

Estuarine Wetland

salt marsh



VEGETATION TYPE 22a

Regional Ecosystem: 12.1.2

Common Reed (*Phragmites australis*)
Grassland on Marine Deposits

COMMUNITY STRUCTURE

Vegetation type 22a is a tall patchy grassland up to 3m in height. The native reed *Phragmites australis* is the dominant and diagnostic grass species, and forms dense tall stands. These stands are often interspersed with more open areas of Saltwater Couch (*Sporobolus virginicus*) or samphires (salt tolerant succulent plants) and sedges up to 50cm in height. The grassland provides between 50% and 100% ground cover to the outer margins of marine plains, which are rarely influenced by any but the largest tides, and often only when accompanied by flooding. If present, trees are usually only isolated and generally small in height.

Ground



Grass/samphire 0-3.0m
Mid-dense to dense
50-100% cover

Source: Searle, 2019 (derived from Ryan et al (2019); plus review of all Gold Coast City marine wetland sites)

Characteristic plant species

Approximately **35 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

GROUND LAYER

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).. Climbing vines generally not present.



Common Reed

Phragmites australis
GRAMINOID (REED)



Saltwater Couch

Sporobolus virginicus
GRASS



Sea Purslane

Sesuvium portulacastrum
SAMPHIRE



Rusty Sedge

Fimbristylis ferruginea
GRAMINOID (SEDGE)



Beaded Samphire

Sarcocornia quinqueflora
SAMPHIRE



Mangrove Wax-flower Vine

Vincetoxicum carnosum
(Formerly *Cynanchum carnosum*)
VINE



Mangrove Fern

Acrostichum speciosum
FERN

GROUND LAYER

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New Zealand Spinach
Tetragonia tetragonioides
FORB



Sea Celery
Apium prostratum
FORB



Bacopa
Bacopa monnieri
FORB (CREEPING)



River Lily
Crinum pedunculatum
FORB (CLUMPING)



Coastal Pigface
Carpobrotus glaucescens
FORB (CREEPING)



Red Crumbweed
Dysphania littoralis
FORB



Yellow Eclipta
Eclipta platyglossa
FORB



Enydra
Enydra woollsii
FORB



Shield Pennywort
Hydrocotyle verticillata
FORB (CREEPING)



Goat's Foot Morning Glory Vine
Ipomoea pes-caprae subsp. *brasiliensis*
VINE (SCAMBLING)

GROUND LAYER

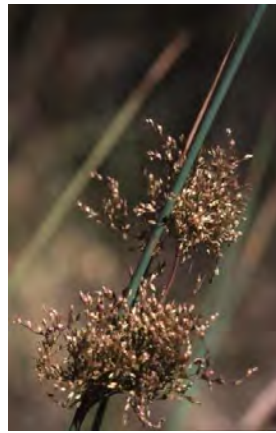
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Swamp Club-rush
Isolepis inundata
GRAMINOID (SEDGE)



Sea Rush
Juncus kraussii
GRAMINOID (RUSH)



Common Rush
Juncus usitatus
GRAMINOID (RUSH)



Mangrove Wax-flower Vine
Vincetoxicum carnosum
(formerly *Cynanchum carnosum*)
VINE



Carpet Weed
Phyla nodiflora
FORB



Creeping Brookweed
Samolus repens
FORB



Prickly Couch
Zoysia macrantha
GRASS (CREEPING)



