

Clifton to Tangoio Coastal Hazard Strategy

Overview



Vision



That coastal communities, businesses and critical infrastructure from Tangoio to Clifton are resilient to the effects of coastal hazards

Partners



Coastal Hazards Joint Committee

Scope



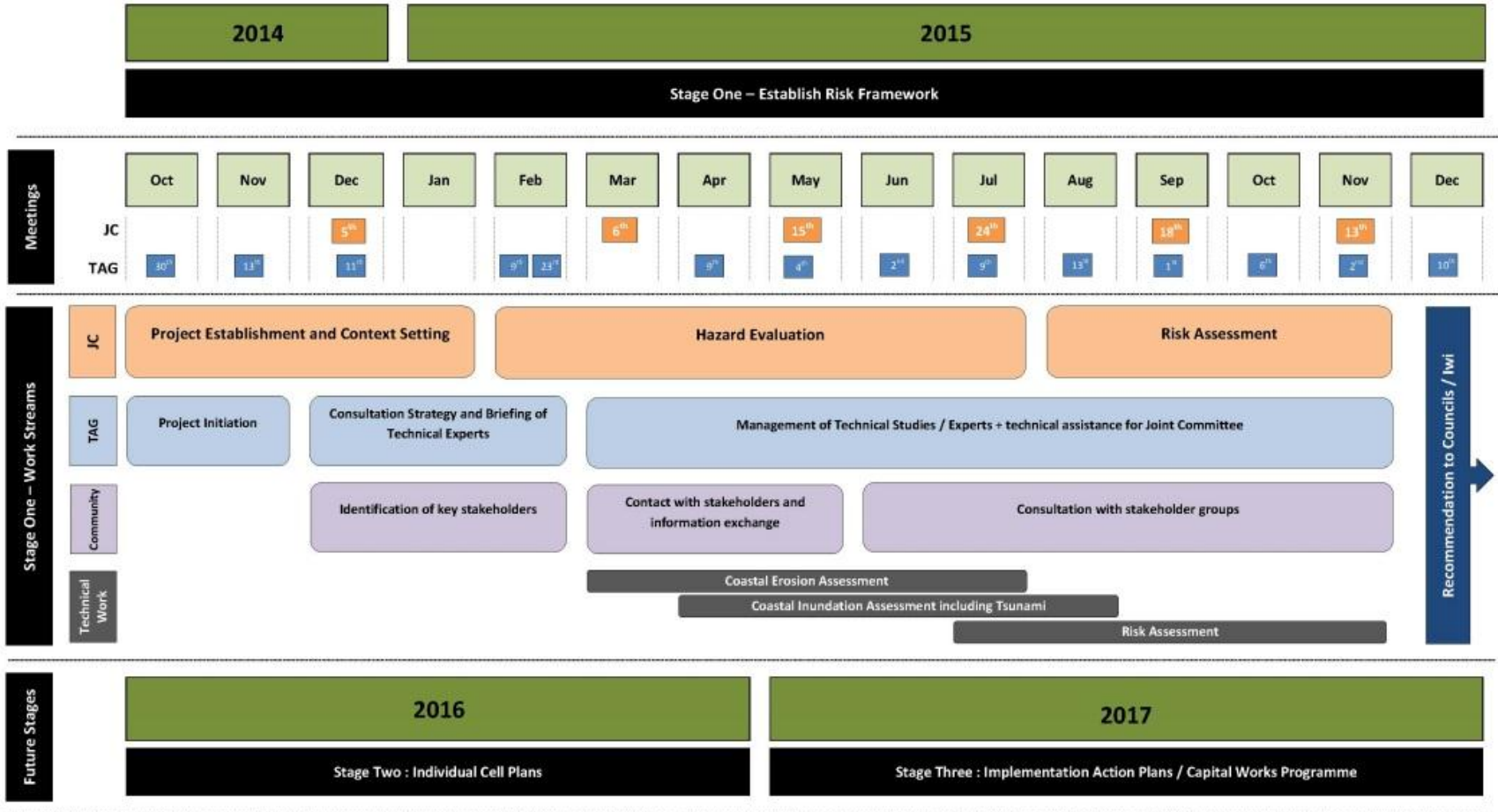
- Covers coastal area between Clifton to Tangoio
- Planned staged responses to hazards out to 2120
- Hazards to be assessed:
 - **Coastal erosion** (storm cut, trends, effects of sea level rise)
 - **Coastal inundation** (storm surge, set-up, run-up, overtopping and sea level rise)
 - **Tsunami**
- Climate change is overriding influence
- Effects of tectonic movement also accounted for

