

Cairns Coastal Hazard Adaptation Strategy (CHAS) Project

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Outline

- 1. Why a Coastal Hazards Adaptation Strategy (CHAS)?**
- 2. Project commencement**
 - Phase 1:** Whole of project stakeholder communication and engagement
 - Phase 2:** Scoping of Coastal Hazard Issues
- 3. Studies and strategies review**
- 4. Proposed project governance**
- 5. Erosion Prone Areas Study – Dr Matt Barnes BMT WBM**
- 6. Progress to date**
- 7. Next steps**

Why a Coastal Hazards Adaptation Strategy?



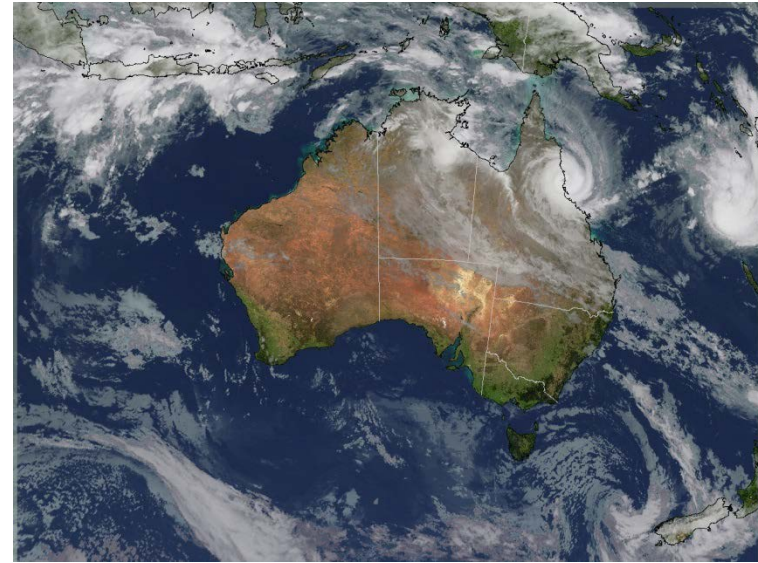
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Coastal Inundation (storm tide, flooding, tsunami) TEMPORARY IMPACTS



Coastal Erosion and Shoreline Recession (sediment supply) PERMANENT IMPACTS



What are the assets on the coast we are concerned about?

