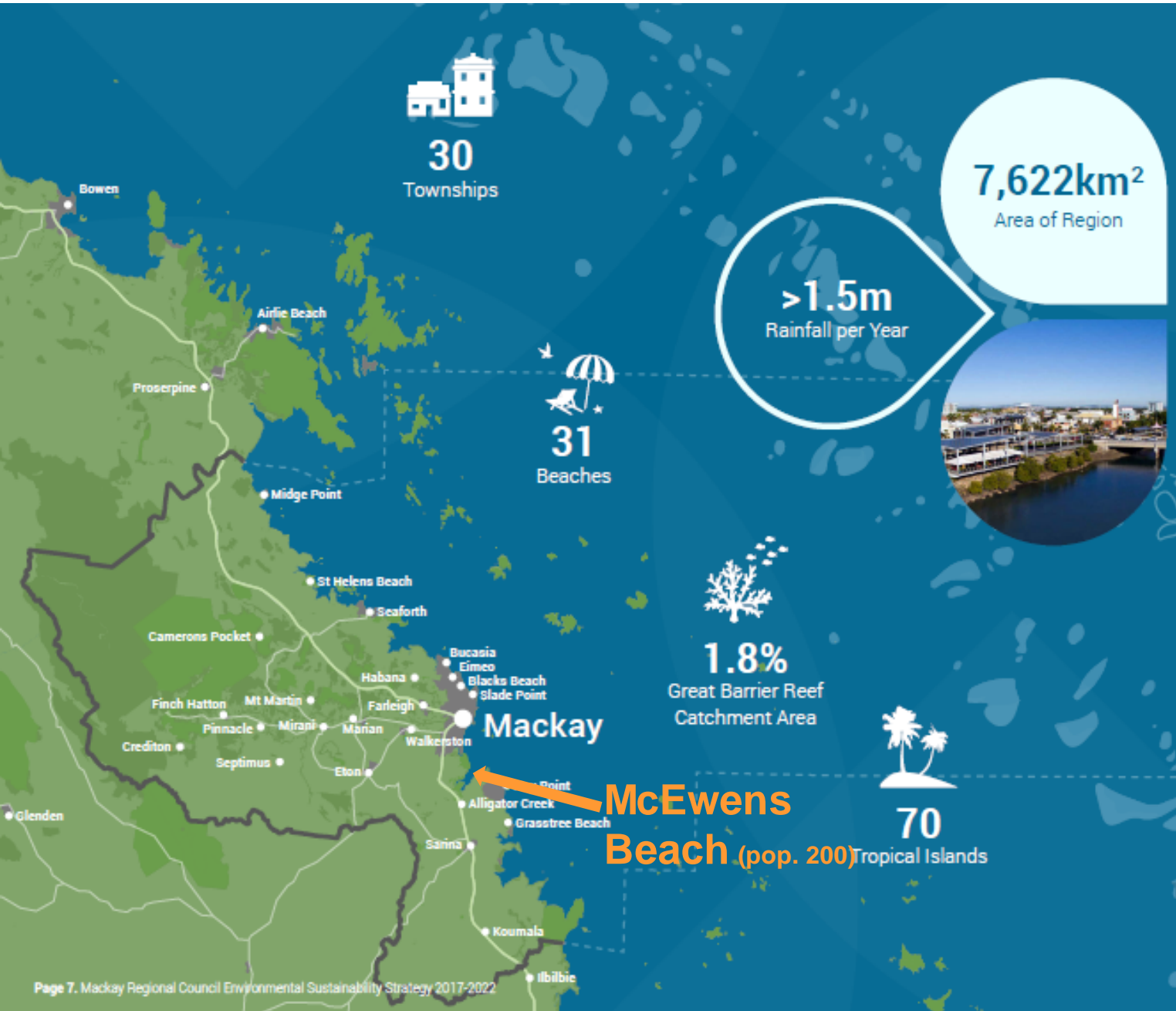




# Negotiating a self funded seawall

Robyn Birkett

01 November 2022



# Mackay Region

- 320 km coastline
- Population of approx. 123,000
- 24 + coastal communities
- Approx 1 cyclone every 2 years ± 150km of Mackay (since 1910)
- 40% properties affected by coastal and flood hazards



