EUCALYPT

VEGETATION TYPE 3c

Regional Ecosystem: 12.12.14

Broad-leaved White Mahogany - Queensland Stringybark - Red Bloodwood +/- Nambucca Ironbark (*Eucalyptus carnea - E. tindaliae - Corymbia gummifera +/- Eucalyptus fusiformis*) Woodland on Mesozoic Igneous Rocks

COMMUNITY STRUCTURE

Vegetation type (VT) 3c is a woodland with an open canopy (approximately 40% cover shading understorey plants) from 9m to 20m high. The canopy layer is characterised by a mixture of stringybark trees (mainly *Eucalyptus carnea* and *E. tindaliae*), together with Red Bloodwood (*Corymbia gummifera*) and Nambucca Ironbark (*E. fusiformis*).

Canopy		Medium – large trees 9 – 20 m Open ~ 40% cover
Sub canopy		Small trees 4 - 8 m Sparse ~5% cover
Shrub		Shrubs 1 – 3 m Sparse ~5% cover
Ground		Grassy 0 – 0.8m Sparse ~15% cover

Source: Searle, 2019 (derived from GC55; GC72; GC108)

The sub-canopy and shrub layers below the canopy are sparse to vary sparse (ca. <10% cover), although the shrub layer also includes a number of predominately heath-like shrubs (notably including *Pultenaea villosa*, *Hakea florenta*, *Acrotriche aggregata* and *Monotoca scoparia*), often with fine, prickly leaves and distinctive flowers. The ground cover is sparse and dominated by grasses.

Characteristic plant species

Approximately **36 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

Photo needed

Photo needed

Broad-leaved White Mahogany

Eucalyptus carnea

Queensland White Stringybark

Eucalyptus tindaliae

Red Bloodwood

Corymbia gummifera

Nambucca Ironbark

Eucalyptus fusiformis

Turpentine

Syncarpia glomulifera

Scribbly Gum

Eucalyptus racemosa

SUB-CANOPY

Tree layer below canopy

Red Bloodwood
Corymbia gummifera

Photo needed

Broad-leaved White Mahogany
Eucalyptus carnea

Turpentine
Syncarpia glomulifera

SHRUB LAYER

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

Hairy Bush Pea
Pultenaea villosa

Wallum Hakea
Hakea florulenta

SHRUB LAYER

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

Tall Ground-berry
Acrotriche aggregata

Prickly Broom Heath
Monotoca scoparia

Netted Olive, Forest Olive
Notelaea ovata

GROUND LAYER AND VINES

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) and vines which may extend upwards into the canopy.

Kangaroo Grass
Themeda triandra

TUSSOCK GRASS

Broad-leaved Mat Rush
Lomandra laxa

MAT RUSH

Pale Mat Rush
Lomandra confertifolia subsp. pallida

MAT RUSH

Variable Sword-sedge
Lepidosperma laterale

SEDGE

City-wide significant plant species

CWS

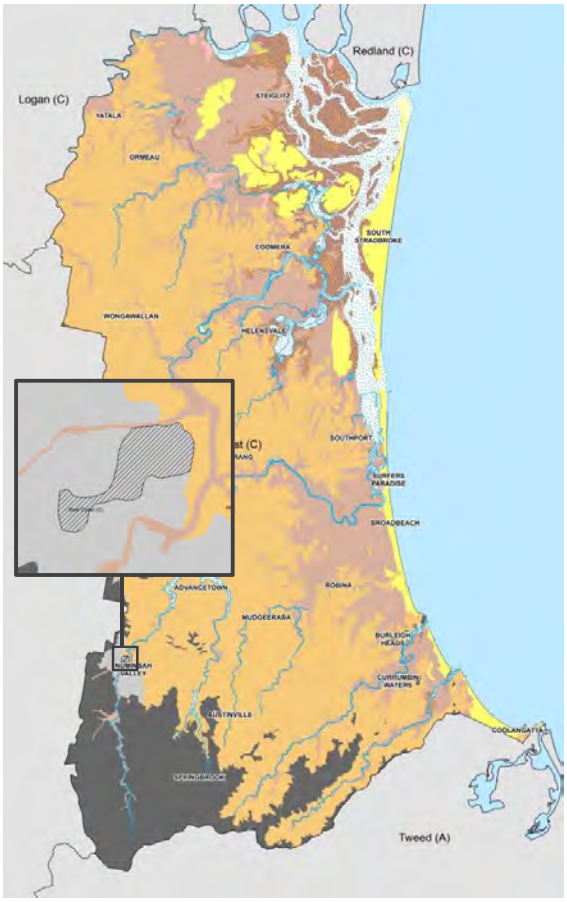
The City of Gold Coast recognises species which are locally significant as City-wide significant (CWS) species. These species are important because they may be threatened, restricted to the Gold Coast, or at the edge of their geographic range. There are no CWS plant species identified for this vegetation 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.

