VEGETATED WETLAND

tree

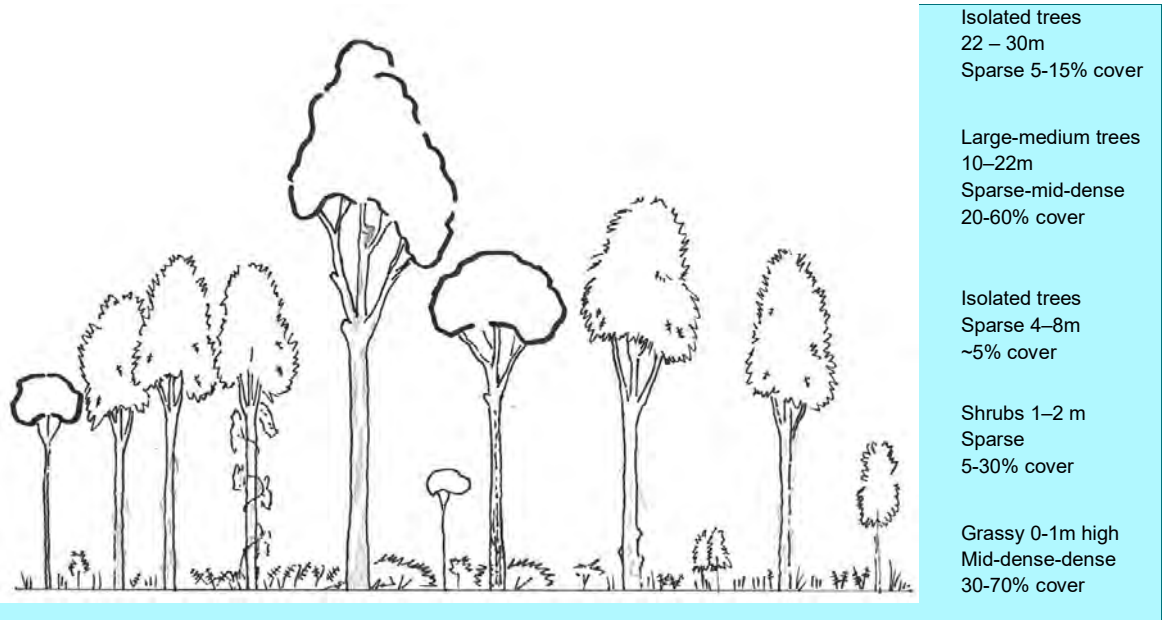
VEGETATION TYPE 8

Regional Ecosystem: 12.3.6

Broad-leaved Paperbark - Forest Red Gum - Swamp Box (*Melaleuca quinquenervia - Eucalyptus tereticornis - Lophostemon suaveolens*) Woodland to Open Forest on Alluvium Open Forest on Alluvium

COMMUNITY STRUCTURE

The is vegetation type forms a woodland to open forest characterised by a canopy in which Broad-leaved Paperbark (*Melaleuca quinquenervia*) is the most commonly occurring tree from 10m to 22m high and occurs together with smaller numbers of Forest Red Gum (*Eucalyptus tereticornis*) as either a canopy or emergent tree to 30m high. Broad-leaved Paperbark usually also dominates the sub-canopy and shrub layers. Swamp Box (*Lophostemon suaveolens*) is also present in low numbers as a canopy or sub-canopy tree.



Source: Searle, 2019 (derived from Ryan et al 2019; GC08; GC61)

The low tree and shrub layers are both sparse, although tea-trees (*Leptospermum polygalifolium*) may be common in patches. Ground cover is typically dense and may include a mixture of grasses and ferns.

Characteristic plant species

Approximately **14** native plants species have been recorded for this vegetation type. Characteristic plant species for this vegetation type are listed below. Dominant (most numerous) species are shaded. Plants in blue text are listed as Wetland Indicator Species in DES Flora Wetland Indicator Species List and are adapted to and dependent on wetlands.

Indicates species is a preferred koala food tree*

GBC — Indicates species is a Glossy Black-Cockatoo feed tree species

CWS — Indicates species is a City-wide significant species

* It is noted that in addition to preferred food trees, koalas utilise a range of eucalypt and non-eucalypt tree species for supplemental feeding and other uses such as shelter. These other species are also important and necessary features of koala habitat.

EMERGENT

Tallest trees, visible above the canopy

Forest Red Gum

Eucalyptus tereticornis

CANOPY

Upper layer of vegetation exposed to sunlight which creates a canopy that shades lower layers

Broad-leaved Paperbark

Melaleuca quinquenervia

Forest Red Gum

Eucalyptus tereticornis

Swamp Box

Lophostemon suaveolens

CANOPY

Upper layer of vegetation exposed to sunlight which creates a canopy that shades lower layers

Pink Bloodwood
Corymbia intermedia

Tallowwood
Eucalyptus microcorys

SUB-CANOPY

Tree layer below canopy

Swamp Box
Lophostemon suaveolens

Broad-leaved Paperbark
Melaleuca quinquenervia

SHRUB LAYER

Tree layer below canopy

Wild May

Leptospermum polygalifolium

Blackwood

Acacia melanoxylon

Brown Kurrajong

Commersonia bartramia

Broad-leaved Paperbark

Melaleuca quinquenervia

GROUND LAYER AND VINES

Lowest layer of vegetation. Plant types can include grasses; graminoids (non-woody plants with a grass-like morphology); ferns; forbs (non-woody, broad-leaved, flowering plants) and vines (where present) may extend upwards into the canopy.