Built/Economic



Community



Environmental

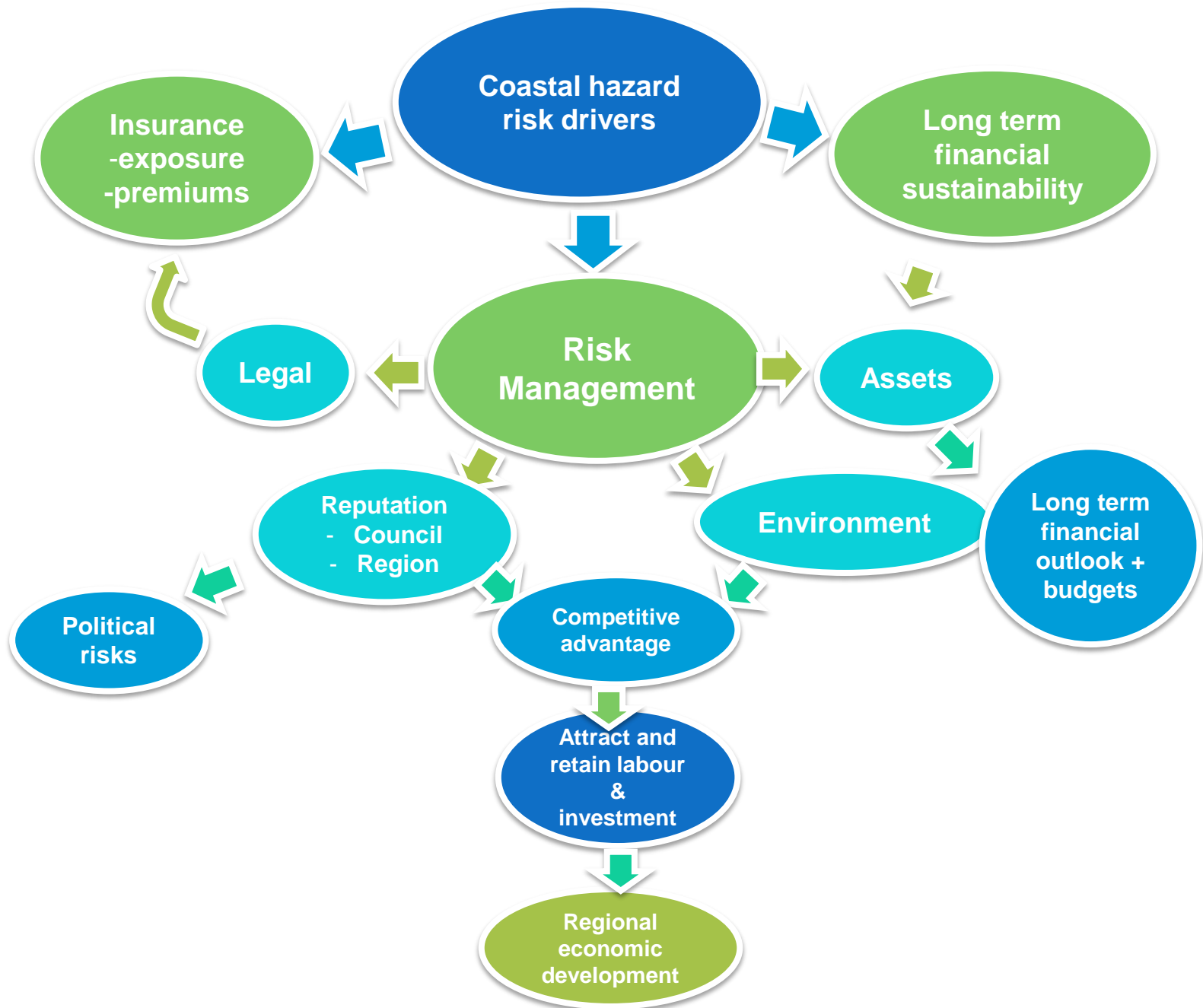


The Coastal Hazard Adaptation Strategy (CHAS) for Cairns

An important 'whole of organisation' document:

- A whole of organisation response: Integrated across Council functions
- Identifies existing coastal hazard risks TODAY, and how they will change or worsen in the FUTURE
- Assess vulnerability and risks to a broad range of assets
- Identifies adaptation options and actions to 'treat' or manage coastal hazard risks
- Identifies priorities - what do we need to do now and what can wait?
- Identifies 'tools' to deliver these actions
- Timing, staging and sequencing of actions over time
- Roles and responsibilities – who does what?
- Funding
- Monitoring and review