Project Phasing



Project Timeline

Tangoio to Clifton Coastal Hazard Strategy 2120



What we know

- Access to years of monitoring and data:
 - How our gravel beaches work
 - Historic shoreline change over time
 - How gravel moves along our beaches

What we Know: Gravel Beaches

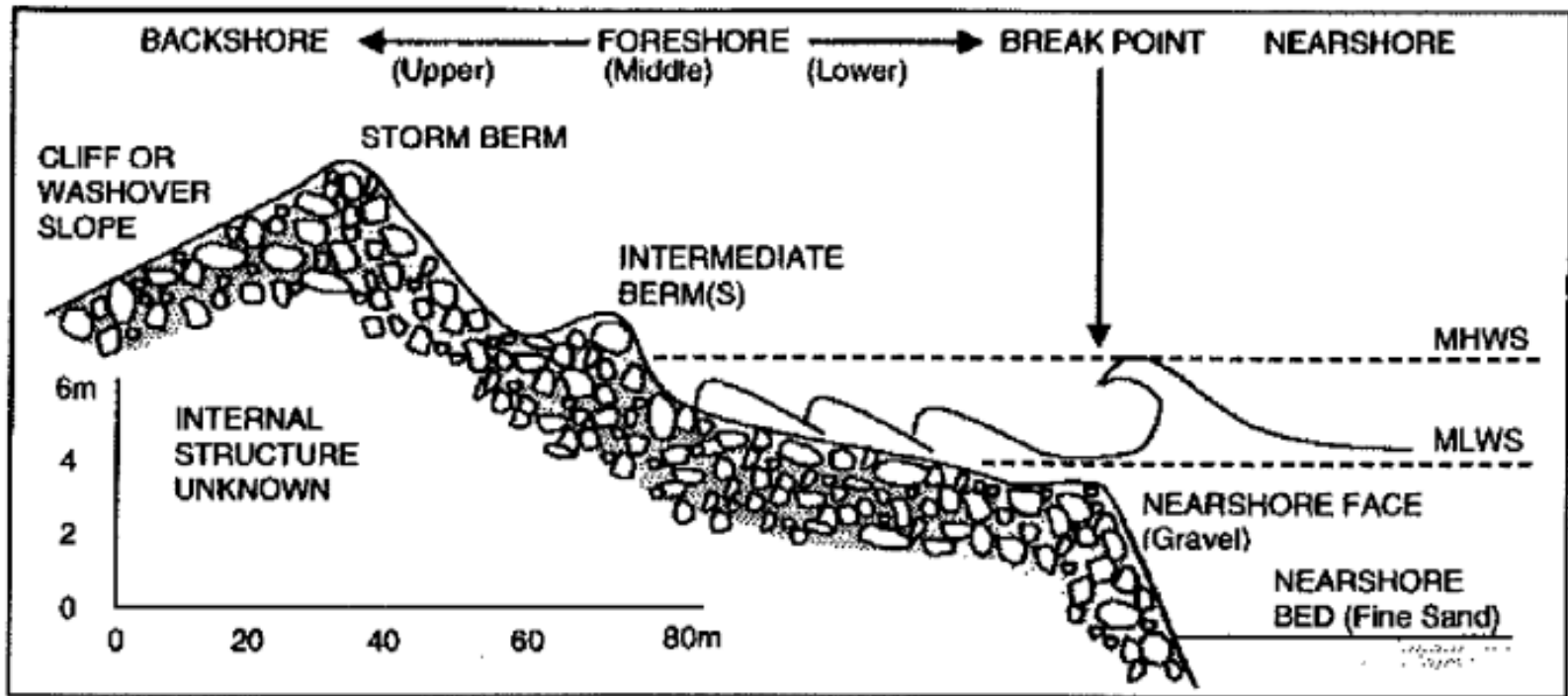
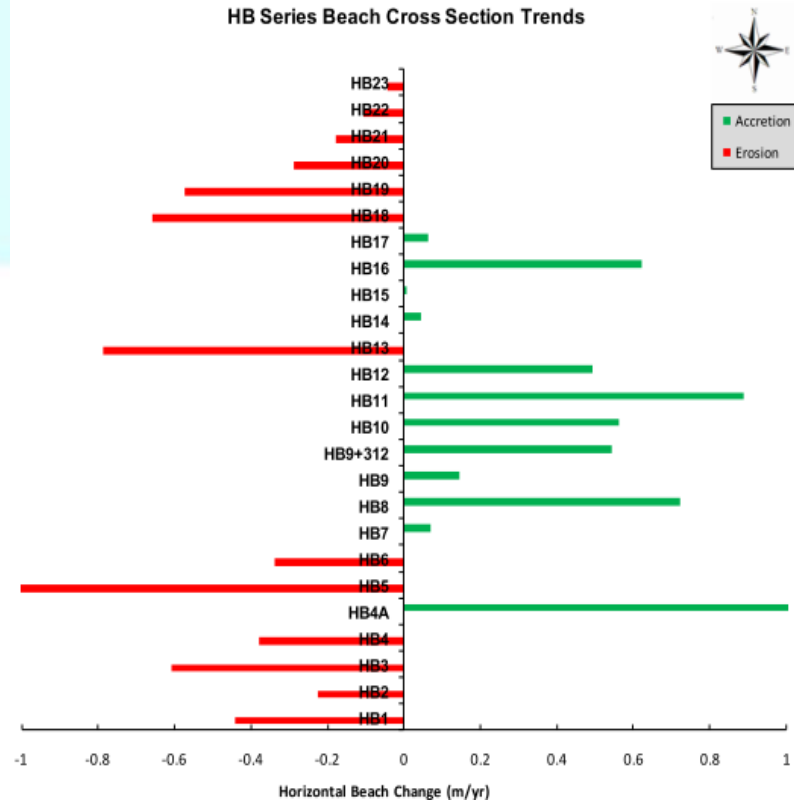


