# EUCALYPT

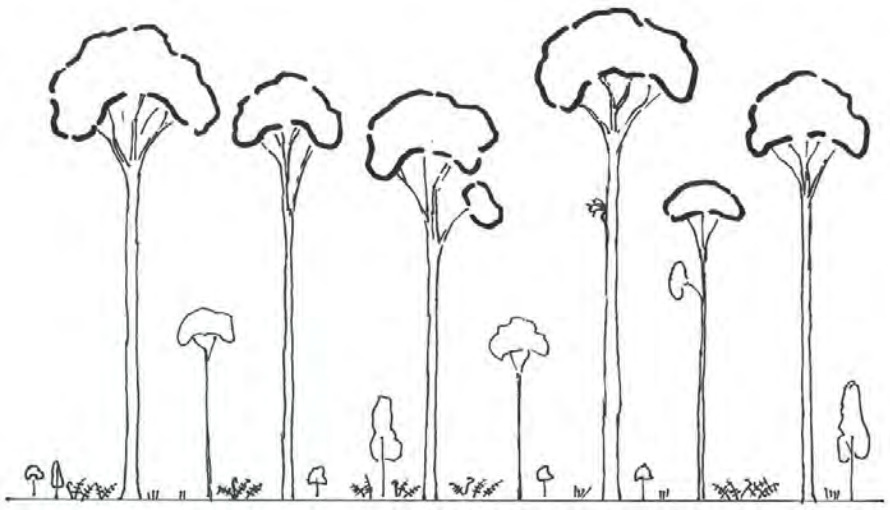
## VEGETATION TYPE 1c

Regional Ecosystem: 12.12.15

Grey Gum - White Mahogany - Tallowwood (*Eucalyptus propinqua - E. acmenoides - E. microcorys*) Open Forest on Mesozoic Igneous Rocks

## COMMUNITY STRUCTURE

This Vegetation type (VT) 1c is typically a tall open forest with a relatively dense canopy (ca. 60% cover). The canopy layer is typically 15-28m high, with Grey Gum and White Mahogany (*Eucalyptus propinqua* and *E. acmenoides*) often dominant. Tallowwood, Brush Box, Pink Bloodwood (*E microcorys*, *Lophostemon confertus* and *Corymbia intermedia*) are also often present.

| | | |
|---|---|---|
| **Canopy** |  | Medium - large trees<br>15 - 28 m<br>Tall open forest<br>60% cover |
| **Sub canopy** | | Small trees & juvenile canopy trees 7 - 15 m<br>Sparse ~ 5% cover |
| **Shrub** | | Shrubs 1 - 3 m<br>Sparse <5% cover |
| **Ground** | | Ferns / grass 0.1 - 1.0m<br>Sparse to mid-dense<br>~ 25% cover |

Source: Searle, 2019 (derived from GC103)

The sub-canopy is sparse and mainly composed of saplings of canopy trees, with Forest She-oak (*Allocasuarina torulosa*) also often present. The ground layer is dominated by ferns, particularly *Blechnum cartilagineum* (Gristle Fern), *Calochlaena dubia* (Common Ground Fern) and *Pteridium esculentum (*Bracken), together with *Imperata cylindrica* (Blady grass) and *Entolasia stricta* grasses (Wiry Panic).

## Characteristic plant species

Approximately **54 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**


**Small-fruited Grey Gum**
*Eucalyptus propinqua*

**White Stringybark**
*Eucalyptus acmenoides*

**Tallowwood**
*Eucalyptus microcorys*

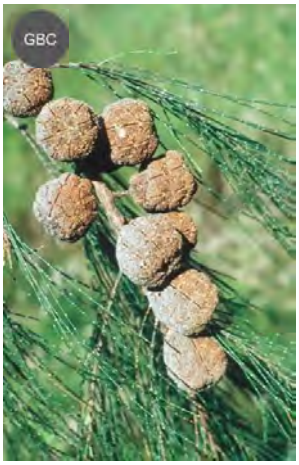
Photo needed

**Pink Bloodwood**
*Corymbia intermedia*

**Brush Box**
*Lophostemon confertus*

## SUB-CANOPY

**Tree layer below canopy**




**Forest She-Oak**

*Allocasuarina torulosa*

**Small-fruited Grey Gum**

*Eucalyptus propinqua*

## SHRUB LAYER

**Middle layer of vegetation usually made up of small trees (including juvenile canopy and sub canopy tree species) and woody shrubs**


**Brush Box**

*Lophostemon confertus*

## GROUND LAYER

**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.**

**Gristle Fern**

*Blechnum cartilagineum*

**FERN**

**Blady Grass**

*Imperata cylindrica*

**GRASS**

**Bracken**

*Pteridium esculentum*

**FERN**



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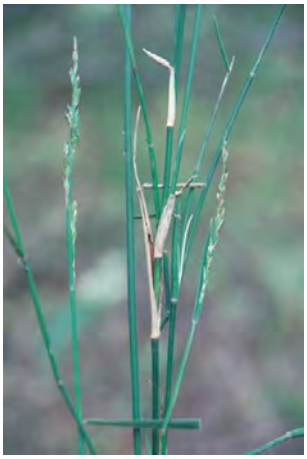
**Dusky Coral Pea**
*Kennedia rubicunda*
**VINE**