Key Drivers for Council taking action on coastal hazard risks



Project commencement Phases 1 & 2

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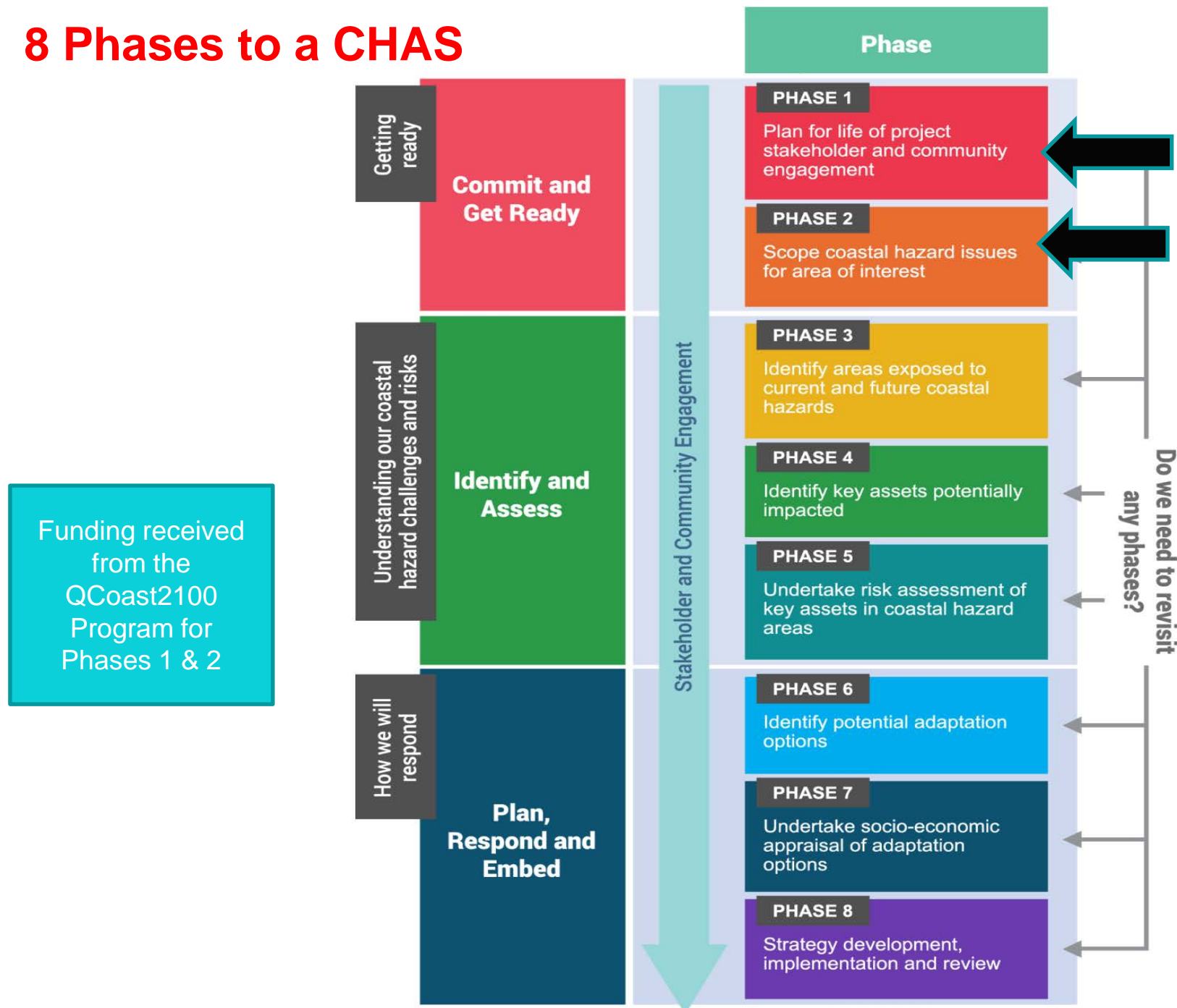


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8 Phases to a CHAS



Phases 1 and 2 only

Phase 1: Stakeholder Communication and Engagement

Objectives

'Whole of Project' Stakeholder communication and engagement:

- Identify all key internal and external stakeholders
- Determine depth of consultation with each stakeholder group
- Identify optimal timing and delivery methods
- Agree council's role and responsibilities
- Document agreed activities



