Wainui Beach Management

Key Stakeholder Forum Meeting 4

28 August 2013

317506 Version 1

N

Purpose

- Walk KSF members through the WBMS for Coastal Erosion Background & Discussion Document
- Advise the Format, Process & Timelines for feedback
- Next Steps

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Agenda

- Welcome
- Apologies
- Minutes - KSF 28 November 2012
- Key New Work
- Walk through Background & Discussion Document
- Format, Process, Timeline for Feedback Next Steps
- Wrap Up

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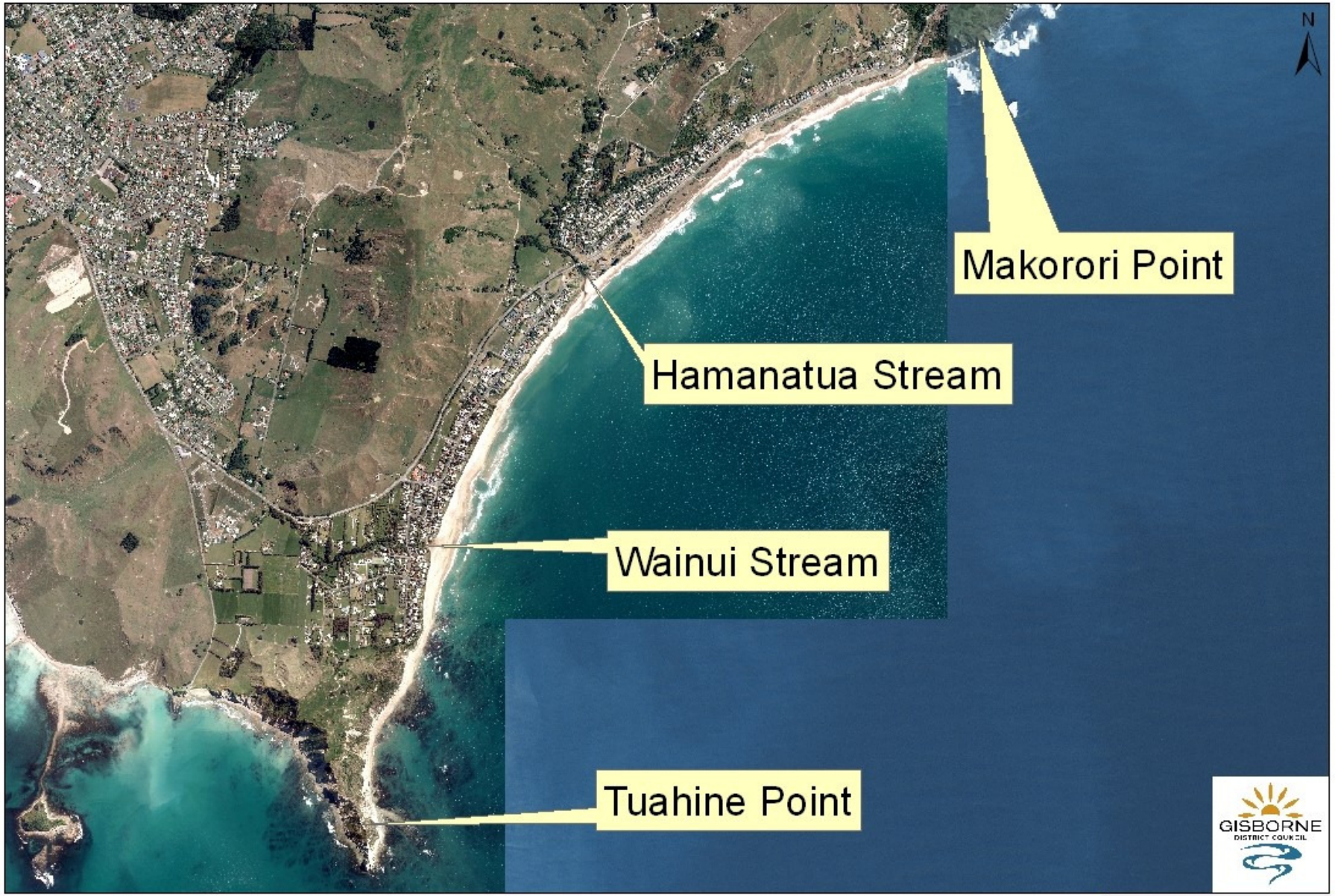
WBMS Study Area



Since last KSF

- Summarising of existing work
- Beach profiles and hazard erosion work
- Surf breaks work
- Cultural values work
- Gathering data on risk
- Detailed screening of potential options report
- WG meeting
- Meetings with Jim Dahm
- Peer reviews of document

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Key New Information – Beach Profiles Report