## Past extremes

### 1918 tropical cyclone

- 3.8 m surge
- 0.7 m rain in 24 hours

### 1958 Major flood

- 0.54 m rain in 5 hrs
- 0.88 m rain in 24 hrs

### 2008 Major flood

- 0.74 m rain in 6 hours
- 1m rain in a day

### 2017 TC Debbie

- 1.6 m surge (Midge Point)

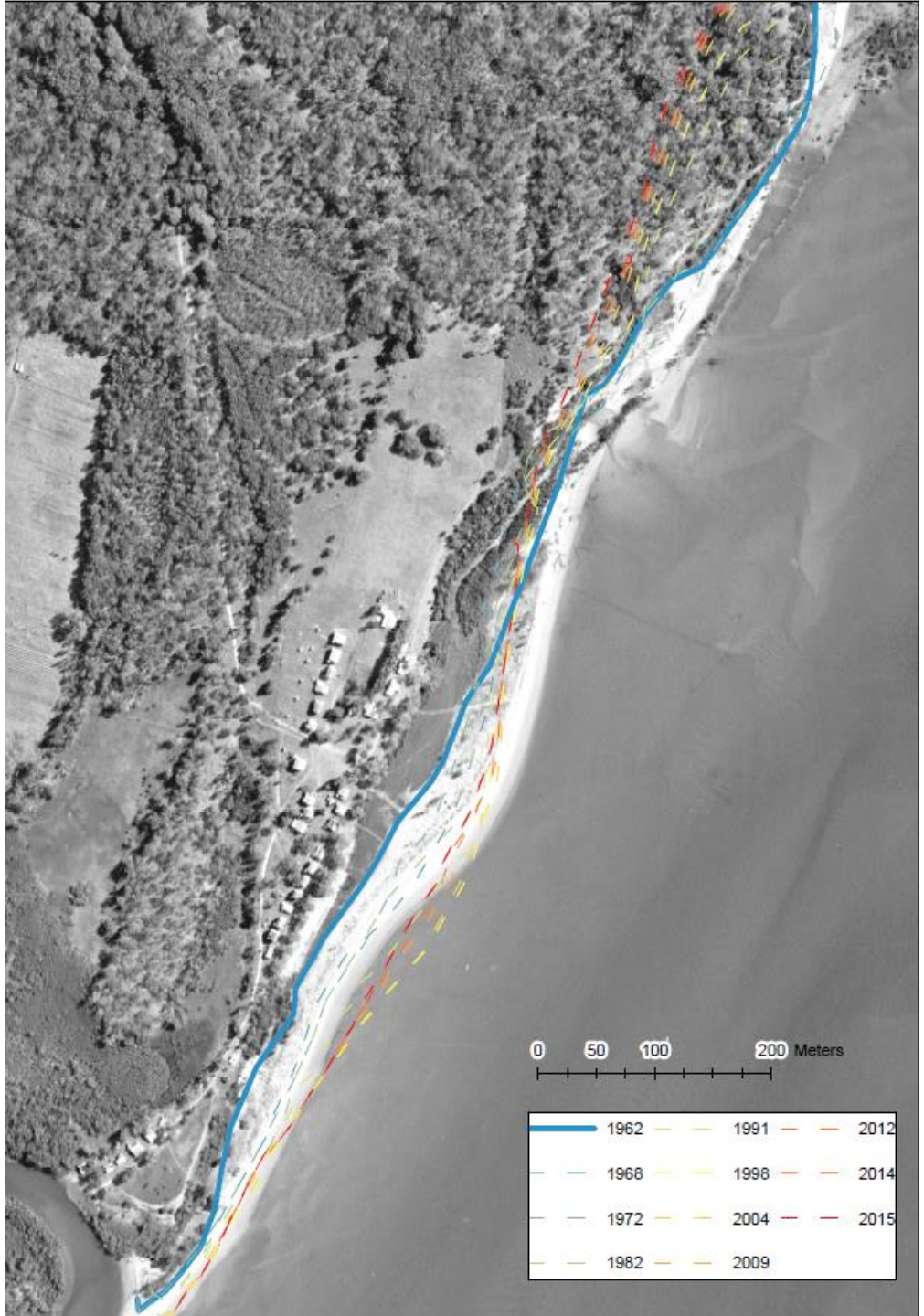
### Adaptation

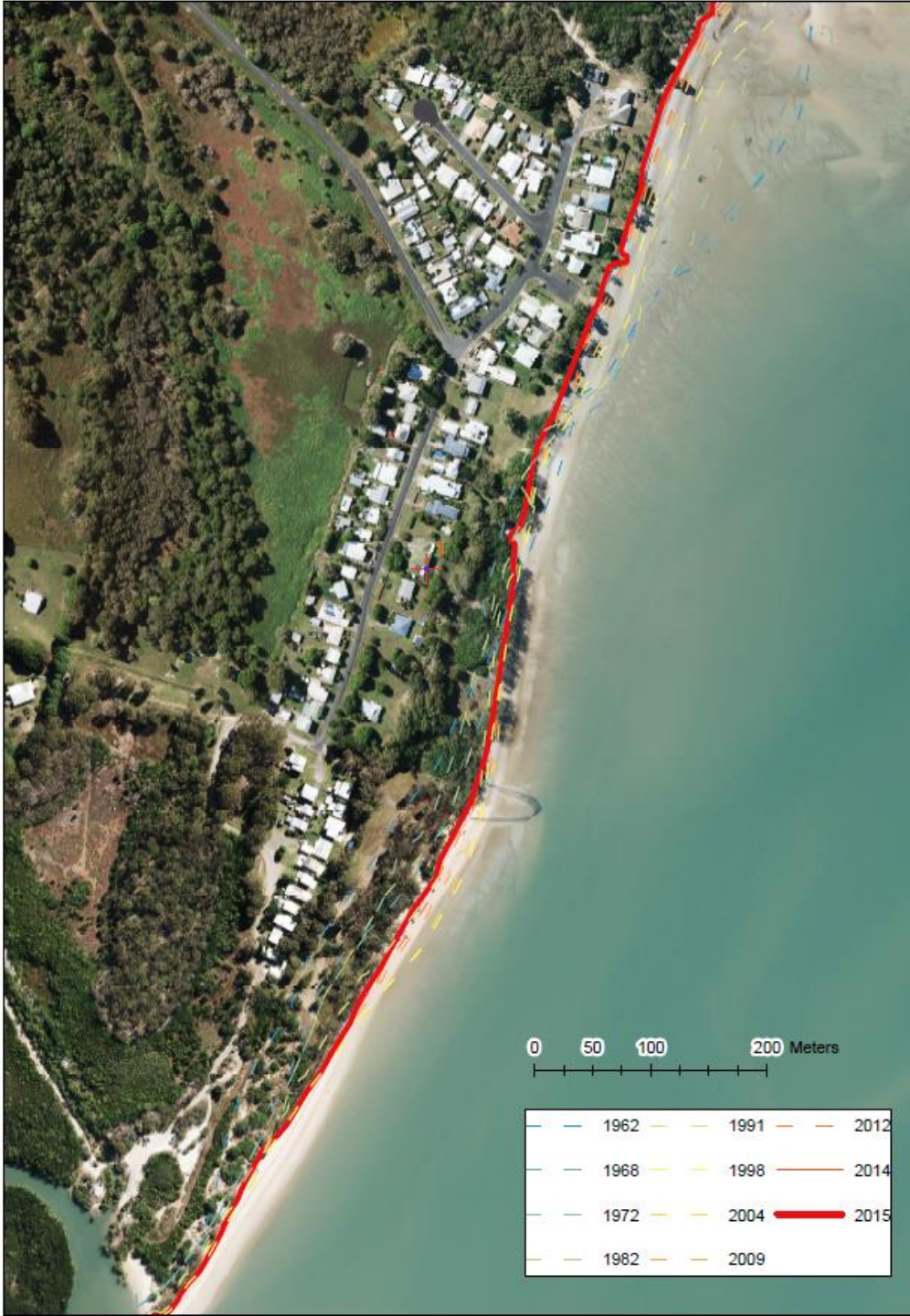
- 12 km riverine and creek levees
- Minimum development levels based on 1918 storm tide
- 4 km of urban seawalls



