

Estuarine Wetland

mangrove



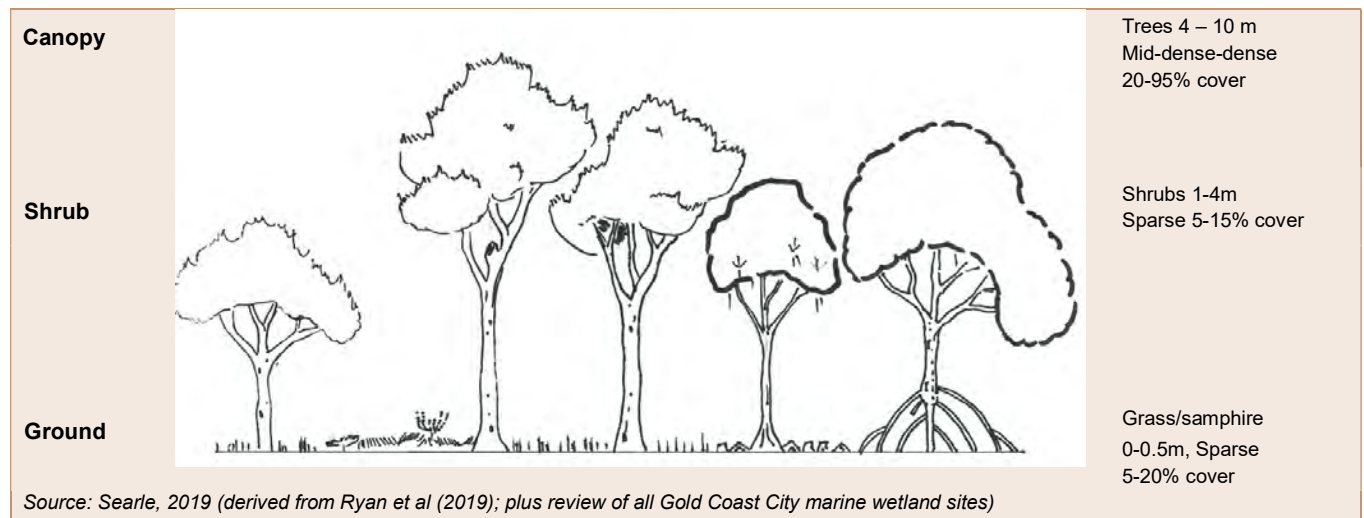
VEGETATION TYPE 18b

Regional Ecosystem: 12.1.3

Grey Mangrove (*Avicennia marina*) Open Forest to Woodland on Marine Deposits

COMMUNITY STRUCTURE

Grey Mangrove open forest to woodland typically consists of a mid-dense to dense tree layer between 4m and 10m high, with a canopy cover ranging from 20-95%. Grey Mangrove (*Avicennia marina*) is invariably the dominant mangrove tree present. River Mangrove (*Aegiceras corniculatum*) may be present, and isolated patches of marine grasses such as *Sporobolus virginicus*, and/or samphire (succulent, herbaceous plants that grows in high salinity environments) such as *Sesuvium portulacastrum* and *Suaeda australis* may also occur.



Characteristic plant species

Approximately **19 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 City-wide significant species

CANOPY

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



Grey Mangrove
Avicennia marina



River Mangrove
Aegiceras corniculatum



Black Mangrove
Bruguiera gymnorhiza



Milky Mangrove
Excoecaria agallocha



Yellow Mangrove
Ceriops tagal var. australis



Stilted Mangrove
Rhizophora stylosa

SHRUB LAYER

Middle layer of vegetation usually made up of small trees and woody shrubs



Grey Saltbush
Atriplex australasica



Berry Saltbush
Einadia hastata



Ruby Saltbush
Enchylaena tomentosa

GROUND LAYER

Lowest layer of vegetation. Plant types can include marine grasses, graminoids (non-woody plants with a grass-like morphology), forbs (non-woody, broad-leaved, flowering plants) and samphires (succulent, herbaceous plants that grows in high salinity environments).



