CAIRNS CITY+ INNER SUBURBS

Areas vulnerable to erosion or inundation (high tide and storm tide) if sea levels rise by 0.8 metres by 2100 as predicted, and no adaptation action is taken. Mapping is in draft form for consultation purposes. For more information www.cairns.qld.gov.au/ourcairnscoast

CAIRNS CBD

0.7

1.4

2.1 km

Cairns city and inner suburbs includes the CBD, Cairns Esplanade, Botanic gardens, parklands, saltwater creek, Cairns Airport and other transport, commercial, tourism and marine hubs. The centre of Cairns, established on reclaimed swamp land and river delta at Trinity Inlet, and its surrounding inner suburbs house more than 11,000 people.



- The land that the city is located on has progressively been filled by 2 to 4m to raise the elevation above tidal and flood levels
- The city is vulnerable to storm-tide inundation and long-term sea level rise
- The city contains the highest number of priority assets at risk from coastal hazards
- Erosion has effected the foreshore since the 2000's however a seawall and rock wall were constructed to protect the esplanade and boardwalk
- Beach nourishment works have occurred periodically along the northern section of the CBD foreshore

COMMUNITY ASSETS AT RISK BY 2100

- Foreshore parks
- Industrial areas
- Business, tourism and commercial infrastructure
- Emergency services and health stations and QFES)

WHOLE OF COAST ONGOING ADAPTATION ACTIONS

Monitoring

Community awareness and education

Emergency management

Planning considerations

Native

vegetation

and habitat

management

• Key infrastructure (e.g. airport, port, marina precinct, hospital)

infrastructure (e.g. Cairns Hospital, ambulance stations, fire stations, community health facilities, police

• Servicing (e.g. water and sewer pipes)

- Variety of schools (e.g. Cairns State High School, St Monica's, Trinity Bay State High School, Parramatta State School)
- Key utility infrastructure (e.g. Ergon Energy's substation and wastewater treatment plants)
- Variety of roads (e.g. Mulgrave Road, Sheridan Street, Comport Street, Anderson Street)
- Drainage infrastructure (e.g. Fearnley Street Drain)

WHAT THE **COMMUNITY VALUES**

- Culturally significant sites
- Wharf precinct
- including lagoon, esplanade boardwalk and picnic areas
- Marine precinct, Navy base and Port area for the economy
- Wetland and nature reserves
- Lakes
- Unique wildlife and biodiversity
- Public facilities, such as museums and art galleries

COMMUNITY **ADAPTATION PRIORITIES**

- Creek mouth management
- mangroves on the Esplanade



Local Adaptation Pathways to respond to coastal hazards

(For community assets, based on monitored sea level rise)

BEACH & FORESHORE MANAGEMENT	 Beach access management (remove unnece access, formalise appropriate public paths a access after erosion)
	 Beach scraping as required to reinforce dun erosion scarps
	• Beach nourishment to maintain beach width
	 Develop local adaptation plan for foreshore based solutions such as mangrove with inte responses.
	 Develop integrated catchment management Saltwater Creek and Fearnley Street drain
MODIFY INFRASTRUCTURE AND HAZARD RESILIENT DESIGN	 Plan to update existing infrastructure (e.g. rabund wall) or locate new infrastructure to er coastal hazards and outside inundation externation
	 Refurbish or upgrade existing structures to hazards which could be undertaken as part works
	 Increase the capacity of flood pumps (mainle
	 Relocate foreshore park assets to outside the extent
	 Raise services (e.g. vehicle access points, ele owned buildings that are likely to be regular sea level rise or storm surges
	 Investigate a raised road around the city for levee preventing tidal inundation and allow
COASTAL ENGINEERING	• Maintain existing seawalls to hold the shore
	 Seawalls may be required along the foresho Creek to prevent inundation and protect CRO
	 Small groynes to maximise the benefit of sm nourishment
	• Scour protection works along waterways to
	 Investigate tidal gates along the length of th to prevent elevated water levels from penet areas
	 Investigate additional engineering options so and detached breakwater to protect foresho
ACCEPT THE RISK AND EMBRACE COASTAL PROCESSES	 Progressively review or relocate public infra inundation encroaches assets or protection viable or effective

TIMING BASED ON SEA LEVEL RISE SHORT TERM MED TERM LONG TERM 0-0.3m 0.3-0.6m >0.6m