- Richards report
- 14 main cross sections
- Earliest survey occurred in 1974
- Surveys on each cross section range from 11 to 177

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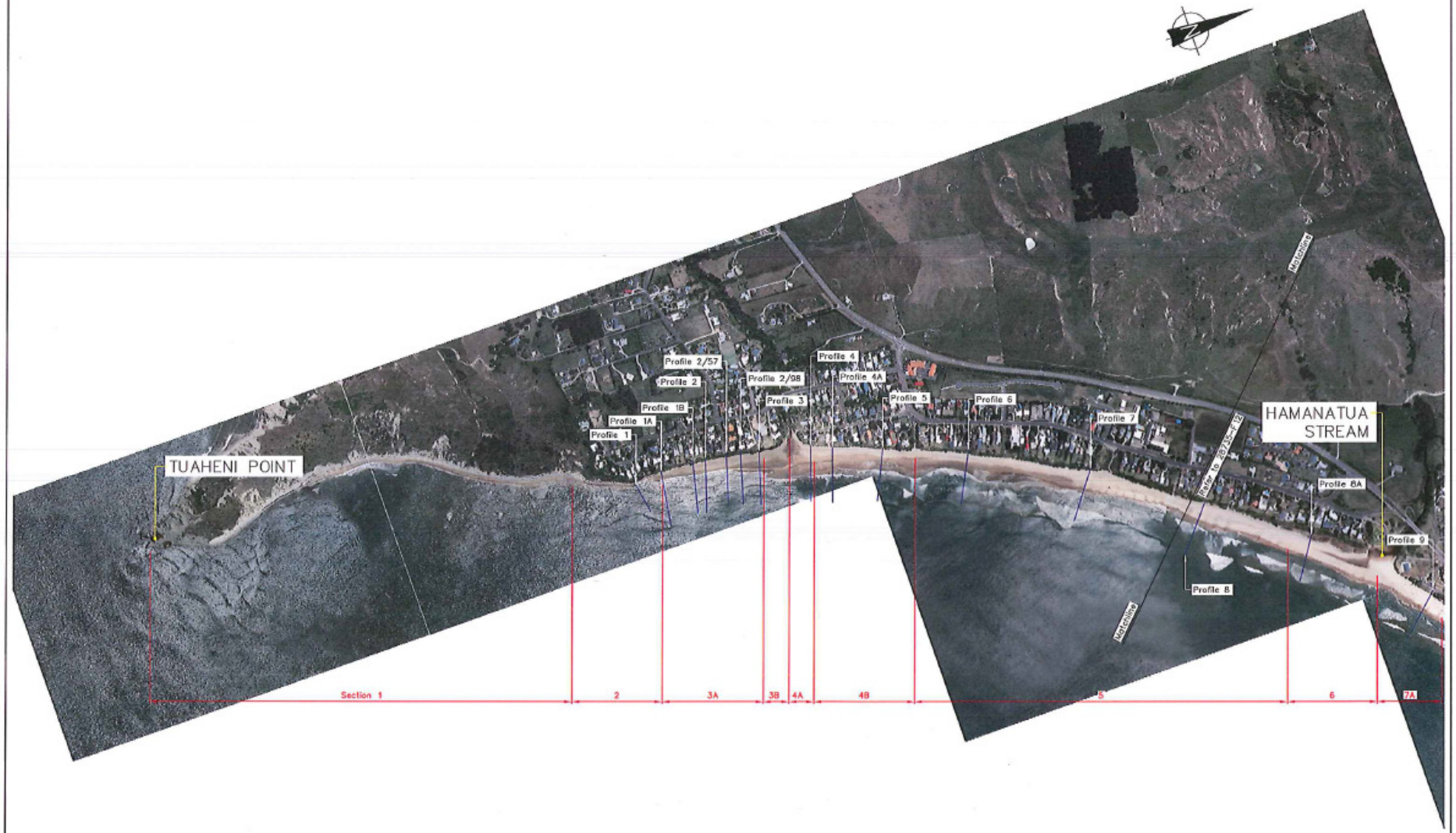

NOTES:

1. Aerial photo supplied by Gisborne District Council

SCALE 1: 10,000

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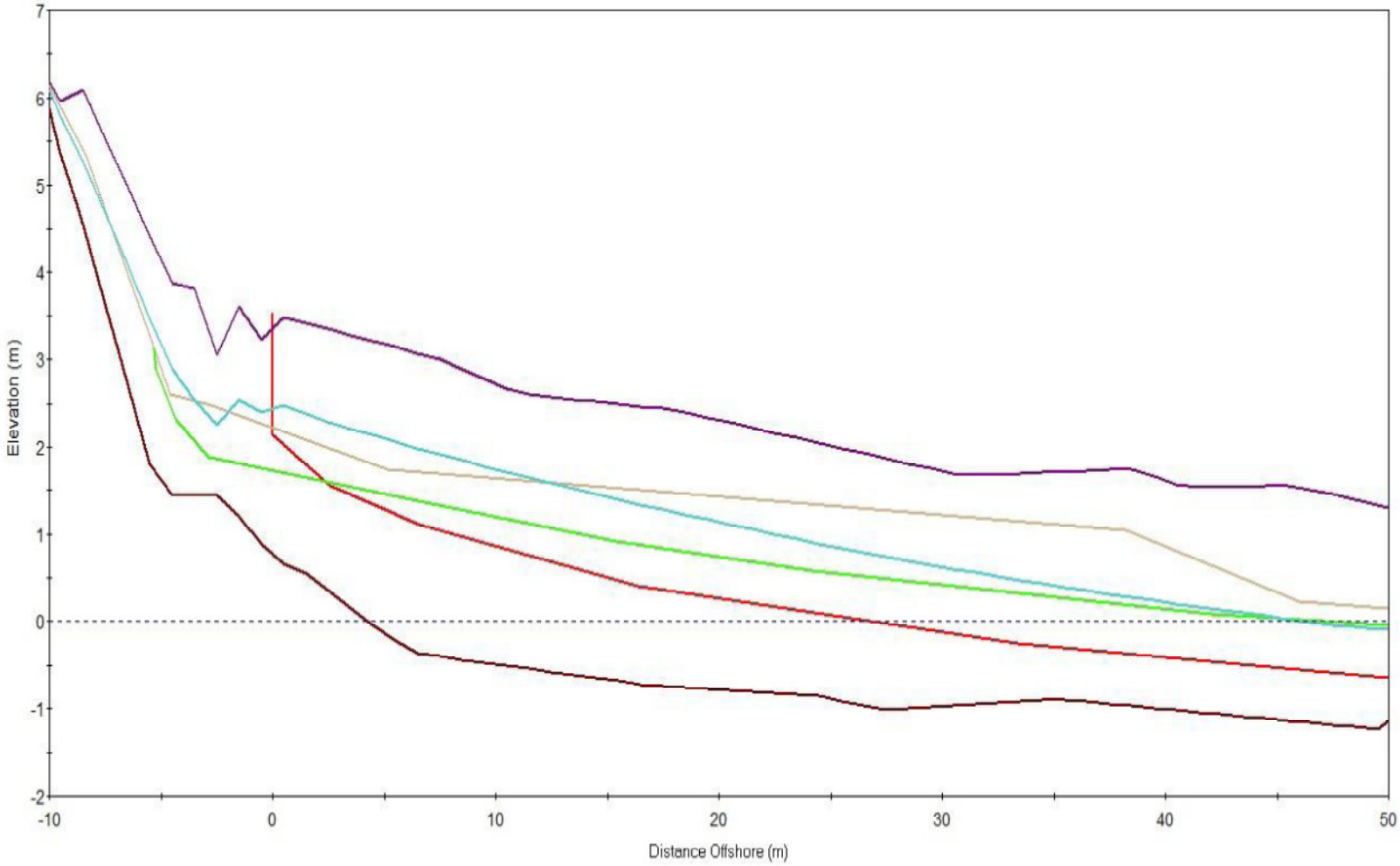
WAINUI BEACH MANAGEMENT STRATEGY