Lesser Sea-Spurrey
Spergularia marina
SAMPHIRE

City-wide significant plant species



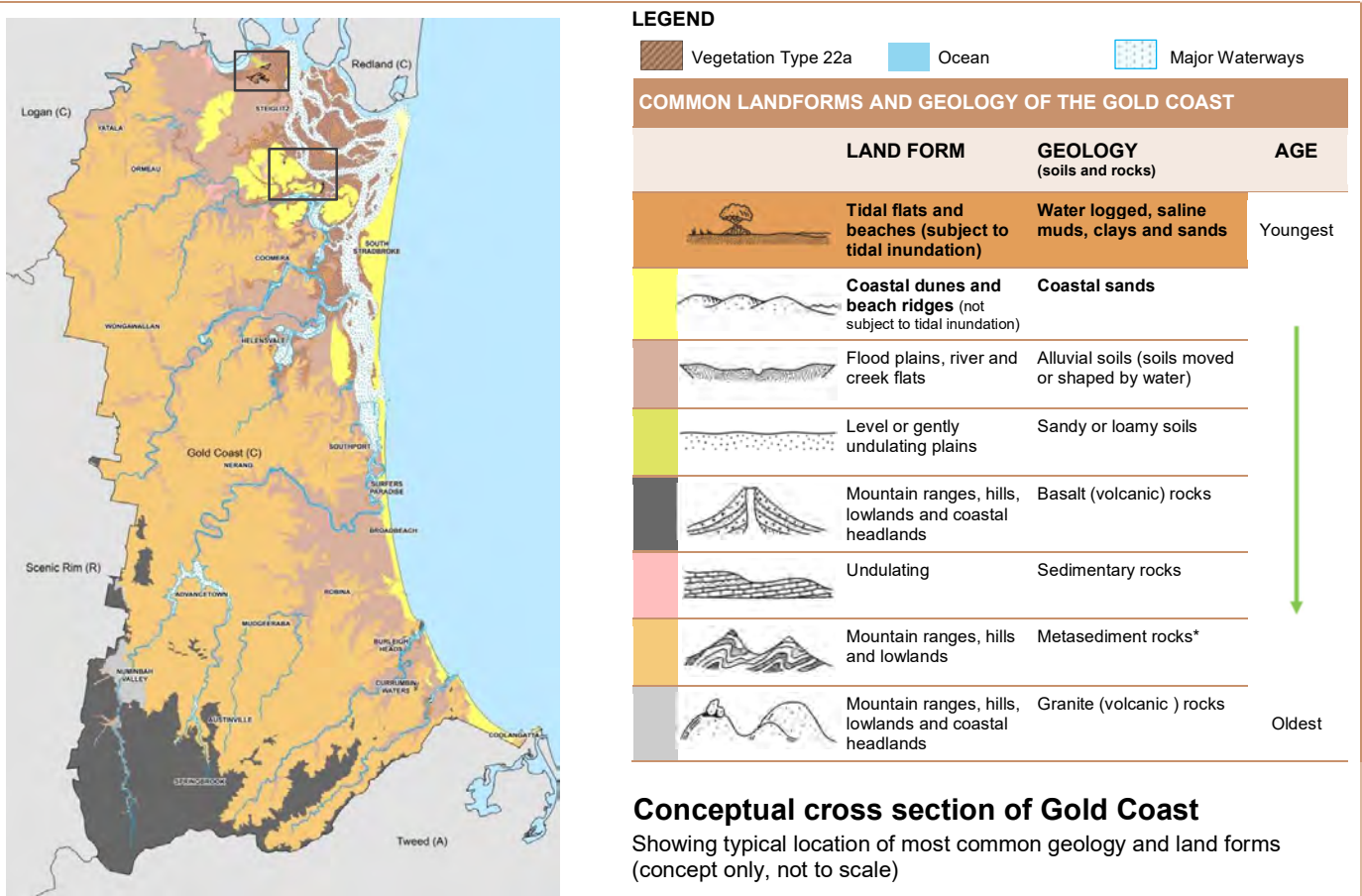
The City of Gold Coast recognises species which are locally significant as City-wide significant (CWS) species. These species are important because they may be threatened, restricted to the Gold Coast, or at the edge of their geographic range. Characteristic species which are CWS species are identified above. 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.

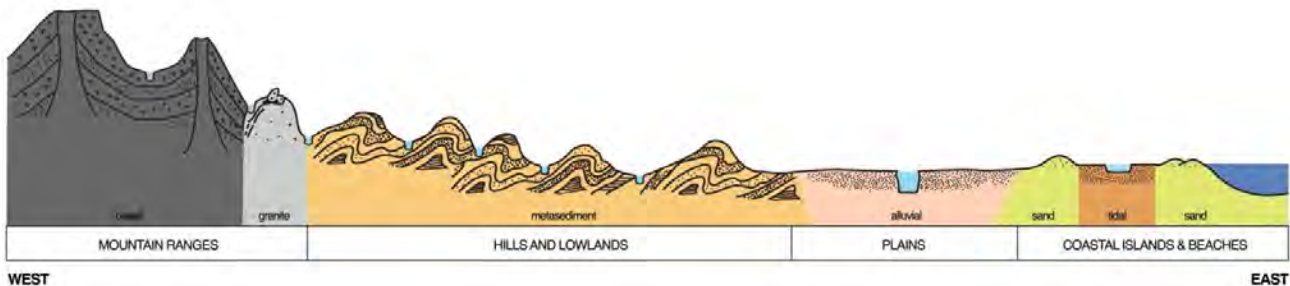
Phragmites australis grassland often occupies the outer or higher marine plains, and are typically only inundated by the highest tides, typically when they are accompanied by flooding. Not all areas of this grassland are mapped, with some areas too small to be differentiated at the scale of vegetation mapping, or are otherwise included in surrounding Swamp Oak communities. This vegetation type typically occurs in association with VT15/VT16 (Swamp Oak woodlands on the upper margins of marine plains). Larger mapped areas of this vegetation type occur at Rocky Point, Cabbage Tree Point, Pimpama, Coombabah, and Tallebudgera and Currumbin Creeks.

Historic distribution of Vegetation Type 22a



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

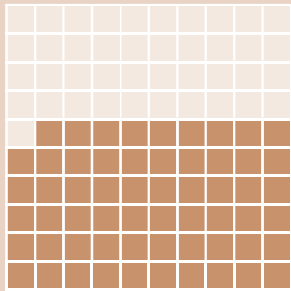
Historically, one of the least common types of vegetation on the Gold Coast. The 2017 extent* of this vegetation type on the Gold Coast was 42 hectares.

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

EXTENT (ha)

Historic
70ha

2017*
42ha
59% of
historical
extent

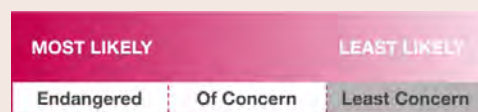


* Extent as mapped in 2017. Includes remnant vegetation only. Does not include disturbed remnant or regrowth.

Queensland

The conservation status of vegetation in Queensland is specified under *the Vegetation Management Act 1999*, which lists this regional ecosystem (RE 12.1.2) 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 ©

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THREATS

Phragmites australis grassland occurs on the upper elevated margins of marine plains, and are subject to minor marine influence and associated 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 impact on this vegetation community. Some weeds are common in this community, particularly Groundsel (*Baccharis halimifolia*), Wild aster (*Symphotrichum subulatum*) and Bitou Bush (*Chrysanthemoides monilifera subsp. rotundata*), and are particularly problematic as the grasslands are open and easily colonised, and are difficult to access for weed control.

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, 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.