Blady Grass

Imperata cylindrica

GRASS

Ischaemum australe var. *australe*

GRASS

Scented Top

Capillipedium spicigerum

TUSSOCK GRASS

GROUND LAYER AND VINES

Lowest layer of vegetation. Plant types can include grasses; graminoids (non-woody plants with a grass-like morphology); ferns; forbs (non-woody, broad-leaved, flowering plants) and vines (where present) may extend upwards into the canopy.

Graceful / Pademelon Grass
Ottochloa gracillima
GRASS

Soft Twig Rush
Baumea rubiginosa
GRAMINOID (SEDGE)

Common Silkpod
Parsonsia straminea
VINE

City-wide significant plant species

CWS

The City of Gold Coast recognises species which are locally significant as City-wide significant (CWS) species. These species are important because they may be threatened, restricted to the Gold Coast, or at the edge of their geographic range. There are no CWS plant species listed for this vegetation type.

OCCURRENCE

Native plants occur in vegetation communities, which are consistently associated with a particular soil type, landform (shape of the land, e.g. hills or plains) aspect (position on a slope in relation to the sun) and climate.

VT 8 occurs on broad lower floodplains close to the coast. Previously occurring over large tracts of the coastal lowlands including Staplyton, Alberton, Gilberton, Norwell, Pimpama, East Coomera, Coombabah, Broadbeach Carrara, Merimac, Miami, Tallebudgera, Elanora and Currumbin Waters, it has now been extensively cleared for growing sugar cane, and for urban development. It forms a mosaic with VT9 (Broad-leaved Paperbark open forest). It typically occurs on deep fertile, sandy to clay soils with good moisture and organic content. It transitions into VT6 (Forest Red Gum/Pink Bloodwood/Grey Ironbark woodland on alluvium) on floodplains at slightly higher ground level, often further away from the coast. Whilst small tracts of this vegetation type are widespread, the largest remaining patches occur at Coombabah in the reserve, and at Currumbin Sanctuary in the south of the City.

Historic distribution of Vegetation Type 8

LEGEND

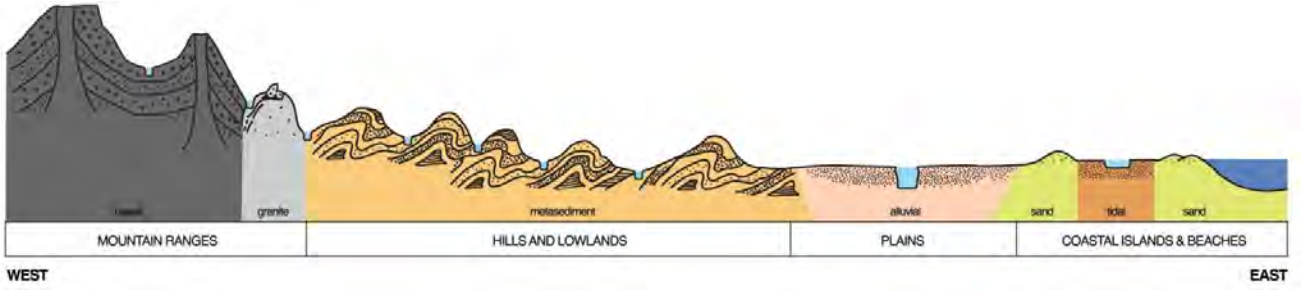
Vegetation Type 8 | Ocean | Major Waterways

COMMON LANDFORMS AND GEOLOGY OF THE GOLD COAST

	LAND FORM	GEOLOGY (soils and rocks)	AGE
	Tidal flats and beaches (subject to tidal inundation)	Water logged, saline muds, clays and sands	Youngest
	Coastal dunes (not subject to tidal inundation)	Dunes and beach ridges (sands)	
	Flood plains, river and creek flats	**Alluvial soils** (soils moved or shaped by water)	
	Level or gently undulating plains	Sandy or loamy soils	
	Mountain ranges, hills, lowlands and coastal headlands	Basalt (volcanic) rocks	
	Undulating	Sedimentary rocks	
	Mountain ranges, hills and lowlands	Metasediment rocks*	
	Mountain ranges, hills, lowlands and coastal headlands	Granite (volcanic) rocks	Oldest

Conceptual cross section of Gold Coast

Showing typical location of most common geology and land forms (concept only, not to scale)