Sea Blite
Suaeda australis
SAMPHIRE



Saltwater Couch
Sporobolus virginicus
GRASS (CREEPING)



Streaked Arrow Grass
Cynogeton striata
GRAMINOID (SEDGE)



Beaded Samphire
Sarcocornia quinqueflora
SAMPHIRE

GROUND LAYER

Lowest layer of vegetation. Plant types can include marine grasses, graminoids (non-woody plants with a grass-like morphology), forbs (non-woody, broad-leaved, flowering plants) and samphires (succulent, herbaceous plants that grows in high salinity environments).



Jellybean Sea Blite
Suaeda arbusculoides
SAMPHIRE



Sea Tassel
Ruppia maritima
AQUATIC



Sea Purslane
Sesuvium portulacastrum
SAMPHIRE



Sea Celery
Apium prostratum
FORB

EPIPHYTES & MISTLETOES

Species that grow on the surface of other plants. Unlike epiphytes, mistletoes are parasitic and derive some or all of their nutritional requirements from the plant on which they grow.



Mangrove Mistletoe
Amyema mackayensis
MISTLETOE



Tiny Bulbophyllum
Bulbophyllum minutissimum
EPIPHYTE

City-wide significant plant species



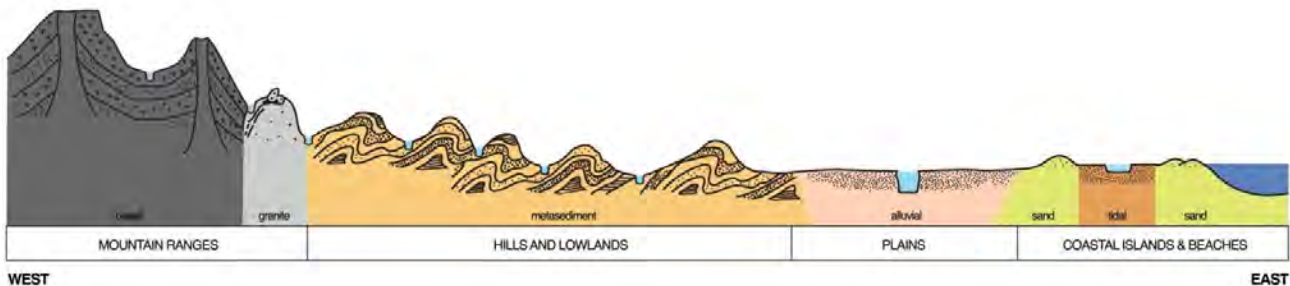
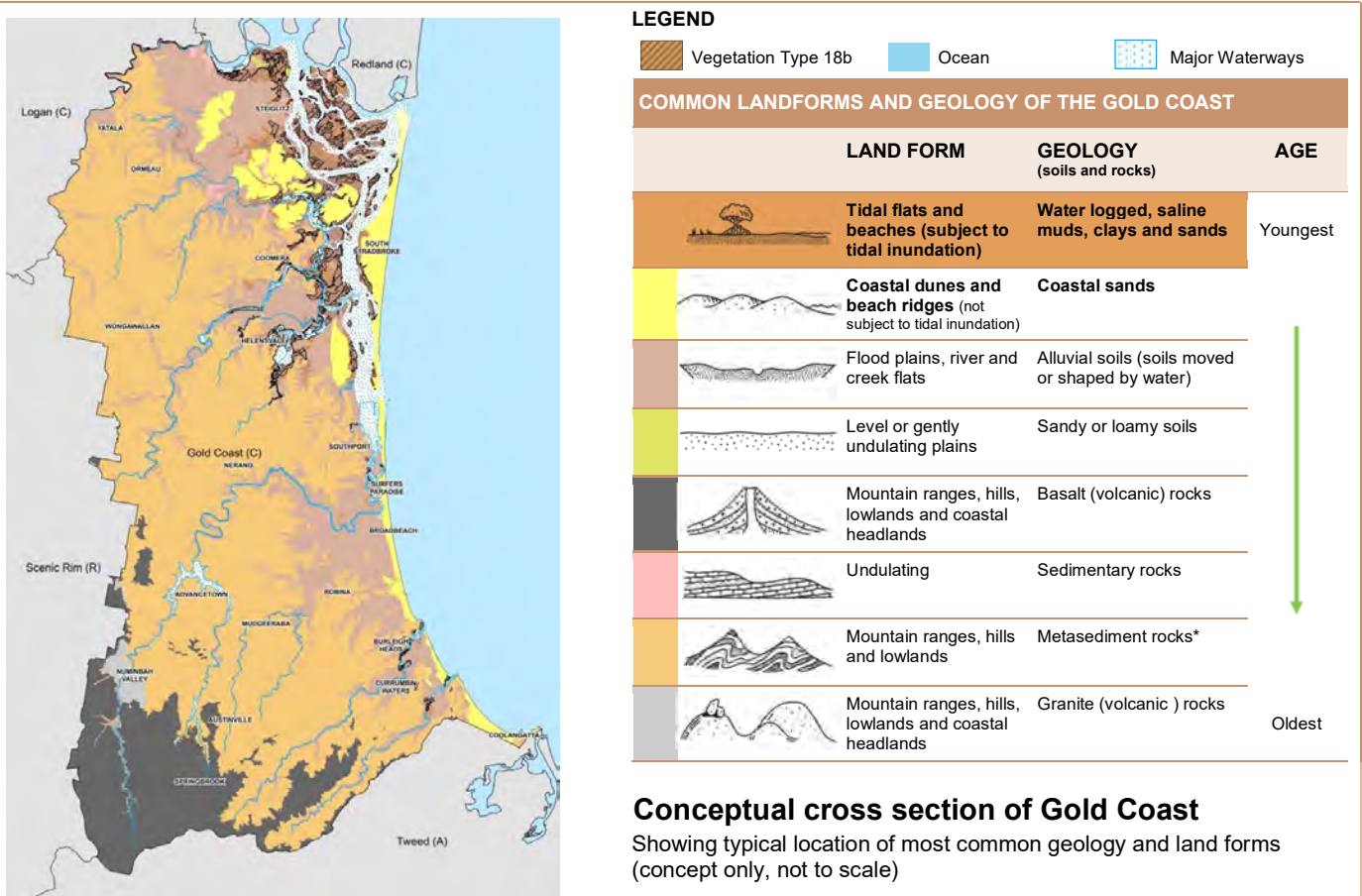
The City of Gold Coast recognises species which are locally significant as City-wide significant (CWS) species. These species are important because they may be threatened, restricted to the Gold Coast, or at the edge of their geographic range. A number of characteristic species are identified above as CWS species. No other CWS plant species have been identified 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.

