospermum jasminoides</i>	Star Jasmine			●		●		●	●	●						●	●			
<i>Vigna marina</i> **	Vigna	●			●			●					●			●	●			

** Grown as tube stock in Mackay Natural Environment Centre or Mackay Botanic Gardens

Groundcovers

Botanical Name	Common Name	Origin			Size		Zones			Aspect			Landscape Use					Tolerance					
		Mackay Native	Australian Native	Exotic	Width (m)	Height (m)	Coastal	Inland	Riverine	Full Sun	Semi Shade	Shade	Recreational Park	Buffer	Signature Plants	Revegetation	Nature Strip / Median	WSUD	Drought	Well Drained	Moist	Poorly Drained	Compacted
<i>Agave attenuata</i>	Foxtail			●	1	0.6	●	●		●	●					●		●	●	●			
<i>Aneilema acuminatum</i> **	Pointed Aneilema	●			1	0.5			●	●	●	●			●			●	●	●	●	●	●
<i>Artanema fimbriatum</i> **	Native Snapdragon	●			1	1		●	●		●				●				●	●	●		
<i>Bromeliaceae sp.</i>	Bromeliads			●			●	●		●	●	●				●		●	●				
<i>Canavalia rosea</i> **	Beach Bean	●					●			●		●			●			●	●				
<i>Canavalia sericea</i> **	Red-Flowered Beach Bean	●					●	●		●		●			●	●		●	●				
<i>Carpobrotus glaucescens</i> **	Pigface	●			1	0.3	●			●					●	●		●	●				
<i>Casuarina glauca</i> 'Cousin It'	Cousin It		●					●		●		●						●	●				
<i>Cuphea hyssopifolia</i> Mauve	False Heather																						
<i>Chrysocephalum apiculatum</i> **	Yellow Buttons	●			0.5	1	●			●		●			●			●	●	●			
<i>Eustrephus latifolius</i> **	Wombat Berry	●					●								●				●				
<i>Evolvulus pilosus</i>	Dwarf Morning Gory			●	1	0.3	●	●		●	●							●	●	●			●
<i>Gazania tomentosa</i>	Silver Gazania			●		2				●	●							●	●				
<i>Gardenia 'Radicans'</i>	Prostate Gardenia			●	1	1	●	●		●		●				●			●	●			
<i>Gazania rigens</i>	Coastal Gazania			●	1	0.3	●	●		●	●	●	●	●		●		●	●				
<i>Geitonoplesium cymosum</i> **	Scrambling Lily	●					●	●	●	●	●	●			●			●	●	●			
<i>Grevillea banksii prostrate</i>	Grevillea prostrate		●		3	0.5	●			●	●	●				●		●	●				
<i>Hypoestes floribunda</i> **	Native Hypoestes	●			0.3			●		●	●	●			●			●	●	●			
<i>Ipomoea pes-caprae</i> **	Goats Foot	●					●			●					●			●	●				
<i>Lobelia membranacea</i> **	Native Lobelia	●			1	0.2		●	●	●	●	●			●			●	●	●	●	●	●
<i>Lobelia purpurescens</i> **	Whiteroot	●			1	0.2		●	●	●	●	●			●			●	●	●	●	●	●
<i>Myoporum boninense</i> **	Coastal Boobialla	●			1	0.2	●			●		●			●	●		●	●				●
<i>Myoporum ellipticum</i>	Creeping Boobialla		●		3	0.3	●			●	●	●						●	●				
<i>Persicaria attenuata</i> **	Smartweed	●				2			●	●					●		●	●	●	●	●	●	●
<i>Phyla nodiflora</i> **	Native Phyla	●				0.3		●		●	●				●			●					
<i>Scaevola aemula</i> 'Mauve Clusters'	Fairy Fan-Flower		●		1	1	●	●		●	●	●				●		●	●	●			
<i>Scaevola calendulacea</i> **	Dune Fan-Flower	●			0	0.2	●			●		●			●			●	●				
<i>Trachelospermum 'Tricolor'</i>	Star Jasmine Tricolor			●	2	1	●			●	●	●				●		●	●				
<i>Viola hederacea</i> **	Native Violet	●			1	0.2	●	●	●	●	●	●			●	●		●	●	●	●		
<i>Vitex rotundifolia</i> **	Beach Vitex	●			1	1	●			●		●			●	●		●	●				
<i>Apowollastonia spilanthoides</i> **	Native Wedelia	●			1	1	●	●		●	●	●			●	●		●	●	●	●	●	●
<i>Commelina ensifolia</i> **	Wandering Sailor	●			1	0.3	●	●	●	●	●	●	●	●	●								