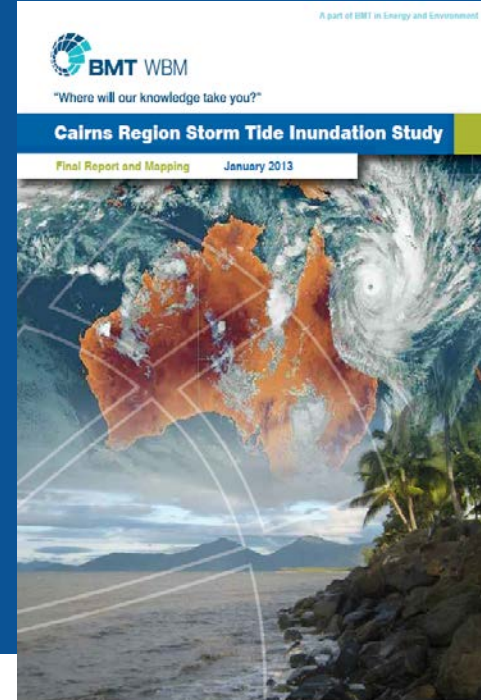
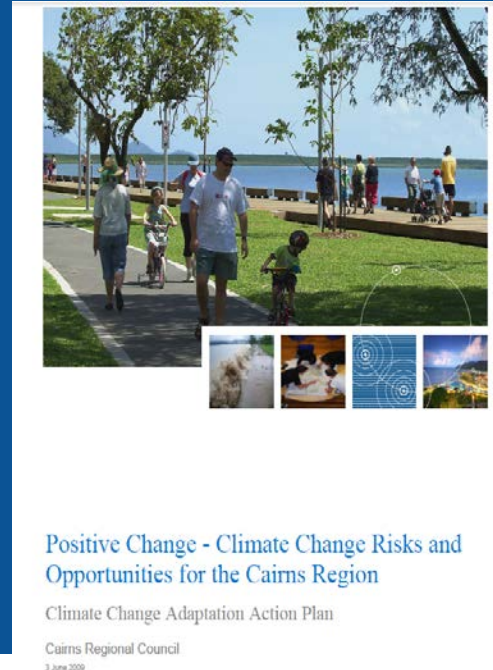
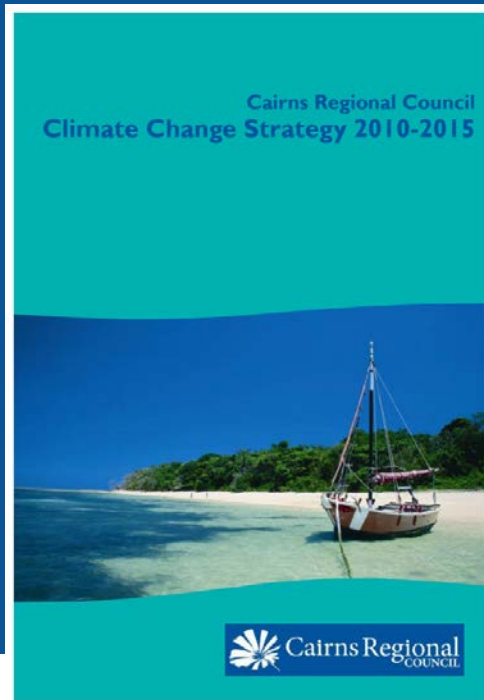
Phase 2: Scoping of Coastal Hazard Issues

Objectives

- Identify existing information
- Identify gaps in existing information
- Determine if further studies are required
- Understand and address barriers to preparing and implementing project
- Gain support from decision-makers and executives – Internal Governance
- Establish parameters of CHAS research – timing, resources, depth of investigations
- Prepare scoping study



Studies and Strategies Review



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Cairns Corporate Plan 2013-2018

- CHAS will help achieve the Corporate Plan Vision and 28 strategic actions:

***We will value our natural
environment, lifestyle and
surroundings***

***We will grow and diversify our
economy***



Building on work already undertaken by Council

- Erosion Prone Areas updated mapping (now underway)
- Storm tide mapping undertaken by BMT WBM in 2011 and 2013
- Climate governance assessment undertaken by Donovan Burton on behalf of the Queensland Government
- Climate Change Adaptation Action Plan, prepared by Aecom
- Climate Change Strategy 2010-2015
- CairnsPlan 2016 and Natural Hazards Study by GHD May 2013
- Cairns Natural Hazard Context Report 2012-13



Photo: Cairns Post: King tide at Palm Cove in 2015.