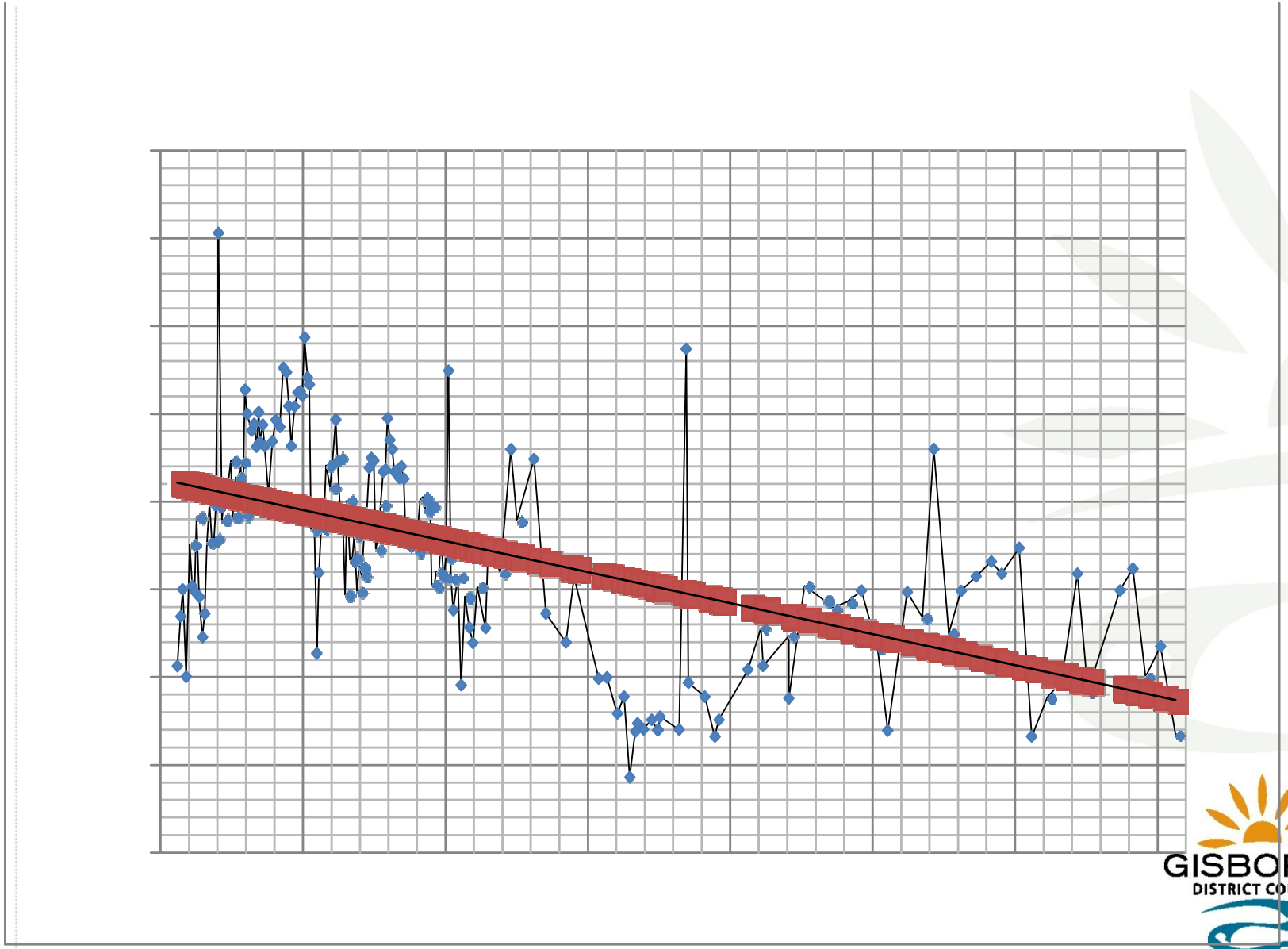
Plan – Sheet 1

FIG. No. Figure 11

REV. 0

Wainui Profile 3





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Key New Information – Hazard Erosion Lines

- Review of the adequacy of Gibbs hazard zones
- Susceptible – change in terminology
- Methodology still the most appropriate for Wainui
- Hazard lines likely to move landward rather than seaward when reviewed

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Key New Information – Surf Break report

- Surf Break Report
  - Amber Dunn
  - High value consideration
  - Underwater sandbars are the surf breaks
  - Sand locally and distantly sourced

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HAZARD ZONE	AREA (HA)	% OF TOTAL AREA
Extreme Hazard	3.42	26%
High Hazard	1.41	11%
Moderate Hazard	2.07	15%
Safety Buffer (estimate)	1.5	11%
Outside Hazard Zones (estimate)	4.9	37%
TOTAL	**13.26**	**100%**

Table 2

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HAZARD ZONE	NUMBER OF DWELLINGS	% OF DWELLINGS
Extreme Hazard	28	25%
High Hazard	11	10%
Moderate Hazard	31	27%
Safety Buffer (estimate)	31	27%
Outside Hazard Zones (estimate)	10	9%
No dwelling	2	2%
TOTAL	**113**	**100%**

Table 3

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Key New Information – Risk

- 113 properties have a capital value of $102 m
- About ¾ of value in the land
- 70 properties are susceptible to erosion

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Key New Information – Detailed Screening of Potential Options

- KSF criteria used
- Primarily it is an evaluation of hard and soft engineering options
- Indentified sections of the beach