Grey Mangrove open forest to woodland is the dominant mangrove community within the Gold Coast, and usually dominates larger areas of mangroves within the Broadwater and Moreton Bay Islands. It can form extensive stands on gently sloped inter-tidal areas, including low islands and more extensive mud banks such as the areas around Coombabah and the mouth of the Coomera River. This vegetation type typically occurs in association with other mangrove and marine grassland/herbfield communities (VT18a, VT1c-f, and VT22a-d). Mapped localities include the Southern Moreton Bay Islands and associated mouths of the Albert, Pimpama and Coomera Rivers, Coombabah wetlands, and Tallebudgera and Currumbin Creeks.

Historic distribution of Vegetation Type 18b



* 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

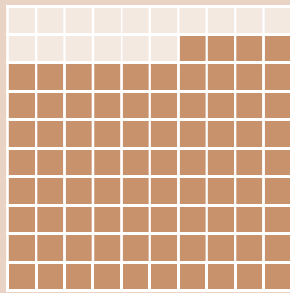
Historically and currently, the most common type of tidal wetland vegetation on the Gold Coast. The 2017 extent* of this vegetation type on the Gold Coast was 2,726 hectares.

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

EXTENT (ha)

Historic
3,252ha

2017*
2,726ha
84% of
historical
extent



* 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 12.1.3) as being 'Of Concern'.

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

MOST LIKELY		LEAST LIKELY	
Endangered	Of Concern	Least Concern	

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 ©

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THREATS

Grey Mangrove open forest to woodland occurs on tidal creeks and is subject to disturbance from storms and other seasonal weather events.

Consequently, sea level rise and potential increased erosion associated with increasing and extreme weather events suggests that Climate Change has the potential to significantly impact on this vegetation community. Weeds are generally a low threat to this community, as it occurs in lower tidal areas.

Common threats to all vegetation types

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 is 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
- 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.