Vegetated Wetland

grass, sedge and herb

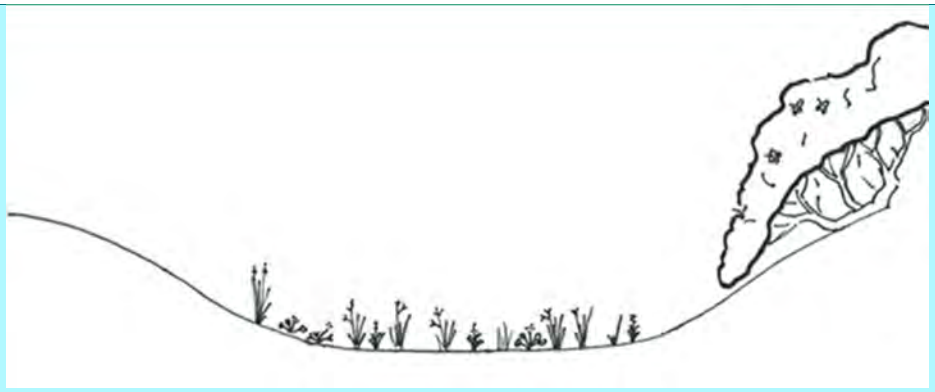
VEGETATION TYPE 25d

Regional Ecosystem: 12.2.15

Sedgeland/Wetland on Coastal Sand

COMMUNITY STRUCTURE

Vegetation type (VT) 25d is generally an open sedgeland in low-lying areas on coastal sands. It is characterised by a sparse mixed ground layer of sedges and herbaceous (soft bodied) plants up to 1m high. Characteristic species include, sedges *Schoenus nitens, Juncus kraussii* and *Carex pumila*, often together with semi-aquatic herbaceous plants such as *Samolus repens, Hydrocotyle verticillata* and *Apium prostratum*. Emergent trees are typically limited to adjoining dunes, with tree such as Cottonwood (*Hibiscus tiliaceus*) occasionally extending into these sedgeland areas.



Source: Searle, 2019 (derived for Ryan *et al,* 2019, and South Stradbroke Island Conservation Area flora list)

Characteristic plant species

Approximately **13 native plants** species have been recorded for this vegetation type. Characteristic plant species 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

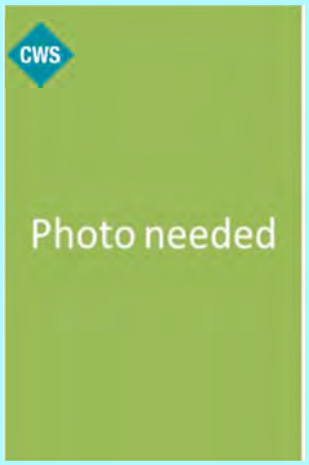
Isolated trees visible above all other layers. Typically limited to adjoining dunes, occasionally extending into sedgeland areas

Coastal She-oak
Casuarina equisetifolia

Cottonwood
Hibiscus tiliaceus

GROUND LAYER

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 Scrambling vines may also be present



Shiny Bog-rush
Schoenus nitens
GRAMINOID (SEDGE)

Strand Sedge
Carex pumila
GRAMINOID (SEDGE)

Creeping Brookweed
Samolus repens
FORB

Sea Rush
Juncus kraussii
GRAMINOID (RUSH)

GROUND LAYER

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 Scrambling vines may also be present

Bacopa
Bacopa monnieri
FORB (CREEPING)

Common Centaury
Centaurium erythraea
FORB

Shield Pennywort
Hydrocotyle verticillata
FORB (CREEPING)

Coast Stackhousia
Stackhousia spathulata
FORB

Sea Celery
Apium prostratum
FORB

Brown-head Samphire
Tecticornia indica subsp. leiostachya
SAMPHIRE

Climbing Guinea-flower
Hibbertia scandens
VINE (SCAMBLING OR CLIMBING)

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. A number of characteristic species are identified above as CWS species. There are no other CWS plant species identified in this vegetation type.

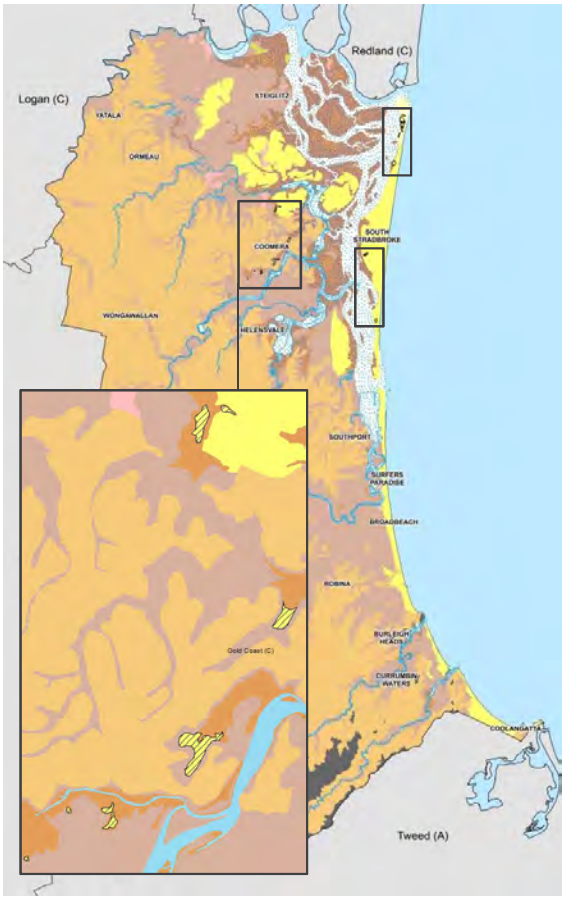
CITY OF GOLDCOAST.