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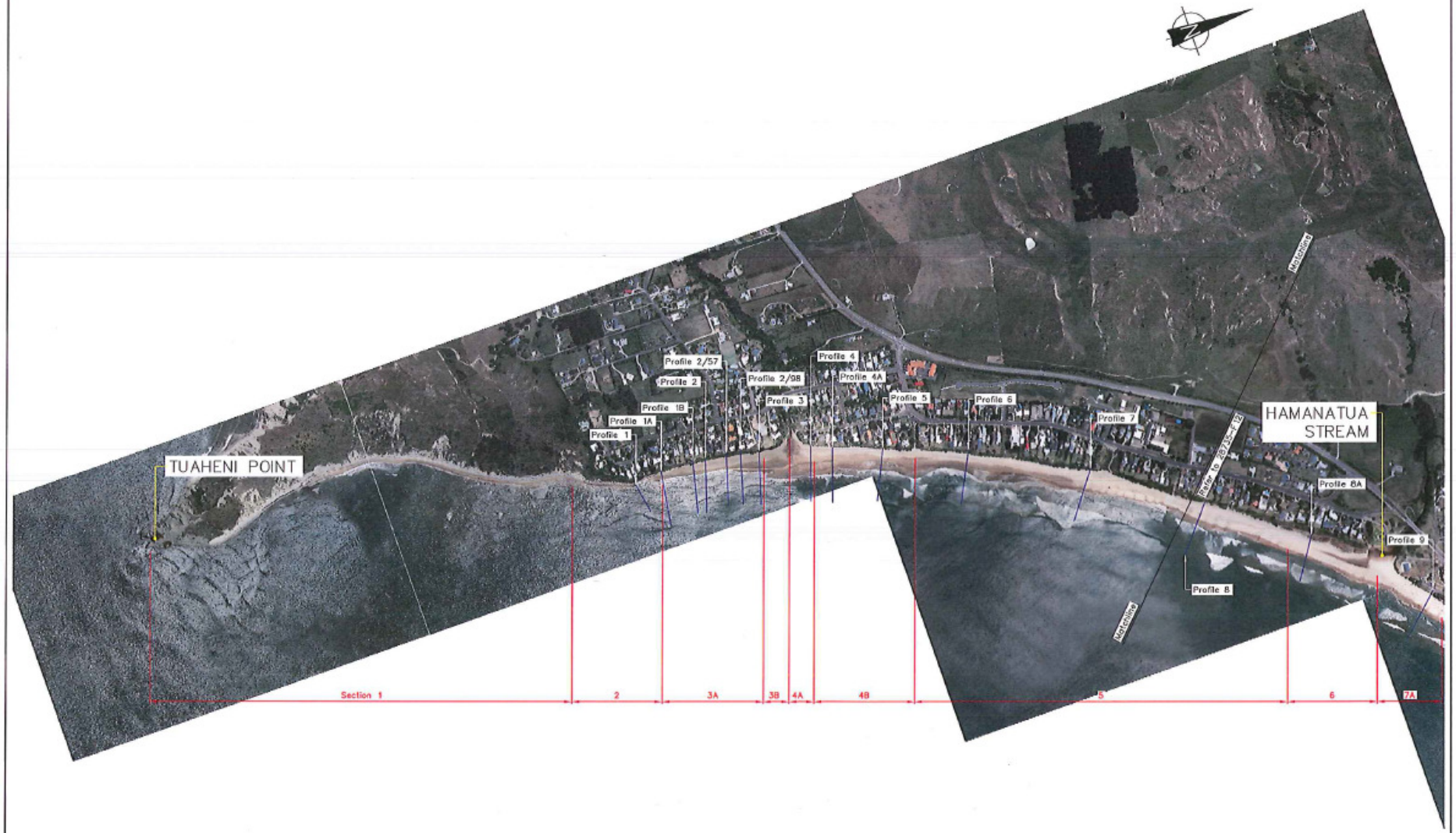

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WAINUI BEACH MANAGEMENT STRATEGY

Plan – Sheet 1

FIG. No. Figure 11

REV. 0

Key New Information – Cultural Values

Outlines key history of tangata whenua in area

Values and issues

- Loss of access & recreational opportunities with residential development
- Impacts on waahi tapu site (old fishing village) Wainui Stream
- Recreational activities

General Principles promoted

- Recognition of beach as a community asset & protection of beach from actions for private benefit
- Balancing any adverse impacts of protection works with enhanced public access or other public benefit
- Protecting and enhancing the naturalness of beach & caring for beach

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WBMS - Background & Discussion Document

- S1 Executive Summary

Background Document

- S2 Context
- S3 Key Considerations
- S4 Assessment of Current Approaches

Discussion Document

- S5 Developing a Future Strategy

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Peer Reviewed

- Richard Reinen-Hamill
- Amber Dunn
- Sheryl Smail
- Aileen Lawrie
  - CE Optotiki DC
  - Consents Manager (Env BoP)
  - Strategic Planning

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Overview

- Documents relevant information & context
- Collates analysis to date
- Provides basis for detailed stakeholder discussion & consideration of options
- Outlines 5 high level options

