

EXPOSED COASTAL

rocky headlands



VEGETATION TYPE 31

Regional Ecosystem: 12.12.19

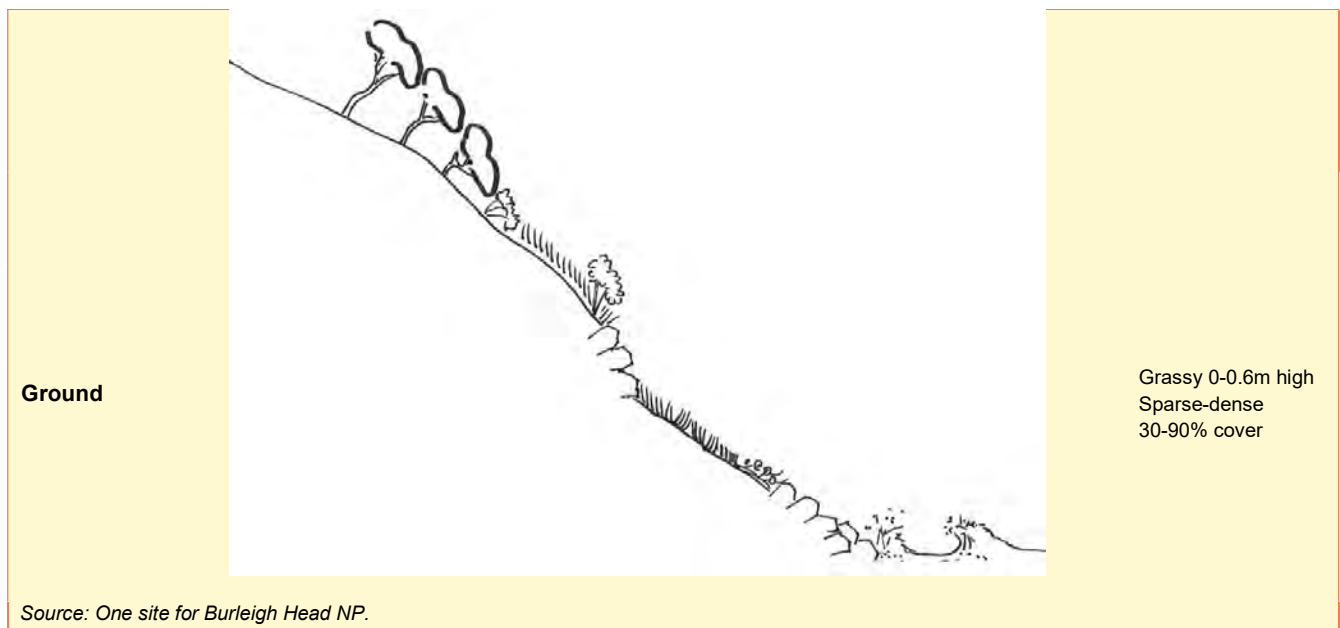
Rocky Headlands with Heath/Grasslands

COMMUNITY STRUCTURE

Grassland on rocky headlands occurs in exposed areas on coastal headlands, where a grassland approximately 30-60cm in height and dominated by Kangaroo Grass (*Themeda triandra*) is the main diagnostic feature. These areas are open and exposed to the prevailing south-easterly winds, may be relatively steeply sloped, and can have open areas of rock amongst or surrounding them.

Other grasses (such as *Imperata cylindrica*) may also occur, together with localised forbs and scrambling vines.

Screw Pine (*Pandanus tectorius*) and small trees such as Macaranga (*Macaranga tanarius*) and Tuckeroo (*Cupaniopsis anacardioides*) occur intermittently.



Characteristic plant species

Approximately 8 native plants species have been recorded for this vegetation type. Characteristic plant species are listed below. Dominant (most numerous) species are shaded.



Indicates species is a preferred koala food tree*



Indicates species is a Glossy Black-Cockatoo feed tree species



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

Scattered plants that grow above other vegetation.



Screw Pine

Pandanus tectorius



SHRUB LAYER

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



Tuckeroo

Cupaniopsis anacardioides



Macaranga

Macaranga tanarius

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).



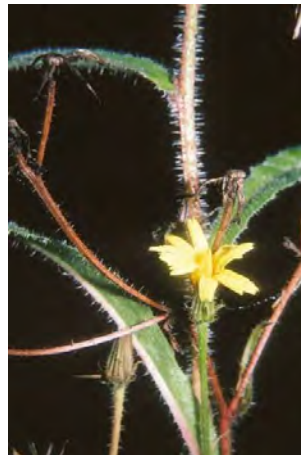
Kangaroo Grass
Themeda triandra
GRASS (TUSSOCK)



Blady Grass
Imperata cylindrica
GRASS



Coastal Jack Bean
Canavalia rosea
VINE (PROSTRATE)