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.

This vegetation type is restricted to low-lying areas on coastal sands. It is typically found in the swale immediately behind the foredune, where this falls to a low point which is inundated at least on a seasonal basis. Much of this community along the urban coastline from Southport to Coolangatta has been cleared for urban development or as a result of historical sand mining. The northern end of South Stradbroke Island supports some of the best natural examples of this vegetation type, and small areas are also mapped for the low-lying areas on coastal sand around the Pimpama River. Additional small patches are likely in other areas on coastal sand, and are likely to be encompassed in adjoining areas mapped as other more dominant vegetation types.

Historic distribution of Vegetation Type 25d



LEGEND

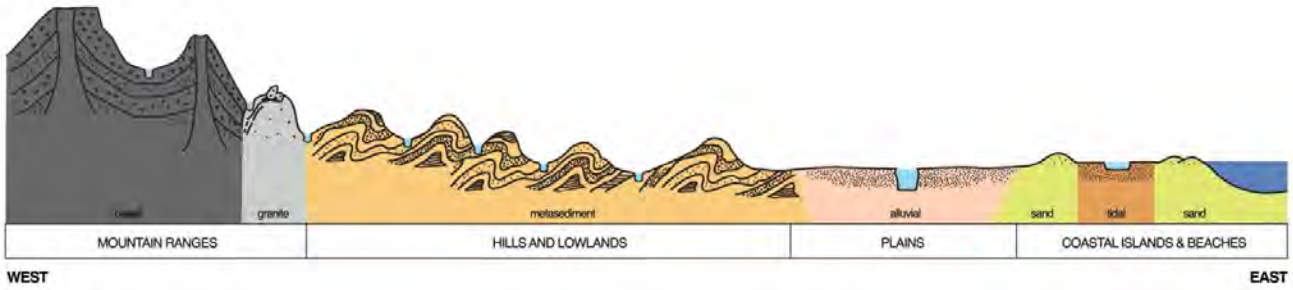
Vegetation Type 25d | Ocean | Major Waterways

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 and beach ridges (not subject to tidal inundation)	**Sand**	
	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**

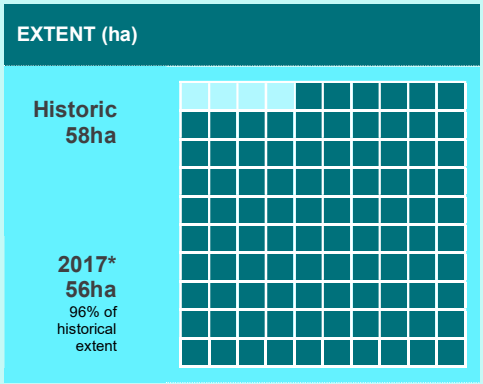
The most common underlying geology on the Gold Coast is metasediment rocks. Metasediment rocks are a type of metamorphic rock (rock transformed by heat and pressure). Originally these rocks were sedimentary rocks which were formed on the ocean floor through the deposition and solidification of sediment. 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, one of the least common types of vegetation on the Gold Coast. The 2017 extent* of this vegetation type on the Gold Coast was 56 hectares.

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

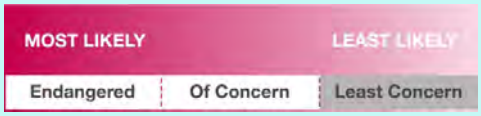


* Extent as mapped in 2017. Includes remnant vegetation only. Does not include disturbed remnant or regrowth.

Queensland

The conservation status of vegetation in Queensland is specified under the *Vegetation Management Act 1999*, which lists this regional ecosystem (RE 12.2.15) as being 'Least Concern'.

LIKELIHOOD OF BECOMING EXTINCT (n 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

Sedgeland on coastal sand deposits is a naturally restricted vegetation type which is limited to low lying areas on coastal sand plains, which are threatened by coastal development. Retention of this vegetation is important as a buffer to climatic events, and this community is also threatened by damage from extreme weather events, and increases in these events as a consequence of Climate Change. Several exotic weeds may occur in this vegetation zone, some of which are widespread and difficult to control (*Gloriosa superba, Bryophyllum sp, Baccharis halimifolia, Chrysanthemoides monilifera*). .

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, and/or
- 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.