**Purple Coral Pea**
*Hardenbergia violacea*
**VINE**



**Wiry Panic**
*Entolasia stricta*
**GRASS**

## 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.

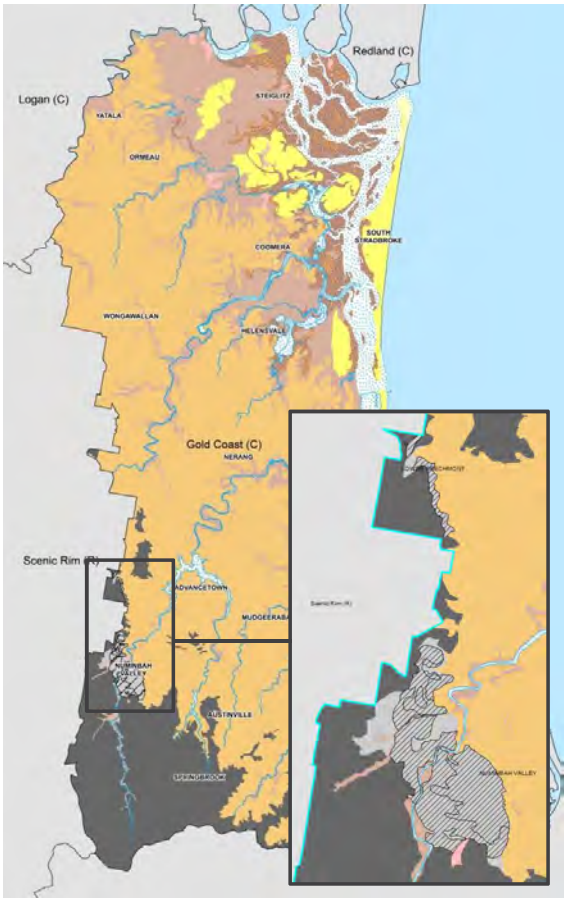
**Palm Lily**
*Cordyline congesta*
**PALM LIKE**

## 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 occurs on sheltered hillslopes on moderately fertile soils with deep leaf litter, high humic (decaying organic materials) and good moisture content. This community is restricted to an area of land on old volcanic-derived soils called the 'Chillingham Volcanics', and is restricted to the lower (northern) Numinbah Valley within Gold Coast City. Other areas of this vegetation type occur on similar soils in Tweed Shire.

### Historic distribution of Vegetation Type 1c




**LEGEND**

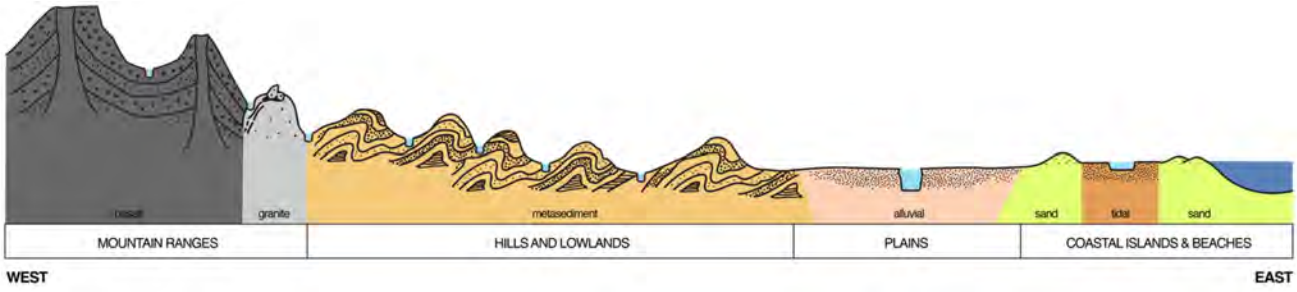
Vegetation Type 1c | Ocean | Major Waterways

**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) | 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**

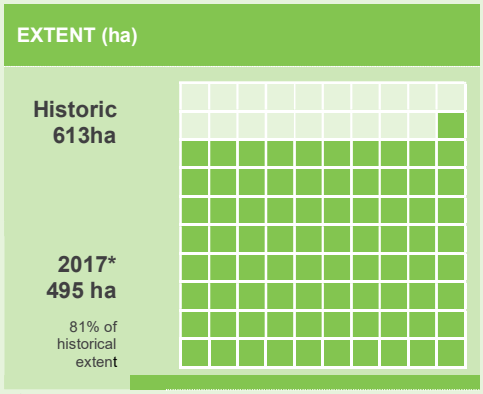
The most common underlying geology on the Gold Coast is metasediment rocks. Metasediment rocks are a type of metamorphic rock (rock transformed by heat and pressure). Originally these rocks were sedimentary rocks which were formed on the ocean floor through the deposition and solidification of sediment. 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

The 2017 extent* of this vegetation type on the Gold Coast is 495 hectares.

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

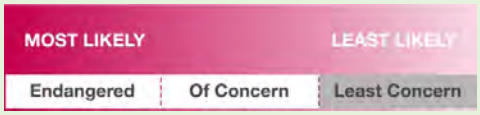



* Extent as mapped in 2017. Includes remnant vegetation only. Does not include disturbed remnant or regrowth

### Queensland

The conservation status of vegetation in Queensland is specified under the *Vegetation Management Act 1999*, which lists this regional ecosystem (RE 12.12.15) 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

VT1c is restricted to more fertile hillslopes and is susceptible to infestation by Lantana and other dense understorey growth, particularly in the absence of fire. It is a naturally restricted vegetation type that can transition towards rainforest in the absence of fire, and relies on appropriate fire management (low frequency, moderate to high intensity fires).

### 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.

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