This vegetation type typically occurs on steep hillslopes and more exposed areas in Numinbah Valley. It occurs upslope of the taller VT1c (Grey Gum/White Mahogany/Tallowwood tall open forest on Mesozoic Igneous Rocks), and on shallower, sandy loam soils. This community is restricted to an area of land on old volcanic-derived soils called the 'Chillingham Volcanics', and is present within the Gold Coast in the lower (northern) Numinbah Valley. Other areas of this vegetation type occur on similar soils in Tweed Shire.

Historic distribution of Vegetation Type 3c



LEGEND

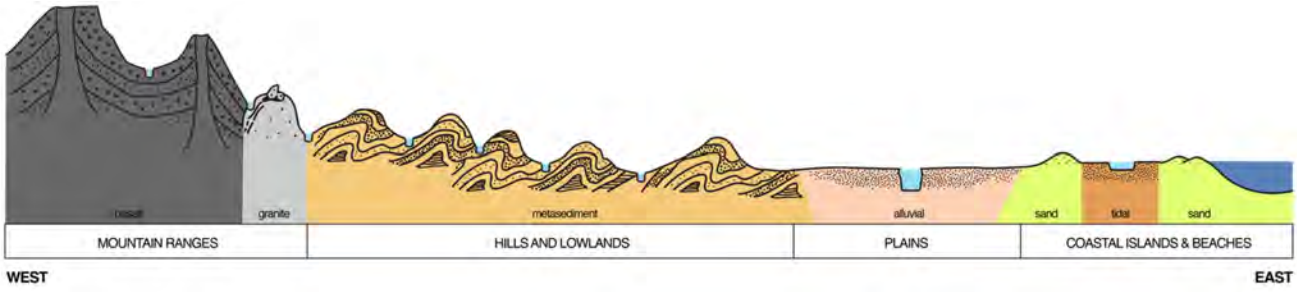
Vegetation Type 3c | Ocean | Major Waterways

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**

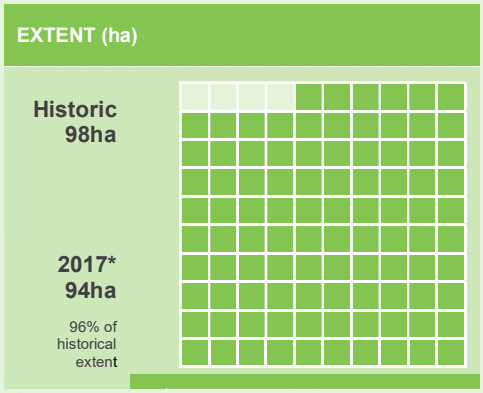
The most common underlying geology on the Gold Coast is metasediment rocks. Metasediment rocks are a type of metamorphic rock (rock transformed by heat and pressure). Originally these rocks were sedimentary rocks which were formed on the ocean floor through the deposition and solidification of sediment. 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 94 hectares.

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

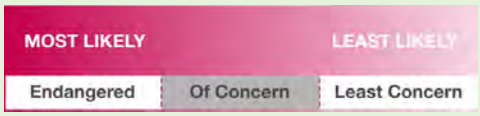


* Extent as mapped in 2017. Includes remnant vegetation only. Does not include disturbed remnant or regrowth

Queensland

The conservation status of vegetation in Queensland is specified under the *Vegetation Management Act 1999*, which lists this regional ecosystem (RE 12.12.14) as being 'Of 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

Mixed Stringybark woodland on Mesozoic Igneous Rocks is restricted to shallow sandy soils, generally within public land reserved for water catchment purposes. It requires regular fire to stimulate and retain some of the plant species present, although too frequent fires represent the main risk to the integrity of this community. The shallow soils limit weed colonisation, although Molasses Grass can colonise open areas. Too frequent fires or other loss of native grassy understorey can result in erosion and desiccation of the soil layer.

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.

CITY OF GOLDCOAST.