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SECTION 2: Context

WBMS Purpose

Sustainability	To develop a sustainable strategy that identifies the preferred management of coastal erosion hazards affecting Wainui Beach
Broader Context	We will be taking into consideration the wider economic, environmental, social, recreational and cultural context
Broad Acceptance	Our goal is to achieve a Wainui Beach Management Strategy that has broad acceptance amongst the community because it will provide a framework for future development and decisions related to Wainui Beach

S2 -Erosion at Wainui Beach & its Management

Describes

- Coastal erosion processes
- Property exposed to coastal erosion
- Current & historic management

Potential erosion consequences primarily relate to property rather than human safety

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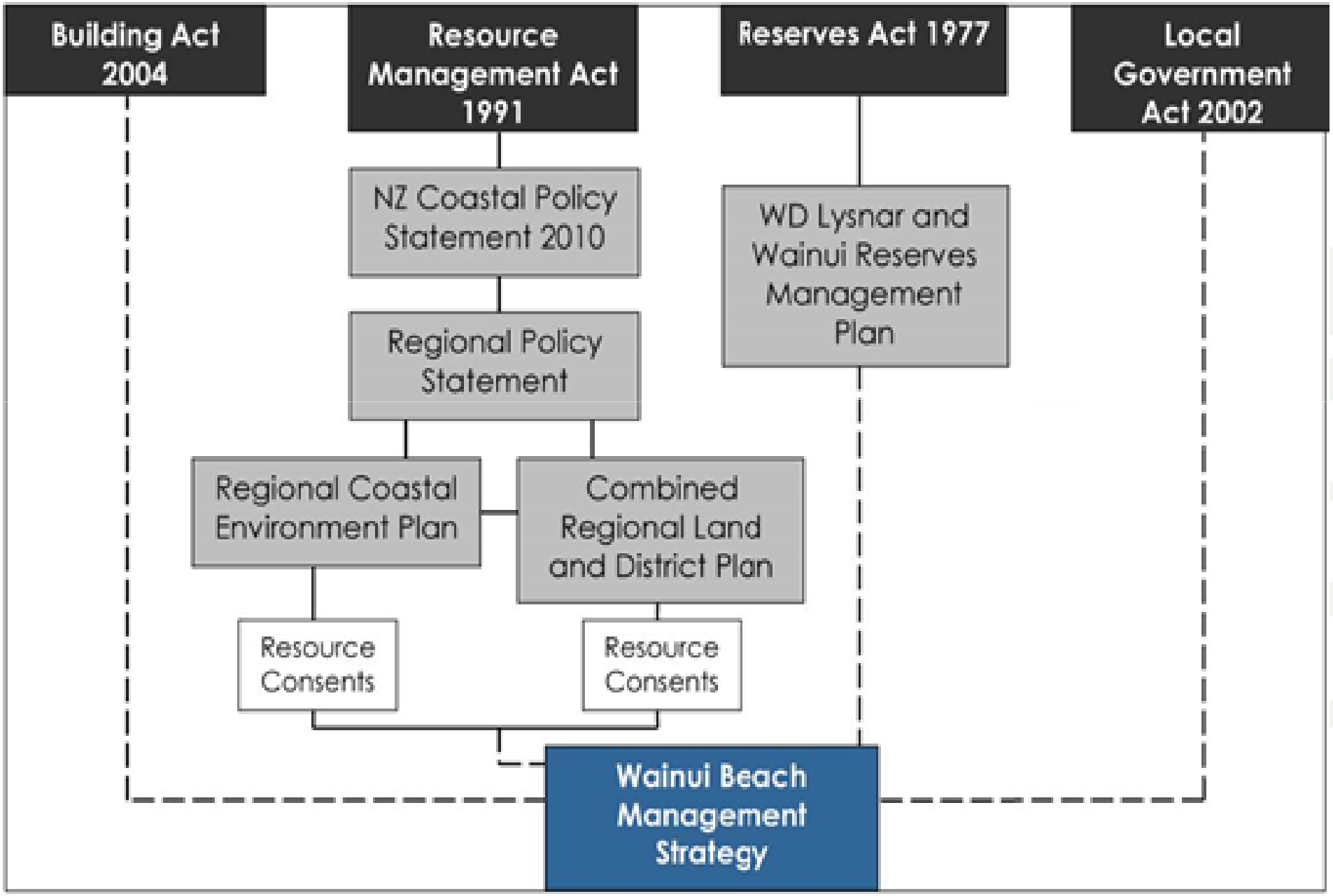
Statutory & Policy Framework



Section 3: Key Considerations

- Outlines key considerations in developing WBMS
- Describes process used to translate these into criteria
- Provides general discussion of each criteria as it applies to Wainui Beach