UNDERSTORY PLANTING			
			
<i>Callistemon 'Little John'</i>	<i>Syzygium wilsonii</i>	<i>Allamanda cathartica</i>	<i>Ixora sp.</i>
			
<i>Hardenbergia violacea</i>	<i>Trachelospermum jasminoides</i>	<i>Lomandra multiflora</i>	<i>Dianella caerulea</i>
			
<i>Curcuma australica</i>	<i>Xerochrysum bracteatum</i>	<i>Bromeliaceae sp.</i>	<i>Vitex rotundifolia</i>

Sedges, rushes and macrophytes

Botanical Name	Common Name	Treatment Type		Planting Density			Zone					Type		
		WSUD - Wetland	WSUD - Swale / BioBasin	Height (m)	Wetland (qty/m2)	Swale (qty/m2)	Pool	Deep Marsh	Shallow Marsh	Lower batters	Upper batters	Submerged	Emergent	Tufted
<i>Baumea articulata</i> **	Jointed Clubrush	●	●	2.0	8.0	5.0		●					●	
<i>Ceratophyllum demersum</i> **	Hornwort	●		0.0	8.0		●					●		
<i>Cyperus alopecuroides</i> **	Cyperus Alopecuroides		●	2.0		5.0								
<i>Cyperus difformis</i> **	Dirty Dora		●	5.0		12.0								
<i>Cyperus distans</i> **	Slender Cyperus		●	1.0		8.0								
<i>Cyperus iria</i> **	Rice Flat Sedge	●		1.0	8.0					●			●	
<i>Cyperus javanicus</i> **	Java Sedge	●	●	1.0	4.0	4.0				●				●
<i>Cyperus lucidus</i> **	Giant Sword-Leaved Sedge		●	2.0		4.0			●	●				
<i>Cyperus pedunculatus</i> **	Pineapple Sedge			0.2										
<i>Cyperus polystachyos</i> **	Bunchy Sedge		●	0.6		8.0			●	●				
<i>Cyperus scariosus</i> **	Nutgrass		●	0.9		8.0								
<i>Eleocharis dulcis</i> **	Water Chestnut	●		1.5	6.0			●	●	●			●	
<i>Eleocharis geniculata</i> **	Nodding Spike-Rush	●		1.0	8.0					●			●	
<i>Eleocharis sphacelata</i> **	Tall Spike-Rush	●		2.0	8.0			●					●	
<i>Fimbristylis dichotoma</i> **	Common Fringe Sedge	●	●	1.0	8.0	8.0				●				●
<i>Fimbristylis ferruginea</i> **	Rusty Fringe Sedge		●	0.7		8.0								
<i>Fimbristylis littoralis</i> **	Lesser Fimbry	●		1.0	8.0				●	●				
<i>Fimbristylis tristachya</i> **	Fimbristylis Tristachya		●	0.6		8.0								
<i>Fuirena umbellata</i> **	Fuirena Umbellata		●	1.0		8.0								
<i>Gahnia aspera</i> **	Saw Sedge		●	1.0		6.0					●			●
<i>Gahnia sieberiana</i> **	Red Fruited Sword Sedge	●	●	3.0	6.0	5.0					●			●
<i>Isolepis inundata</i> **	Swamp Club-Rush	●		0.3	8.0				●				●	
<i>Juncus polyanthemus</i> **	Striated Rush		●	0.5		10.0			●					
<i>Juncus usitatus</i> **	Common Rush	●	●	1.2	10.0	6.0			●	●			●	
<i>Leersia hexandra</i> **	Swamp Rice Grass	●		0.0	6.0			●					●	
<i>Lepironia articulata</i> **	Grey Rush	●		0.0	6.0			●	●	●			●	
<i>Lomandra hystrix</i> **	River Mat-Rush	●	●	2.0	8.0	6.0				●	●			●
<i>Lomandra longifolia</i> **	Spiny-Headed Mat-Rush	●	●	0.5	4.0	6.0					●			●
<i>Myriophyllum verrucosum</i> **	Red Water-Milfoil	●		1.5	1.0		●					●		
<i>Persicaria strigosa</i> **	Prickly Smartweed		●	0.2		5.0								