Proposed project governance arrangements

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Project governance arrangements

Council

Project Control Group

Members

- General Manager Planning and Environment
- General Manager Infrastructure Services
- Manager Strategic Planning and Approvals
- Manager Infrastructure Planning
- Local Disaster Coordinator
- Environmental Coordinator, Water and Waste
- Project Managers – P&E

Project Manager

Sophie Barrett and Sarah Cook

Internal Technical
Working Group

Members

- Coordinator Strategic Programs Sophie Barrett
- Strategic Planner
- Sustainability Officer
- Development Assessment
- Infrastructure Planner
- Water and Waste – Environmental and Assets
- Disaster Management
- Natural Areas Management
- Finance
- Asset Management
- Parks and Leisure Strategic Planner

Phases 1 & 2 CHAS

Consultancy Team and
Project Management Team

Erosion Prone Areas Mapping

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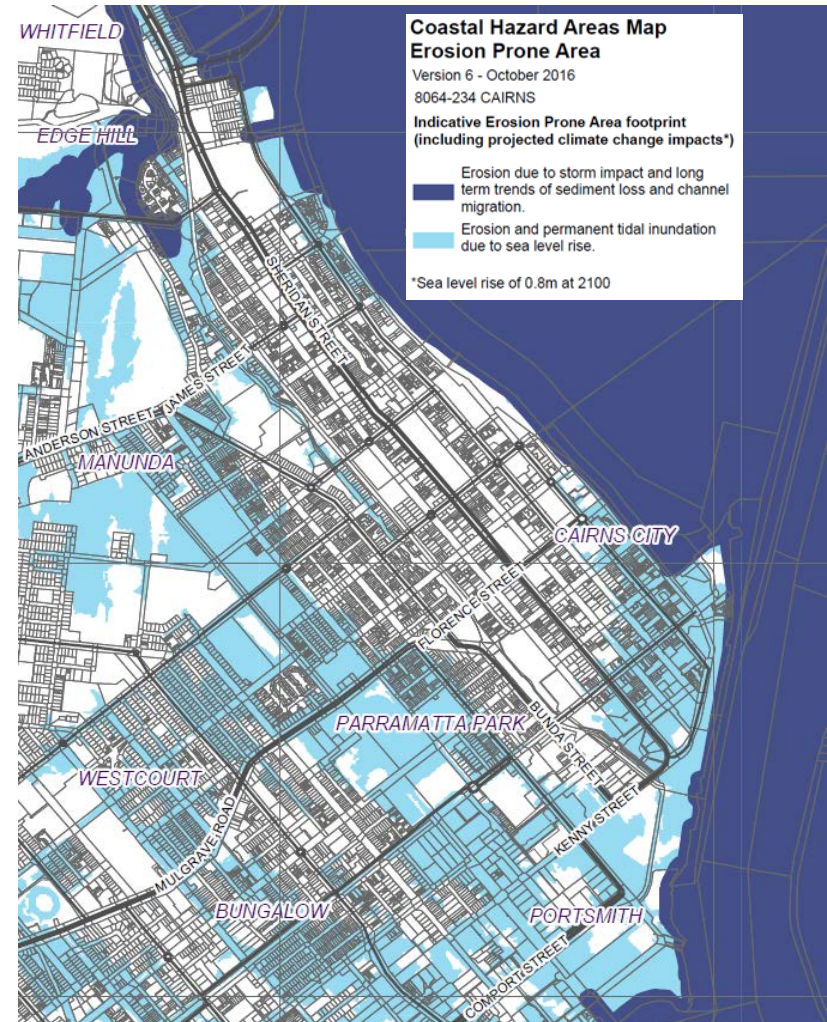
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EPA Study Objectives