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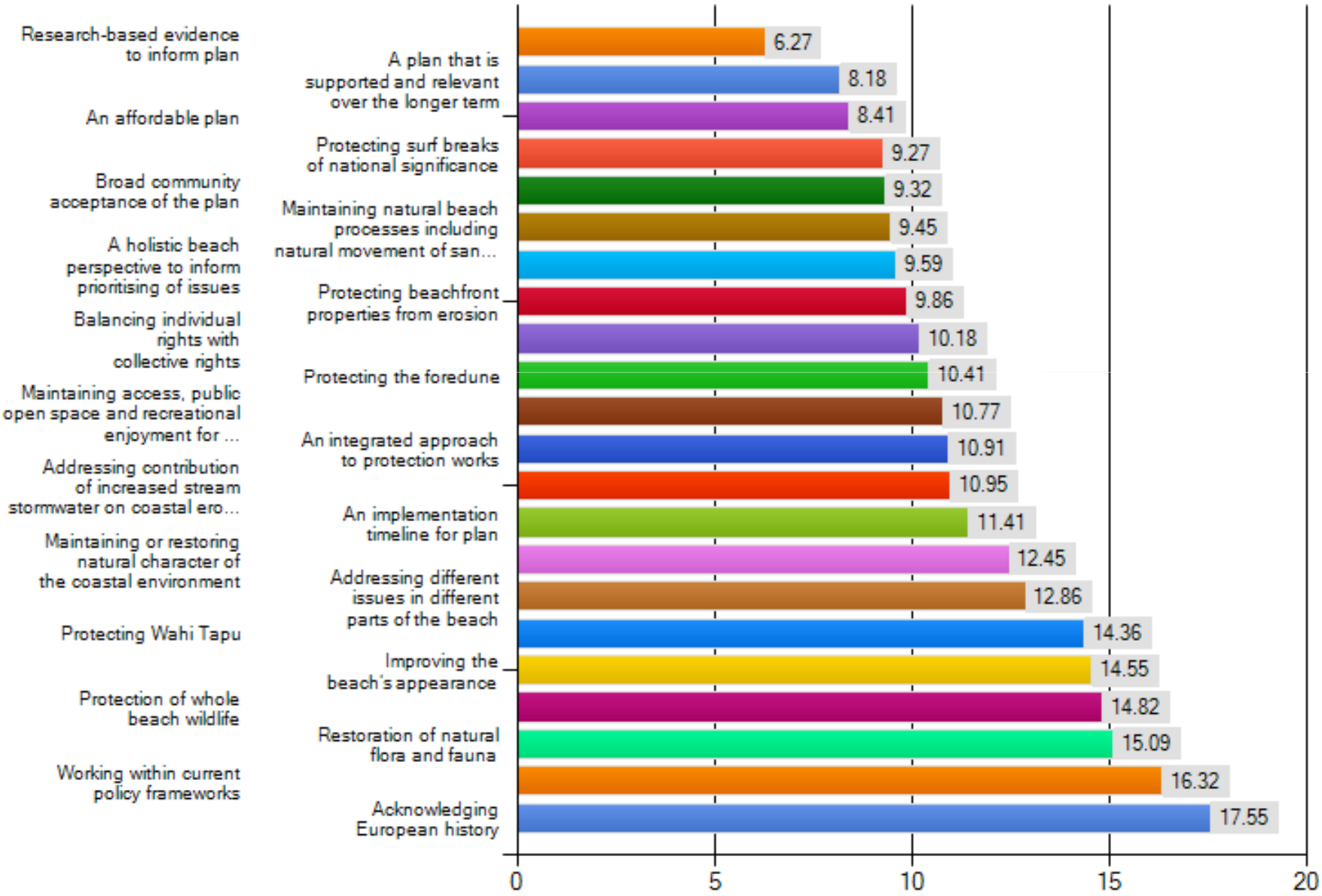
Wainui Beach Management Plan: The 22 Issues in Order of Ave Priority Received (where 1 is the highest priority)



S3 - General Criteria

From KSF criteria and those in statute and policy

1. Coastal Hazard Management and property protection
2. Effective Life and implementation timescales
3. Natural Character
4. Surf Breaks
5. Outstanding natural landscapes
6. Public and private access (onto and along the beach)
7. Cultural values
8. Ecosystems, habitat and indigenous vegetation
9. Relative cost (monetary)

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SECTION 4:
Assessment of Current Approaches

- Discusses current erosion management approaches with reference to key considerations
- Draws on reports, expert opinion & stakeholder views

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SECTION 5
Developing a Future Strategy

- Provides an introduction to developing WBMS for Coastal Erosion
- Basis for more in-depth assessment & discussion
- Outlines range of tools
  - Regulatory
  - Hard protection structures
  - Dune enhancement
  - Financial instruments
  - Education
- Presents 5 high level strategy options

