Wet Eucalypt

VEGETATION TYPE 2c

Regional Ecosystem: 12.8.9

Brush Box (*Lophostemon confertus*) Open Forest with Rainforest understorey on Cainozoic Igneous Rocks

COMMUNITY STRUCTURE

This vegetation type is a tall open forest. It is characterised by a tall canopy layer of (often densely-packed) Brush Box (L*ophostemon confertus*) to between 18m and 26m in height. The sub-canopy is also dominated by Brush Box. Other eucalypts (particularly *Eucalyptus. microcorys* and *E. propinqua*) are also present in lower numbers in the canopy and sub-canopy.

Source: Ryan et al. 2019; GC122

The shrub layer is sparse to mid-dense, and typically includes a diverse mix of juvenile rainforest tree species, (*Trochocarpa laurina*, *Shizomeria ovata*, *Guioa semiglauca, Endiandra spp*. and *Notalaea longifolia* are some of the commonly seen species). The ground layer is dominated by ferns (*Adiantum hispidulum, Blechnum cartilagineum, Doodia aspera*) and other herbaceous plants (including *Lomandra confertifolia, L. longifolia, Tripladenia cunninghamii*). Epiphytes are common on trees, and vines can also be common.

Characteristic plant species

Approximately **126** 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.

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.

CANOPY

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

Brush Box

Lophostemon confertus

Tallowwood

Eucalyptus microcorys

Photo needed

Small-fruited Grey Gum

Eucalyptus propinqua

White Mahogany

Eucalyptus acmenoides

Red Mahogany

Eucalyptus resinifera

SUB-CANOPY

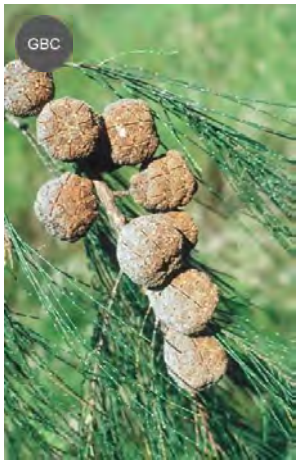
Tree layer below canopy

Brush Box

Lophostemon confertus

Turpentine

Syncarpia glomulifera



Forest She-Oak

Allocasuarina torulosa

Small-fruited Grey Gum

Eucalyptus propinqua

Tallowwood

Eucalyptus microcorys

SHRUB LAYER

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

Crab Apple
Schizomeria ovata

Tree Heath
Trochocarpa laurina

Long-leaved Mock-olive
Notalaea longifolia

Wild Quince
Guioa semiglauca

Hard Aspen
Acronychia laevis

Large-leaved Canthium
Psydrax lamprophylla
(formerly *Canthium lamprophyllum)*

Black Walnut
Endiandra globosa

GROUND LAYER AND VINES

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

Pale Mat Rush

Lomandra confertifolia subsp. pallida

GRAMINOID

Prickly Rasp Fern

Doodia aspera

FERN

Gristle Fern

Blechnum cartilagineum

FERN

Rough Maindenhair Fern

Adiantum hispidlum

FERN

Tripladenia

Tripladenia cunninghamii

FORB

Long-leaved Mat Rush

Lomandra longifolia

GRAMINOID

Gum Vine

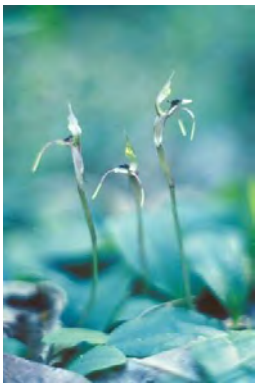
Aphanopetalum resinosum

VINE

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. In addition to characteristic species identified above as CWS species, the following CWS plant species may also be present in this vegetation type.

Veiny Lace Flower
Archidendron muellerianum
TREE



A Bird Orchid
Chiloglottis sylvestris
EPIPHYTE

Palm Lily
Cordyline congesta
SHRUB

Long-leaved Tuckeroo
Cupaniopsis newmanii
SHRUB

Smooth Tuckeroo
Cupaniopsis serrate
SHRUB

Black-fruited Sword-sedge
Gahnia melanocarpa
GRAMINOID (SEDGE)