Botanical Name	Common Name	Treatment Type		Planting Density			Zone					Type		
		WSUD - Wetland	WSUD - Swale / BioBasin	Height (m)	Wetland (qty/m2)	Swale (qty/m2)	Pool	Deep Marsh	Shallow Marsh	Lower batters	Upper batters	Submerged	Emergent	Tufted
<i>Philydrum lanuginosum</i> **	Woolly Water Lily	●		0.0	1.0				●	●				●
<i>Phragmites australis</i> **	Common Reed	●		0.0	1.0			●	●				●	
<i>Potamogeton crispus</i> **	Curly Pondweed	●		4.5	5.0		●				●			
<i>Potamogeton octandrus</i> **	Pondweed	●		4.5	8.0		●				●			
<i>Potamogeton tricarinatus</i> **	Pondweed	●		4.5	20.0		●	●	●		●			
<i>Rhynchospora corymbosa</i> **	Matamat		●	1.0		4.0								
<i>Scleria polycarpa</i> **	Many-Fruited Sedgegrass		●	1.5		4.0			●	●				
<i>Schoenoplectus subulatus</i> ** (syn. <i>S. litoralis</i>)	Shore Club-Rush	●		1.6	6.0			●					●	
<i>Schoenoplectiella mucronata</i> ** (syn. <i>Schoenoplectus mucronatus</i>)	Star Club-Rush	●		1.0	6.0				●				●	
<i>Scleria brownii</i> **	Sedgegrass	●		0.4										
<i>Scleria mackaviensis</i> **	Nut Sedge	●		0.5										

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Grasses

Botanical Name	Common Name	Origin			Aspect			Landscape Use			Maintenance			
		Mackay Native	Australian Native	Exotic	Full Sun	Semi Shade	Shade	Recreational Park	Nature Strip / Median	Revegetation	WSUD	Low	Medium	High
<i>Chrysopogon filipes</i> **	Australian Vetiver Grass	●			●	●	●			●	●			
<i>Cymbopogon refractus</i> **	Barbed Wire Grass	●			●					●	●			
<i>Eragrostis interrupta</i> **	Coastal Lovegrass	●								●				
<i>Eriachne triodioides</i> **	Wanderrie Grass	●								●				
<i>Festuca glauca</i>	Blue Fescue Grass			●	●	●	●	●						
<i>Heteropogon triticeus</i> **	Giant Spear Grass	●								●				
<i>Imperata cylindrica</i> **	Blady Grass	●				●				●	●			
<i>Ischaemum australe</i> **	Zipper Grass	●								●	●			
<i>Ischaemum rugosum</i> **	Saramollagrass	●		●						●	●			
<i>Paspalum distichum</i> **	Water Couch	●			●	●				●	●			
<i>Paspalum vaginatum 'saltene'</i> **	Salt Water Couch	●			●					●	●	●		
<i>Spinifex sericeus</i> **	Beach Spinifex	●								●				
<i>Sporobolus virginicus</i> **	Marine Couch	●								●	●			
<i>Themeda triandra</i> **	Kangaroo Grass	●			●					●	●			
<i>Thuarea involuta</i> **	Birds Beak Grass	●								●				
<i>Zoysia macrantha subsp. Macrantha</i>	Coastal Zoysia	●					●	●						
<i>Zoysia micrantha</i> **	Zoysia	●			●	●		●	●	●	●	●		
<i>Zoysia tenuifolia</i>	No-Mow Grass			●			●	●						
<i>Cymbopogon ambiguus</i> **	Native Lemon Grass	●			●		●	●						
<i>Gymnostachys anceps</i> **	Travellers Grass	●			●	●	●	●	●	●				
<i>Leptaspis banksii</i> **	Rainforest Grass	●				●	●	●	●	●				

** Grown as tube stock in Mackay Natural Environment Centre or Mackay Botanic Gardens

Turf

Botanical Name	Common Name	Cultivar Name	Origin			Aspect			Landscape Use			Maintenance		
			Mackay Native	Australian Native	Exotic	Full Sun	Semi Shade	Shade	Recreational Park	Nature Strip / Median	Revegetation	High-Profile Area	Low	Medium
<i>Cynodon dactylon</i>	Couch	Wintergreen			●	●			●	●	●		●	
<i>Cynodon dactylon</i>	Green Couch	Nullabor			●	●			●	●	●		●	
<i>Stenotaphrum secundatum</i>	Buffalo	Sir Walter			●	●	●				●		●	●
<i>Zoysia japonica</i>	Zoysia	Empire			●	●	●		●	●	●	●	●	
<i>Zoysia matrella</i>	Zoysia Zeon	Sir Grange			●	●	●		●	●	●	●	●	