- Refined EPA assessments, hazard classification and mapping based on local scale considerations
- Lodge an amendment to the State EPA Plans (no statutory process, achieved through consultation with DEHP)
- Lodge an amendment to the Coastal Management District (regulatory process, more difficult to EPA amendment)
- Risk Assessment (assets and values within the EPA)

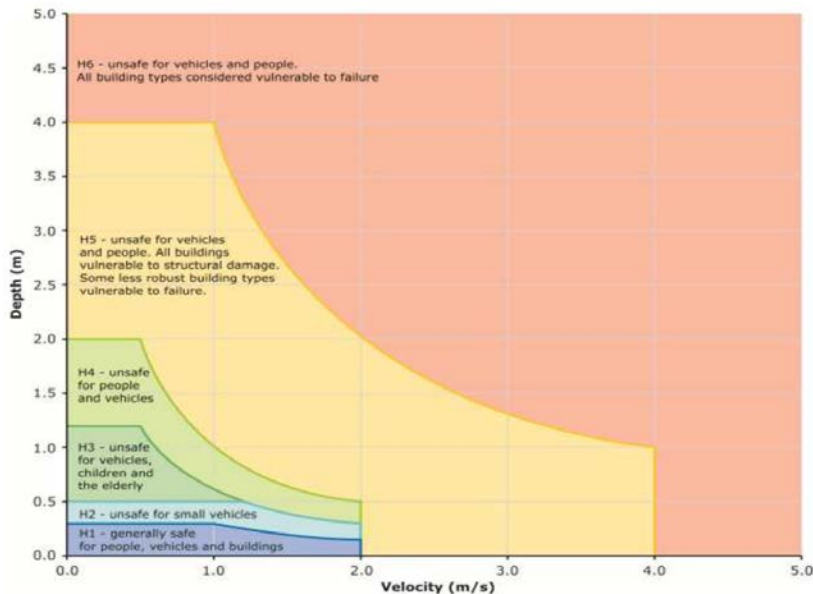
State EPA Plans: Cairns CBD

- Three components to the EPA plans:
 1. Calculated erosion distance from open coast shoreline
 2. 40 m buffer on present day HAT
 3. Permanent inundation due to sea level rise (present day HAT + 0.8 m)
- Cairns CBD significantly impacted by component 3



Refining the hazard: Example classification

- Classifying the permanent inundation due to SLR hazard by depth
- Majority of SLR hazard area less than 0.2 m depth