*** Metasediment rocks**

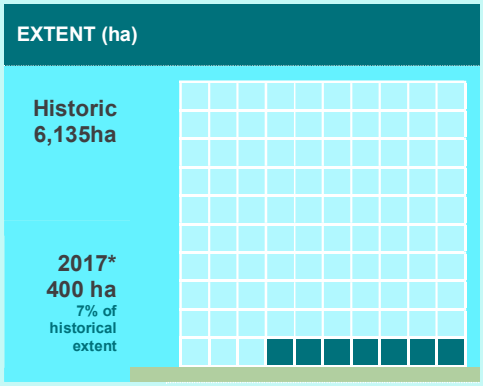
The most common underlying geology on the Gold Coast is metasediment rocks. Metasediment rocks are a type of metamorphic rock (rock transformed by heat and pressure). Originally these rocks were sedimentary rocks which were formed on the ocean floor through the deposition and solidification of sediment. These sedimentary rocks were subsequently buried underneath other rocks and subjected to high pressures and temperatures, causing the rock to recrystallize. This recrystallization process is known as metamorphosis, hence the term metamorphic rocks. About 300 million years ago these metamorphic rocks were pushed upward by geologic processes, creating much of the ranges, hills and lowlands on the Gold Coast.

2017 EXTENT AND CONSERVATION STATUS

Gold Coast

Historically, this vegetation type was the second most common type of swamp vegetation on the Gold Coast. Much of its historical extent has been lost with only 7% remaining. The 2017 extent* of this vegetation type on the Gold Coast was 400 hectares.

1 HECTARE (HA) = 2.46 ACRES ≅ THE SIZE OF AN INTERNATIONAL RUGBY FIELD

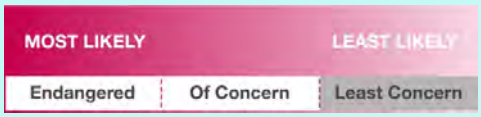


* Extent as mapped in 2017. Includes remnant vegetation only. Does not include disturbed remnant or regrowth.

Queensland

The conservation status of vegetation in Queensland is specified under the *Vegetation Management Act 1999*, which lists this regional ecosystem (RE 12.3.6) as being 'Least Concern'.

LIKELIHOOD OF BECOMING EXTINCT (in QLD) due to biodiversity loss/degradation



USEFUL RESOURCES

City of Gold Coast website: Environmental weeds and invasive plants.

Find out more about regional ecosystems at the Queensland Government Regional Ecosystems webpage.

CREDITS

Content – ngh Environmental and Jason Searle.
Vegetation Type Photo – Lui Weber ©
Unless otherwise noted all other photos – Glenn Leiper ©

Version 3, November 2020

THREATS

This vegetation type was previously widespread but has been extensively cleared, and is subject to ongoing pressure for clearing for urban development, including ancillary uses such as road and infrastructure corridors, flood detention facilities and general residential and commercial development. It is also a productive and well-watered vegetation type and weeds often infest it, especially in areas where disturbance or fragmentation have opened up the canopy layer. Invasive weeds, including Lantana, Pepper Bush, Camphor Laurel, Cats-claw creeper, Trad (Wandering Jew), and Guinea Grass are common.

About common threats:

Clearing

Native vegetation is protected by Federal, State and local legislation. However, with increasing population growth in the region, Southeast Queensland is experiencing large amounts of vegetation clearing, particularly in areas designated for urban development. Protecting native vegetation on your property is one of the most beneficial things you can do to protect wildlife and the natural environment.

Weeds

Environmental weeds are the second biggest threat to our natural environment after land clearing. Environmental weeds (introduced plants that have naturalised and are invading our bushland) degrade our natural environment by:

- out competing native plant species for available nutrients and light
- taking over and transforming native landscapes often leading to local plant or animal extinctions and loss of biodiversity
- reducing the availability of food and other resources for many native animals whilst sometimes benefiting pest animals
- increasing the risk of destructive wildfire
- often being toxic to people and animals.

Fire

Very broadly, vegetation types are either adapted to fire or fire sensitive. Fire can become a threat if:

- it extends into vegetation types which should not be burnt e.g. rainforest,
- the frequency and/or intensity of the fire is too high, and/or
- the area burnt is too large.

Grazing

The grazing of animals like cattle, horses, goats and feral animals such as deer can cause trampling or loss of diversity of seedlings and compact soil, preventing natural regeneration.

Collecting

Unethical and illegal collection of plant specimens in the wild poses a serious threat to some species, particularly orchids, grass trees and epiphytes.

Climate change

Changes in temperature and rainfall can have significant effects on our city's vegetation. For example, without consistent rainfall, areas become drier, potentially resulting in higher fire frequency and/or intensity, which some plants and vegetation communities won't be able to tolerate. Plants (and animals) need available space to migrate as conditions change, with high altitude species at the greatest risk as there is nowhere suitable for them to go. Warmer conditions may also provide the right habitat for a greater variety of weeds. As sea levels rise, salt water moves further upstream and vegetation also becomes inundated.

CITY OF GOLDCOAST.