Native vegetation groups

The Gold Coast is one of Australia’s most biodiverse cities. It is home to:

- more than 1730 recorded species of native plants
- world heritage-listed Gondwana rainforests and
- Ramsar convention-listed coastal wetlands.

Some features that give the city its iconic reputation and a reason for people to visit, live and invest in the city are:

- the many waterfalls
- open forests
- freshwater and tidal wetlands
- sand dunes and long stretches of beach bordering the Coral Sea.

Many interesting and beautiful native vegetation groups contribute to the city’s biodiversity. Native vegetation grows in groups of species. These groups vary depending on soil, landform, aspect and climate. Understanding these differences can help with choosing the right species for your garden. When you plant the right native plant in the right place, you save time, money, effort, energy and you do less maintenance.

From the coast to the hinterland, there are 10 native vegetation groups. There are different vegetation types within each of these groups.

Exposed coastal

Sand dunes are the dominant landform along the Gold Coast’s coastline. These long stretches of sand are interspersed with a number of rocky headlands. Vegetation growing in these areas is exposed to strong salt laden winds and wind and wave erosion resulting in a unique array of plant species.

Dune vegetation

The vegetation type most familiar to beachgoers, dune vegetation, is dominated by species like Coastal She-oak (*Casuarina equisetifolia*), Coastal Banksia (*Banksia integrifolia*) and Beach Spinifex.

Dune vegetation stabilises the dunes in the face of strong winds but much of it has been cleared or is suffering from weed invasion, including garden escapee plants. It protects the dynamic coastline from wind and from salt and buffers the effects of storms and cyclones. The City’s Ocean Beaches Strategy aims to improve the quantity and condition of dune vegetation along the coast.

Dunes are home to an assortment of wildlife, including reptiles, insects, birds and mammals.

Rocky headlands

This unique vegetation community occurs on exposed areas of rocky headlands such as Burleigh Head.

Grasses such as Kangaroo Grass (*Thermopsis triandra*) are the dominant feature though isolated, small trees such as Screw Pine (*Pandanus tectorius*) may also occur.

Tidal wetlands

Tidal wetland vegetation communities occur on tidal flats within estuaries. They are a mosaic of treed and treeless areas. They are highly dynamic and change in extent as flood events modify estuarine shores. As the boundary between terrestrial and marine environments, tidal wetlands are strategic refuge areas, supporting plants found nowhere else.

Tidal wetlands are also home to many migratory species of birds and provide nursery and breeding areas for a large range of animals including fish, birds and invertebrates. Up to two thirds of fish caught off the Australian coastline spend some of their lifecycle in tidal wetlands and estuaries. There are three distinct subgroups of tidal wetlands - mangroves, salt marshes and swamp oak woodlands.

Mangroves

Mangrove forests fringe our coastal waterways and cover the mud islands found within our estuaries. An important habitat for a wide range of species, mangroves provide nursery, feeding and protective areas for fish and crustaceans and are vital for nutrient cycling.

Mangroves also play a valuable role in foreshore protection with their extensive root systems assisting shoreline stability. There are seven different types of mangrove vegetation on the Gold Coast. If you live close to mangrove wetlands, you may notice a pungent, rotten egg-like odour between May and November.

This odour is typically the result of the breakdown of organic material, such as leaves and seeds, in wetland areas. Bacteria facilitate this breakdown by consuming oxygen from the water, creating a sulphur reaction with distinctive hydrogen sulphide (rotten egg) odour. As this is a natural process, little can be done to reduce the odour.

For further information please see our Protecting catchments page or download and view more information about mangroves of the Gold Coast.

Salt marshes
Salt marshes occur at the outer or higher marine intertidal zone and are typically slightly more elevated than adjoining mangroves. They are dominated by low-growing, saltwater tolerant plants such as marine grasses, sedges and samphires (succulent, herbaceous plants that grow in high-salinity environments). There are five types of salt marsh on the Gold Coast.

Swamp Oak Woodlands

Swamp Oak Woodlands occur at the upper limit of the tidal zone, in areas infrequently inundated by saltwater on spring tides. They are dominated by Swamp Oak (Casuarina glauca). Isolated emergent trees, mostly Queensland Blue Gum (Eucalyptus tereticornis subsp. tereticornis), sometimes occur.

Coastal

In more protected coastal areas, inland from the beach dunes, headlands and tidal wetlands, a number of other coastal vegetation communities occur. These include wallum (heathlands) and coastal woodlands.