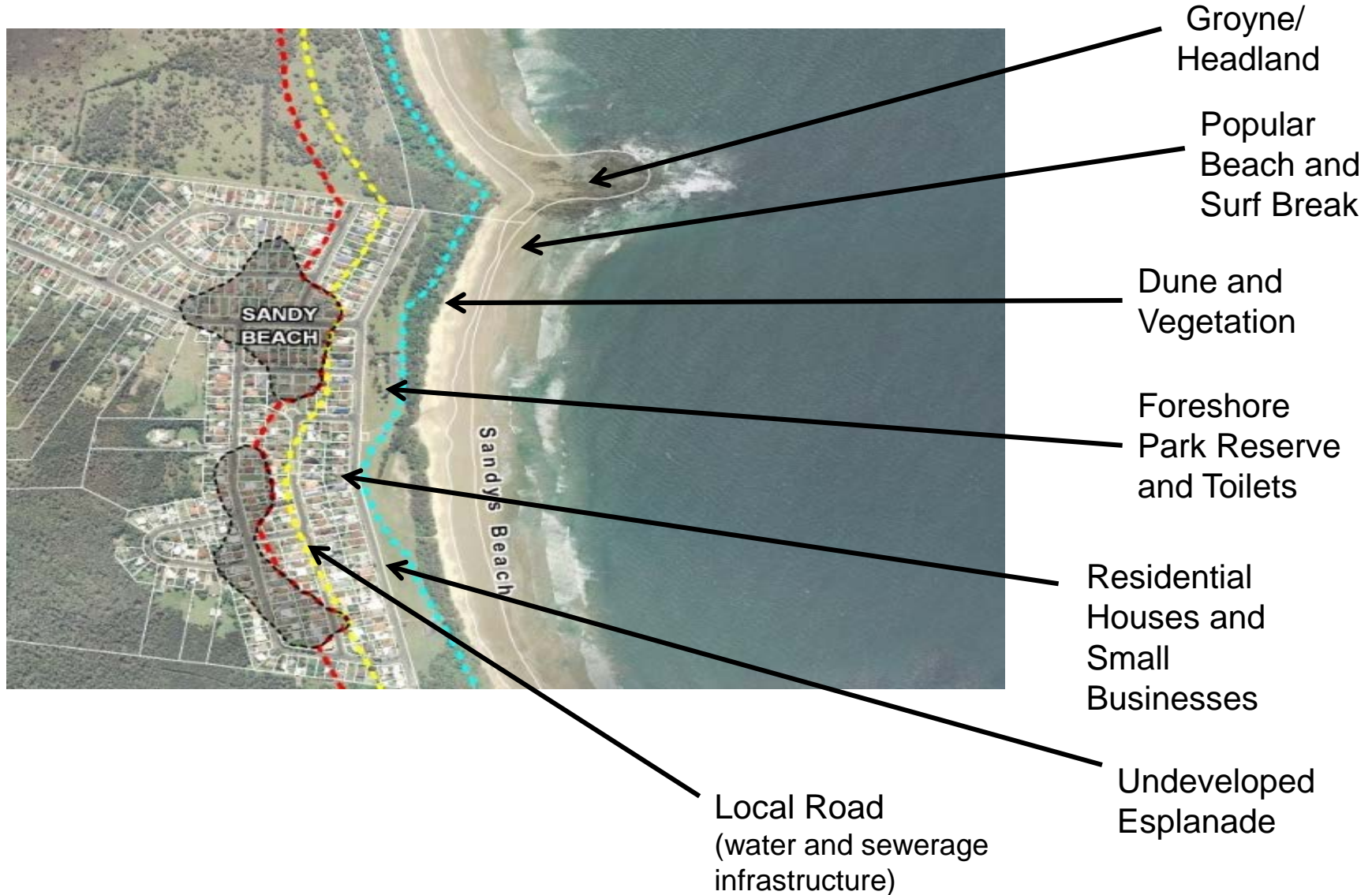


Refining the hazard: Example classification

- Likelihood of hazard may be high
- However, consequence and risk considerably lower
- Slowly changing risk profile over time, easily monitored
- Standard adaption responses to treat the risk