Figure 2.1: Typical morphology of a mixed sand and gravel beach profile. Updated From Kirk (1980:193).

What we know

- Sea levels are rising (but there is uncertainty how much, and we need to plan for a range of scenarios)
- Weather is changing – e.g. increasing frequency and severity of storm events
- What happens on one part of the coast affects other parts e.g. Preventing erosion in one part may shift erosion to another part

What we Know: Historic Erosion and Accretion



What we don't know

- What elements are at risk from coastal hazards, now, and out to 2120?
 - Schools, marae, urupa?
 - Homes and places of work?
 - Infrastructure?
- What degree of risk are our communities willing to accept?
- What responses to these risks are practical, affordable and responsible, and under what timeframe should these be implemented?

Example Output – Hazard Mapping



- Example of type of output this strategy will produce this year
- Map showing extent of hazard based on likelihood of impact based on current knowledge
- Establish 100% line (i.e. it will definitely effect to this point)
- Establish 0% line (i.e. we know it wont go that far)

Progress to date

- Tonkin & Taylor have been engaged to undertake technical review work to assess hazards
- Joint Committee has established with a terms of reference and timetable of meetings
- Technical Advisory Group has established with a timetable of meetings
- Website is now live – www.hbhazards.co.nz
- Stakeholders have been identified

Next Steps

- Compile all GIS and technical information held by each partner council
- Progress technical assessments
- Engage with stakeholders