Picris
Picris angustifolia subsp.
carolorum-henricorum
FORB



Sea Daisy
Wollastonia biflora
FORB

City-wide significant plant species



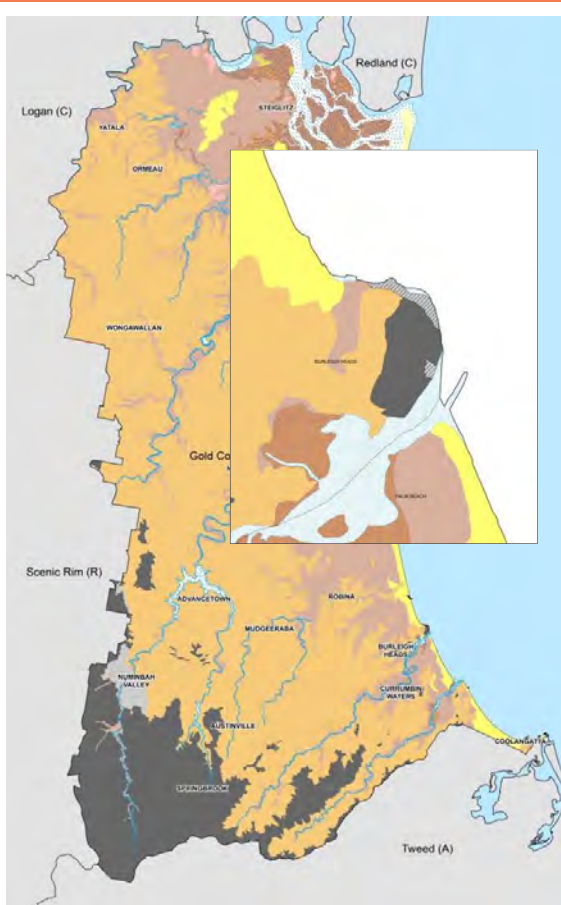
The City of Gold Coast recognises species which are locally significant as City-wide significant (CWS) species. These species are important because they may be threatened, restricted to the Gold Coast, or at the edge of their geographic range. There are no City-wide significant plant species listed for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

Grassland on rocky headlands is a naturally restricted vegetation type and occurs in open areas on rocky headlands, in areas exposed to the prevailing southerly and easterly winds. This community occurs naturally on the eastern edge of Burleigh Head on thin, rich, red basalt-derived soils. Basaltic rocks can occur at the surface in some locations. This community forms a natural mosaic with adjoining Sub-tropical Vine Forest on basaltic headlands (VT28), and may be colonised by rainforest in the absence of fire.

Historic distribution of Vegetation Type 31



LEGEND

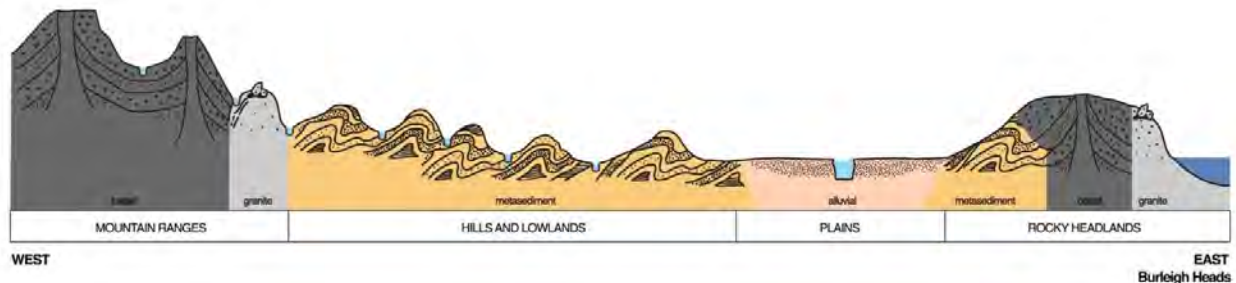
- Vegetation Type 31
- Ocean
- Major Waterways

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)	Coastal 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	

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 metamorphism, 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

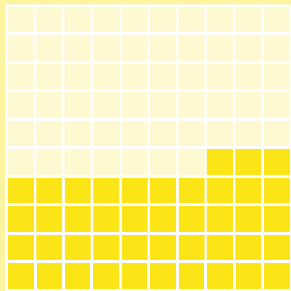
Historically, this VT was one of the least common vegetation types on the coast. It's the least common type of Coastal vegetation. The 2017 extent* of this vegetation type on the Gold Coast was 5 hectares.

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

EXTENT (ha)

Historic
13 ha

2017*
5 ha
43% of
historical
extent

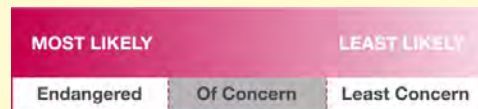


* Extent as mapped in 2017. Includes remnant vegetation only. Does not include disturbed remnant or regrowth.

Queensland

The conservation status of vegetation in Queensland is specified under the *Vegetation Management Act 1999*, which lists this regional ecosystem (RE 12.12.19) 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 ©

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THREATS

This vegetation type is naturally restricted to rocky headlands, and is protected in Burleigh Head National Park within the Gold Coast. However, human visitation and disturbance is high, and in addition to direct plant trampling, weed invasion and the risk of damage from fire are constant threats requiring ongoing management. This community is threatened by invasion of exotic weeds (such as *Melinus minutiflora*, *Senecio madagascariensis*, *Asparagus* spp., *Gloriosa superba*, *Bryophyllum* spp., *Baccharis halimifolia* and *Chrysanthemoides monilifera*), especially when fire or disturbance are too frequent. Fire management and weed control are the keys to maintenance of this native grassland community.

About common threats

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
- 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.