# 1962 McEwens Beach

- 26 dwellings
- holiday destination
- northern beach area undeveloped





## 2015 McEwens Beach

- 80 dwellings
- Population of around 200
- From 1962 to 2015 (53 yrs) McEwens beach has experienced:
  - Northern beach – 95 m erosion
  - Southern beach – 50 m accretion



## McEwens Beach Seawall

- 240 m long
- 9 adjoining land owners (one is Council)
- Residents formed a proactive beach erosion protection group to negotiate a solution rather than have a levy imposed on them
- 2016 cost - \$3,000 per metre
- Group funded construction and council assisted with Development Applications
- Public access via stairs at the end of McEwens Beach Carpark Rd





# Adaptation pathway - McEwens Beach

## Measures

Stand by

Beach nourishment

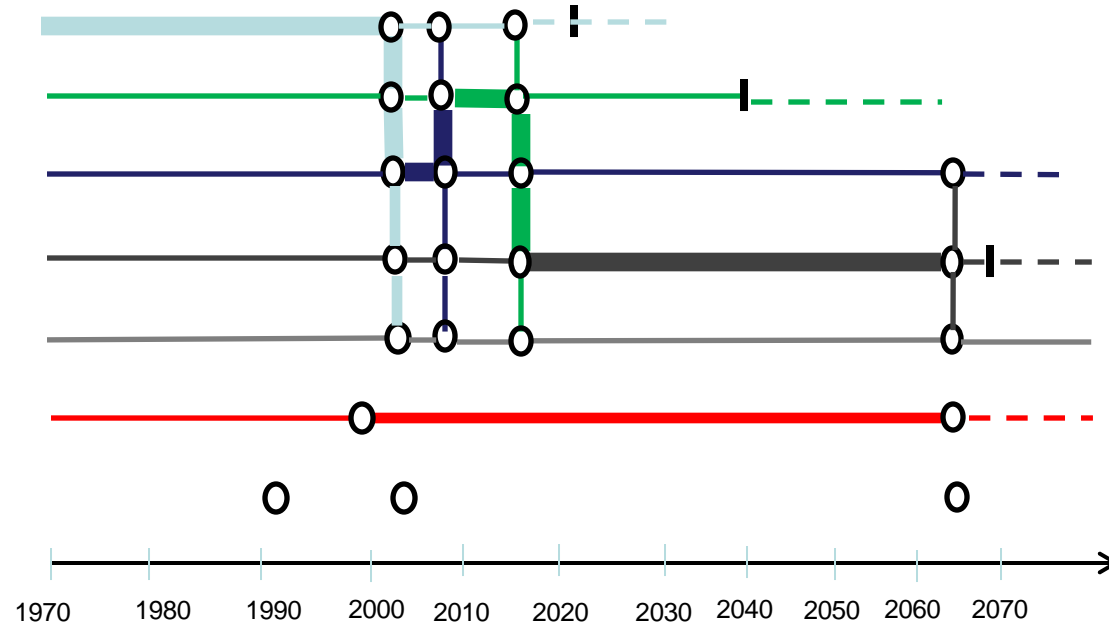
Sea wall – Govt. constr.

Sea wall – Resident constr.