Wallum (Heathlands)

Wallum is a term used to name the wildflower heathlands that were common on the east coast of Australia prior to European settlement. Heathland vegetation is found in sandy, coastal areas with low-nutrient soils, but can also be found growing on rock in the mountains (see montane section below).

Wallum describes a variety of vegetation communities, which are typically very diverse and support a distinct variety of plants including tea trees, grasstrees and wildflowers. There are three types of wallum vegetation that occur in coastal areas on the Gold Coast.

An important species common to coastal heathlands on the Gold Coast is the Wallum Banksia (Banksia aemula). This species is the floral and arboreal emblem of the Gold Coast. The best place to see wallum or wildflower heathlands on the Gold Coast is at Pine Ridge Conservation Park. In late winter and spring, the wallum here bursts into bloom with an amazing diversity of wildflowers.

Visit Gold Coast Stories for further information on the Wallum Banksia.

Coastal woodlands

These woodlands grow on old sand dunes in inland coastal areas and on South Stradbroke Island. Eucalypts and other gum trees are often dominant but coastal plants such as Coastal Cypress Pine (Callitris columellaris) and/or banksias, tea-trees and heaths are also present. There are two coastal woodland vegetation types on the Gold Coast.

Swamp forest

A large part of the Gold Coast was once covered by a magnificent feature, the Great Swamp. It occurred in low-lying areas that were periodically waterlogged or subject to fresh water inundation. It extended from Burleigh Waters west to Mudgeeraba, north to Nerang River and east to the edge of the coastal dune systems.

Paperbarks (Melaleuca species) are the dominant species forming this vegetation group and often found in association with eucalypts such as Queensland Blue Gum (Eucalyptus tereticornis subsp. tereticornis) or Swamp Oak (Casuarina glauca).

There are four types of swamp forest vegetation on the Gold Coast.
This vegetation group has been extensively cleared and its habitat modified on the Gold Coast, largely by the construction of the canal systems and draining of the floodplain. Less than eight per cent of this vegetation community remains on the Gold Coast. Remaining areas of paperbark open forests and woodlands type are of high environmental significance.

**Freshwater wetlands**

These vegetation communities grow in low-lying areas, permanently or regularly inundated by freshwater. They are therefore dominated by aquatic or semi-aquatic plants adapted to low oxygen soil environments and prolonged periods of freshwater inundation. Characteristic plants include sedges, rushes and rush/sedge-like plants.

Freshwater wetlands are home for many species of water birds, frogs, invertebrates and fish. They also support countless water-loving plants.

**Riverina and alluvial**

A variety of forest and woodland vegetation communities grow in the fertile alluvial soils (soils transported by water), which occur along watercourses and their floodplains. While often dominated by eucalypts, these communities may include rainforest species when fire is excluded for long periods.

The stream bank or riparian vegetation found along creeks and rivers is often different to the surrounding vegetation groups because of the additional moisture and nutrients available and due to the presence of better soils.

Watercourses and their associated riparian vegetation provide critical habitat and corridors for native wildlife, even when water runs in the streambed only part of the time. Download the Native animals of Gold Coast riparian areas fact sheet to find out more.

Much of the Gold Coast’s riparian vegetation has been cleared for farming or residential purposes, so protecting what remains and restoring degraded and cleared riparian vegetation is essential for the survival of many species.

**Eucalypt**

Eucalypt open forests and woodlands are the most common types of vegetation on the Gold Coast. They are the quintessential Australian bush with gum trees and wattles, grass trees and wildflowers, koalas and kookaburras. Eucalypt forests occupy the Gold Coast’s lowlands, foothills and much of the higher country on a range of soils.
Eucalypt open forests and woodlands are home to an amazing variety of native animals including many Australian icons such as kangaroos, wallabies, echidnas and possums. These species are commonly seen on Gold Coast properties, even small blocks that retain native bushland. Download the Native animals of Gold Coast eucalypt forests and woodlands fact sheet to find out more.

More than 20 species of eucalypts and related trees (gum trees) are found on the Gold Coast. Mature gum trees often contain hollows which are essential breeding, nesting and roosting sites for native fauna. The formation of hollows can take up to 120–180 years. Where hollows exist, they do not indicate that a tree is unsafe; in fact, hollow-bearing trees can be stronger and sturdier. We need to retain gum trees in our environment for a long time to ensure our coexistence with the wonderful local fauna.