Appendix D – QLD Environmental Weeds and Their Alternatives

Botanical Name	Common Name	Alternative Plant(s)	Common Name	Notes
<i>Murraya paniculata</i>	Mock Orange	<i>Murraya ovatifoliata</i> <i>Syzygium australe</i> cultivars	Native Mock Orange Lilly Pilly cultivars	QLD herbarium does not recognise in Australian reduction of <i>Murraya ovatifoliolata</i> and <i>Murraya paniculata</i> 'Exotica' to synonym of <i>M. paniculate</i> .
<i>Tradescantia spathacea</i>	Moses-in-his-Cradle	<i>Bromeliaceae</i>	Bromeliads	The plant produces seed which will germinate in favourable conditions. It also reproduces from pieces of stem.
<i>Alternanthera sp.</i>	Red-leaved Alternanthera	<i>Graptophyllum pictum</i> <i>Melaleuca</i> 'Great Balls of Fire'	Caricature Plant	The plant reproduces easily from small stem pieces in dumped garden waste. The seeds are also thought to assist in the spread of this plant, even germinating in cracks in concrete.
<i>Heliconia psittacorum</i>	Parrot's Beak Heliconia	<i>Curcuma australica</i> <i>Heliconia caribea</i> 'Red'	Cape York Lily Caribbean Heliconia	This Heliconia produces viable seed which is spread by wind and water. This plant is also spread by pieces of rhizome which quickly regenerate.
<i>Allamanda cathartica</i>	Golden Trumpet Vine	<i>Pandorea jasminoides</i> <i>Petrea volubilis</i> <i>Mandevilla</i> 'Sundial'	Bower of Beauty Purple Wreath Yellow Mandevilla	This plant can regenerate from dumped garden waste and invade rainforest and forest fringes. This plant should not be planted near sensitive natural areas.
<i>Nephrolepis cordifolia</i>	Fishbone Fern	<i>Adiantum hispidulum</i> <i>Asplenium australasicum</i>	Rough Maidenhair Fern Bird's Nest Fern	Spores can be carried by either wind or water. It only takes a small piece of this plant to regenerate, so ensure complete and effective disposal.
<i>Duranta erecta</i>	Prickly Duranta	<i>Syzygium australe</i> cultivars <i>Graptophyllum ilicifolium</i> <i>Graptophyllum pictum</i>	Lilly Pilly cultivars Holly Fuchsia Caricature Plant	The berries are highly attractive to birds. If a plant is allowed to form berries, birds ingest them and distribute the plants widely in native bushland, creating thickets and upsetting the ecosystem.
<i>Pennisetum alopecuroides</i>	Fountain Grass	<i>Lomandra sp.</i> <i>Dianella sp.</i>	Mat Rushes Flax Lilies	The seeds are not plentiful, and viability is low however as there is conjecture regarding the distribution of this plant in Asia and Australia it is recommended we promote sterile hybrids or other well-established native grasses.
<i>Canna indica</i>	Canna Lily	<i>Curcuma australica</i> <i>Lomandra sp.</i> <i>Cordyline fruticosa</i>	Cape York Lily Mat Rushes Cordylines	Canna produces seeds which when spread enable colonisation of natural areas.
<i>Mesembryanthemum cordifolium</i> (formerly <i>Aptenia cordifolia</i>)	Baby Sun Rose	<i>Carpobrotus glaucescens</i> <i>Evolvulus pilosus</i> <i>Scaevola aemula</i>	Pigface Dwarf Morning Glory Fairy-Fan Flower	A garden escape with considerable potential to invade coastal dunes. Forms mats and can smother native ground covers.
<i>Catharanthus roseus</i>	Pink Periwinkle	<i>Wrightia antidysenterica</i> <i>Vitex rotundifolia</i> <i>Ixora sp.</i>	Arctic Snow Vitex Ixora's	The plant produces an abundance of seeds which germinate readily. Can tolerate a wide range of growing conditions.