Retreat

Emergency Management

Planning Controls

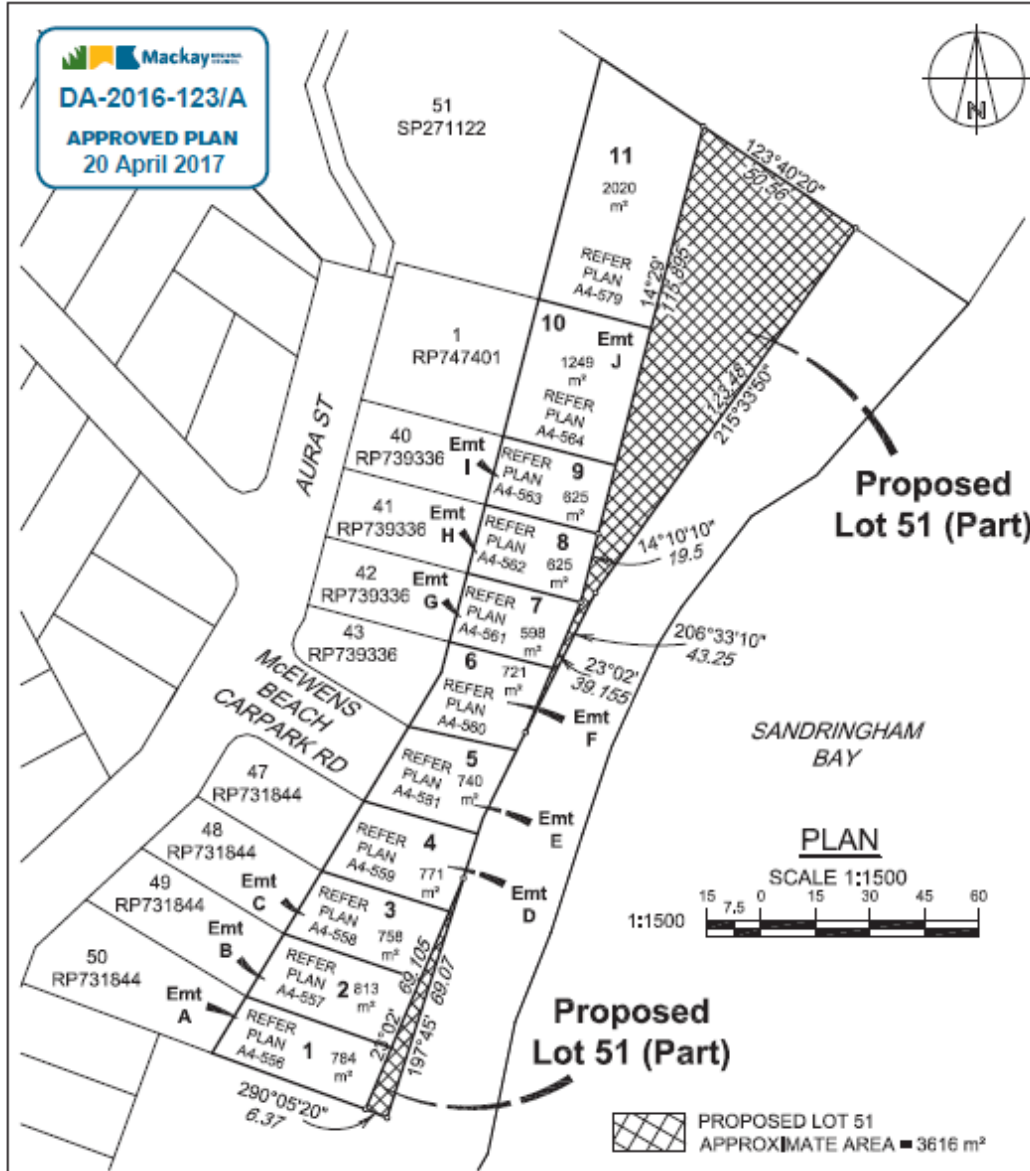


### Protect

Use hard structures (eg sea walls) or soft solutions (eg dunes and vegetation) to protect land from the sea. May be prohibitively expensive, especially in the long term



- Transfer to new measure
- ▮ Adaptive tipping point



## Why was it successful?

- Erosion issues were **monitored** over many years
- Trials of other defence structures (eg timber wall) were not effective in managing erosion – **continuous improvement**
- **Risk based and people focused** – loss of property was imminent and residents were committed to act as a group
- There was **collaboration** and shared responsibility between residents, local and state government
- Works aligned with **policy**



## Further information

[McEwens Beach Local Coastal Plan.pdf](#)

[Adaption-Pathway-of-McEwens-Beach-.pdf](#)

[Mackay Coastal Erosion Protection Works Policy -  
\\_Adopted 24.10.18.pdf](#)

[qcoast2100](#)

Robyn Birkett | Principal Engineer - Waterways | Strategic Planning | Mackay Regional Council  
Phone: 07 4961 9155 | Fax: 07 4944 2409 | [robyn.birkett@mackay.qld.gov.au](mailto:robyn.birkett@mackay.qld.gov.au) | [mackay.qld.gov.au](http://mackay.qld.gov.au)