Download the to find out more about local fauna which use hollows and how you can protect and support this fauna in your backyard.

**Wet eucalypt**

Like other types of eucalypt forests, the canopy of wet eucalypt forests is dominated by gum trees (eucalypts and related trees) but because conditions are moister, rainforest trees and shrubs are often found in the understorey.

Fire is very important in determining the structure and species composition of wet eucalypt forests. If fire occurs, the vegetation group may change towards a dry eucalypt forest, and if fire is excluded, the vegetation may become rainforest over time.

Wet eucalypt forests can be found adjacent to both eucalypt forest and rainforest and share characteristics of both, adding to habitat diversity and providing food and other resources for a wide variety of fauna species.

There are six types of wet eucalypt vegetation on the Gold Coast.

**Rainforest**

Rainforest communities are generally found in areas with moist, rich, volcanic or alluvial soils, located in sheltered gullies and along watercourses. They are complex and often dense forests typically with closed canopies and an array of plant life forms including mosses, ferns, vines, palms, strangler figs and epiphytes. At least half of the canopy contains rainforest species but canopy trees can be overtopped by emergent eucalypt trees in some types of rainforest communities.
A number of subgroups of rainforest occur on the Gold Coast, including subtropical, gallery, dry, warm temperate, cool temperate and littoral rainforest. Littoral rainforest describes the coastal rainforests that once existed close to beaches, such as the magnificent Surfers Paradise rainforest that once grew between Main Beach and Broadbeach. The coastal rainforest that grows on the basalt rock at Burleigh Head is another type of littoral rainforest and is the only example of this type in the entire city.

There are a total of 12 rainforest vegetation types on the Gold Coast. These rainforests contain great biological value and are home to many rare and threatened species, such as the Macadamia Nut, *(Macadamia integrifolia and M. tetraphylla)*. Download the Threatened rainforest plants of the Gold Coast booklet to find out more about rare and threatened species.

World Heritage status has been awarded to the rainforests of Springbrook and Lamington, but all rainforest is of great importance for the diversity of plants, animals and other life forms it supports. Download the Native animals of rainforest in the Gold Coast factsheet to learn more about rainforest animal species.

**Montane**

As its name implies, montane vegetation occurs in the mountains. It occurs either as heath communities on expanses of rock or as small isolated outcrops of vegetation on rock shelves and in crevices of cliff faces. Due to similar growing conditions — low soil fertility and high exposure to wind and sun - montane vegetation communities occasionally share similar species to coastal heath communities.

Montane heath is dominated by a mix of tea-trees and other prickly leaved shrubs. Rock orchids, ferns and herbaceous plants may also be present along with Bell-Fruited Mallee Ash *(Eucalyptus cederocarpa)*, a near threatened, low growing tree.

On cliff faces, trees and larger plants are rarely present but Spear Lilies *(Doryanthes palmeri)* often dominate these isolated patches of vegetation. This species is of City-wide significance.

Regional ecosystems and vegetation types

The Queensland State government uses Regional Ecosystems to classify and describe vegetation within a region associated with a particular combination of geology, landform and soil. You can request a map of biodiversity status or broad vegetation group to find out what pre-clearing vegetation, remnant vegetation and regional ecosystems your property has, or view descriptions of regional ecosystems.

The City uses vegetation types to map its vegetation cover. Vegetation types were defined by botanists from the Queensland Herbarium for the City in 2003 and are more descriptive, locally-relevant and provide more information than Regional Ecosystems do.

The summarises the extent and distribution of native vegetation types across the Gold Coast local government area as of 2015. The Gold Coast City identifies current and historic representation of each vegetation type within the conservation network, gaps in representation and expert panel-agreed targets to ensure adequate representation for each vegetation type.

Download Vegetation types of the Gold Coast to view the list of vegetation types within the city.

**Related information**

- City-wide significant species
- Gold Coast flora and fauna
- Plant native species
### Key information

**Brochures, fact sheets & reports**
- Mangroves of the Gold Coast
- Native animals of Gold Coast eucalypt forests and woodlands - fact sheet
- Native animals of Gold Coast rainforest areas - fact sheet
- Native animals of Gold Coast riparian areas - fact sheet
- Threatened rainforest plants of the Gold Coast
- Vegetation types

**External links**
- Queensland Government - request a map of biodiversity status or broad vegetation group
- Queensland Government - Regional ecosystems
- Gold Coast Stones - The Wallum Bankia

**Maps, drawings & plans**