Erosion Hazard Lines Overlaying Various Assets on the Coast



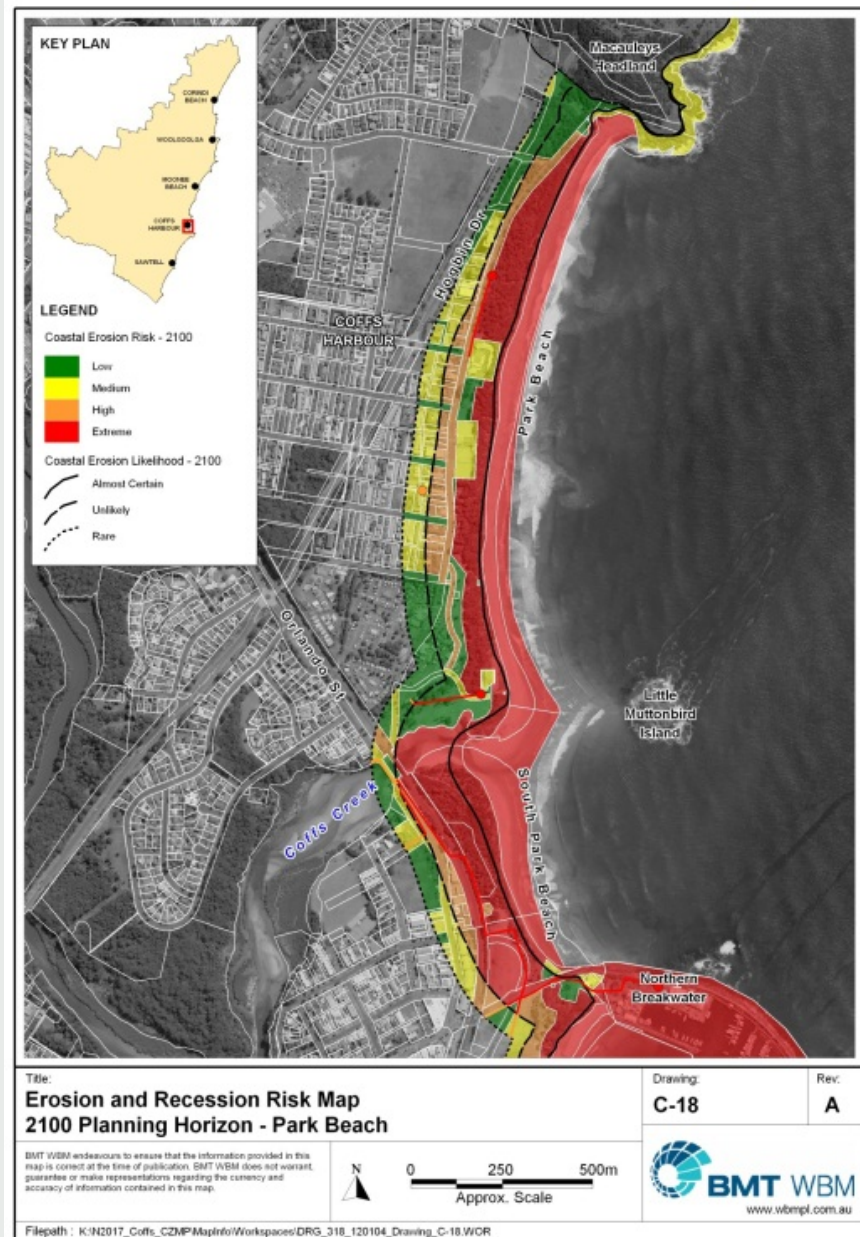
Risk Mapping

Combines likelihood (hazard areas) with consequence (so what?)

Provides information at an asset or lot level

Spatial representation through GIS

Informs the CHAS, other strategic planning projects and scheme drafting



Progress to date

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Project Inception and Workshop 1

- Internal Governance
- Confirmation of working group
- Project overview
- Stakeholder identification review

- 1. How will coastal hazards impact on your operational area in Council?**
- 2. What do you see as the benefits to Council preparing a CHAS and to your functional area of responsibility?**
- 3. What are the barriers, challenges and opportunities for Council preparing a CHAS?**
- 4. Identify projects that are currently underway that might be influenced by a CHAS**



Councillor Workshop

- Context and Overview of project
- Funding
- What are we currently doing?
- Critical issues
- Benefits and opportunities for preparing a CHAS



Collaboration

- Presentation to Indonesian Coastal Managers on Coastal Hazards – JCU/ Griffith University
- Working with Yarrabah Council to benefit from knowledge sharing



Next steps

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Next steps

Councillor workshop, PCG meeting and working group session to:

- Confirm emerging directions from data synthesis and gap analysis and best practice approaches
- Review Draft Key Directions Paper

Commence

- Draft Stakeholder and Engagement Strategy to confirm approach to consultation and key stakeholders
- Scoping Report

An aerial photograph of a coastal city, likely Cairns, Australia. The city is built along a peninsula, with a large harbor to the right. The harbor is filled with numerous boats and yachts moored at a long pier. In the background, there are mountains and a body of water. The sky is blue with some light clouds. The text "Thank you" is overlaid in the center of the image.

Thank you