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Dredging

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What is dredging?

Dredging is an excavation activity that artificially deepens and widens harbours and waterway channels. The process of dredging involves using machinery to collect sediments such as sand, silt or mud that have settled at the bottom of the channel.

Dredging keeps waterway channels navigable for boat users and also has significant flood mitigation benefits in rivers.

Some of the uses of dredging include:

• Creating a new harbour, berth or waterway or to deepen existing waterways to allow larger ships access
• Preparatory work for bridges, piers or wharves
• Maintaining existing waterways or channels which are at risk of becoming silted

• Beach nourishment
• Mining for minerals, construction materials including sand and gravels or other elements like gold or diamonds
• Flood prevention

Why is dredging necessary?

Waterways are a complex network of naturally shallow areas and channels. Factors including varying tidal and weather conditions as well as a build up of sediment, can cause these channels to become narrow or too shallow to navigate. The process of dredging allows us to maintain the waterways to ensure they are navigable for craft.

Dredging can also have significant benefits in flood prevention. By increasing the channel depth it increases the channels capacity for carrying water.

Benefits of dredging

In some locations on the Gold Coast, sediment is generally clean sand that can be used for landfill or nourishing shorelines. This can assist in offsetting the effects of erosion which is a significant problem on the Gold Coast.

Dredging is vital to the construction and maintenance of much of the infrastructure that underpins the Gold Coast way of life. Marine infrastructure is vital for the city’s economic prosperity and social well being.

The materials that are being dredged are frequently used to create or restore habitats as more than 90% of sediments from navigation dredging comprise unpolluted, natural, undisturbed sediment.

The sediment that is deemed beneficial can be used in a variety of ways including:
Dredging
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• Coastal protection and beach nourishment
• Agriculture, horticulture, forestry
• Habitat development or enhancement e.g. aquatic habitats, bird habitats, mudflats etc
• Amenity development or enhancement e.g. landscaping
• Raising low-lying land
• Production of construction material e.g. brocks, clay, aggregates

Dredging can also assist in removing contaminated sediments, thus improving the water quality and restoring the health of aquatic ecosystems.

Environmental impacts of dredging

As part of the dredging process the Gold Coast Waterway Authority is committed to mitigating any potential environmental risks by undertaking an extensive Environmental Impact Assessment prior to the commencement of any dredging program.

Some of the main environmental concerns relating to dredging include:
• Water quality, e.g. increase of suspended solids concentration and potential release of contaminants during dredging or disposal
• Habitats and natural areas, e.g. habitat enhancement, removal or destruction of benthos, smothering
• Local communities, e.g. the effects of noise, increased employment opportunities
• Changes to topography
• Physical processes, e.g. waves, currents, or drainage and hence erosion or deposition
• Archaeological assets, e.g. shipwrecks
• Recreation, e.g. sailing, swimming and beach use
• Economic activities, e.g. commercial fishing, improved infrastructure


What is being done?

Boating activity on the Gold Coast waterways is growing steadily and 11% of Queensland’s recreational boats are now located in the Gold Coast region. Based on the latest figures, there are now almost 28,000 recreationally registered boats and almost 700 commercially registered vessels in the Gold Coast area.

The Queensland Government, through the establishment of the Gold Coast Waterways Authority has committed $35.3 million over three years to improving access to and management of the Gold Coast Waterways including several significant dredging projects.

Recently completed and current dredging projects include:
• Gold Coast Seaway entrance dredging, a joint initiative with Gold Coast City Council (commenced in May 2011 and completed in July 2012)
• North Channel, South Channel and South Wave Break Island Channel dredging (commenced in January 2013 and due for completion in September 2013)
• Coomera River dredging (commenced in October 2012 and due for completion in September 2013)

For more information please contact the Gold Coast Waterways Authority on 07 5539 7350.