Fine-leaved Tuckeroo
Lepiderema pulchella
SHRUB

Shining Burrawang
Lepidozamia peroffskyana
CYCAD

Plectranthus argentatus
FORB

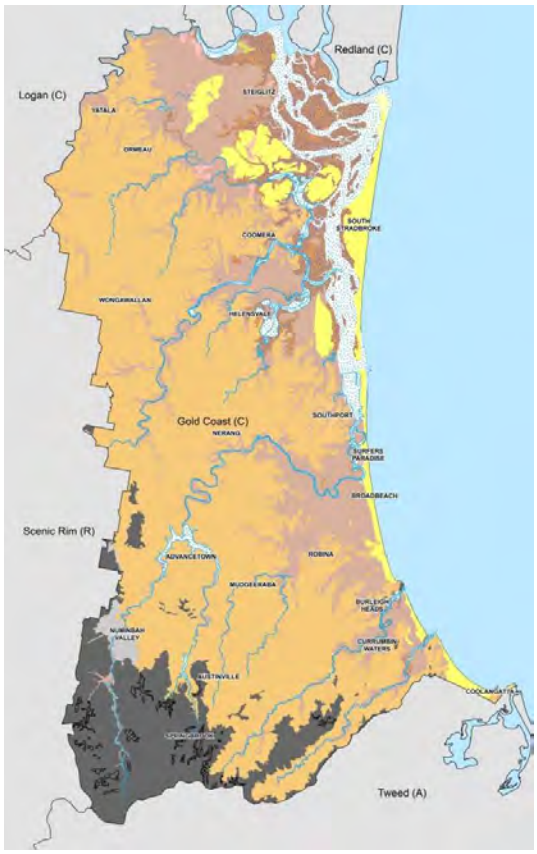
Sharp Greenhood
Pterostylis acuminata
FORB

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 the southern part of the Gold Coast, occurring on low sheltered slopes with rich red to brown soils at the base of the Springbrook plateau (including Austinville and Numinbah). Here it occurs in moist fertile areas exposed to high rainfall, and in moist sheltered gullies where it often adjoins rainforest VT29b (Vine Forest on Cainozoic igneous rocks), eventually developing into rainforest in the long-term absence of fire.

Historic distribution of Vegetation Type 2c



LEGEND

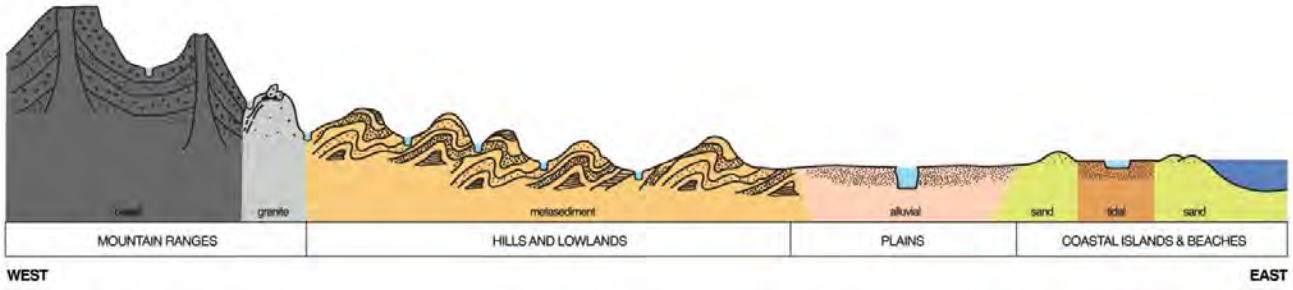
Vegetation Type 2c | Ocean | Major Waterways

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**

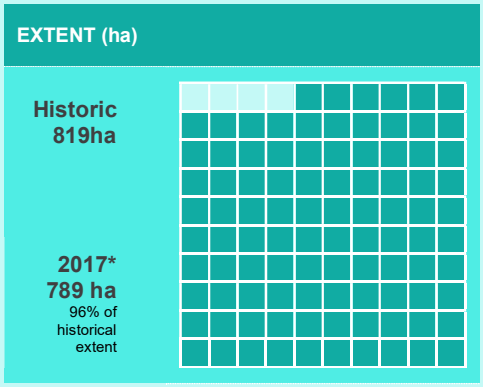
The most common underlying geology on the Gold Coast is metasediment rocks. Metasediment rocks are a type of metamorphic rock (rock transformed by heat and pressure). Originally these rocks were sedimentary rocks which were formed on the ocean floor through the deposition and solidification of sediment. 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 one of the least common types of wet eucalypt forest on the Gold Coast but most (96%) of its original extent remains. The current extent* of this vegetation type on the Gold Coast is 789 hectares.

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

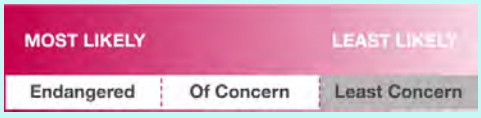


* Extent as mapped in 2017. Includes remnant vegetation only. Does not include disturbed remnant or regrowth.

Queensland

The conservation status of vegetation in Queensland is specified under the Vegetation Management Act 1999, which lists this regional ecosystem (RE 12.8.9) 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

This vegetation type develops into rainforest in the absence of fire. The fertile areas where it occurs are also particularly susceptible to infestation by Lantana and other exotic weeds, especially scrambling vines (notably *Pueraria lobata, Anredera cordifolia* and *Macfadyena unguis-cati*). It requires low frequency, moderate intensity fires around once every 20-100 years to maintain Brush Box as the dominant canopy tree, and to remove dense understorey regrowth, including native rainforest trees and exotic weeds.

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 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,
- 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.