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S5 - Range of Tools - 1

Regulatory Options

- Restricting additions/alterations
- Restricting location of new buildings
- Designing for relocatability
- Forced Retreat options
- Restricting subdivision to create additional residential lots
- Restricting construction of hard protection works
- Covenants

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S5 - Range of Tools - 2

Hard Protection Structures

- Emergency geobag protection
- Cobble berm revetment
- Rock revetment
- Training groynes

Dune enhancement & beach scraping

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S5 - Range of Tools - 3

Financial instruments

- Convert properties to public reserve
- Purchase properties
  & lease/rent
  & relocate dwellings
  & covenant & sell
- Subsidies for relocation
- Pre-paid relocation fund
- Transferable development right

Education & Awareness

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SECTION 5: Possible Options

Sets out 5 possible high level options/strategies for managing coastal erosion:

- Over next 100 years – focusing on 1st 20 years
- Each would involve a package of tools or responses
- Not intended as final options
- Intended to promote further discussion & refinement

Final strategy may be mixture of presented ideas or something quite different

Authors' initial thoughts only

Further assessment anticipated with key stakeholders & specialist advisers

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S5 - Option 1: Protect Properties

Protect properties (particularly dwellings), for as long as possible

While minimising adverse effects on environment

Avoid additional development in areas at risk in long term

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Option 1: Protect Properties

Option 2: Buy Time

Protect properties for a finite period (20 -50 yrs)

Use this time to avoid & reduce risk in long term

Regulation to ensure no additional development adds to risk

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Option 1: Protect Properties

Option 2: Buy Time

Option 3: Maintain Structures

Maintain structures until provide no real benefit

Add no new structures

Community-led retreat

- to address short-term risk not addressed by dune enhancement
  & long-term sea level rise risk

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Option 1: Protect Properties

Option 2: Buy Time

Option 3: Maintain Structures

Option 4: Soft Management & Community-led Retreat

Stop protection structure maintenance

- leave to degrade
- remove if become a hazard

Dune enhancement

Community-led retreat

- to address short-term risk not addressed by dune enhancement & long-term sea level rise risk

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Option 1: Protect Properties

Option 2: Buy Time

Option 3: Maintain Structures

Option 4: Soft Management & Community-led Retreat

Option 5: Retreat Focus

Relocate & remove assets away from harm before situation could become critical

Retreat may be forced through regulation

Possibly incentivised by financial instruments

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Option 1: Protect Properties
Option 2: Buy Time
Option 3: Maintain Structures
Option 4: Soft Management & Community-led Retreat
Option 5: Retreat Focus

To assist discussion & analysis a table compares the issues arising for each relative to the general criteria

1. Coastal Hazard Management and property protection
2. Effective Life and implementation timescales
3. Natural Character
4. Surf Breaks
5. Outstanding natural landscapes
6. Public and private access (onto and along the beach)
7. Cultural values
8. Ecosystems, habitat and indigenous vegetation
9. Relative cost (monetary)

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COASTAL HAZARD MANAGEMENT AND PROPERTY PROTECTION

Option 1 *Protect Properties*	Option 2 *Buy Time*	Option 3 *Maintain Structures*	Option 4 *Soft Management & Community-led Retreat*	Option 5 *Retreat Focus*
Choice of protection approach (e.g. cobble revetment v traditional revetment v dune enhancement)				
Location of structures; both along the beach and within the beach cross section.				
Effectiveness of regulation to avoid additional property that may be at risk in the long term - may be difficult to implement when aiming to 'hold the shore'.				
Vulnerability of and level of protection provided to properties – in the short term esp. for the 28 properties with dwellings in the Extreme Hazard Zone; particularly those protected by 'lesser' structures.				
Meeting the NZCPS – discourage hard protection structures and promote alternatives				
Community acceptance of long term retreat in relation to sea level rise.		High value of beachfront property and community acceptance of retreat, even potentially in the short term for those properties at risk of erosion during storms.		
Implementing regulation to avoid development that may add to the risk. Likely to be pressure to allow full use and development of property.				
Effectiveness of dune enhancement and the extent to which it can be used at the south of the beach.				
		Feasibility of financial instruments to encourage retreat.		
				Interference with existing use 'rights' to enjoy property.

EFFECTIVE LIFE AND IMPLEMENTATION TIMESCALES

Commentary:
NZCPS requires consideration of how the hazard risk might change over at least 100 years. Effectiveness of management approaches may vary over different time periods, particularly due to sea level rise.

Option 1 *Protect Properties*	**Option 2** *Buy Time*	**Option 3** *Maintain Structures*	**Option 4** *Soft Management & Community-led Retreat*	**Option 5** *Retreat Focus*
Long term effectiveness of protection approaches with sea level rise and possible beach rotation.				
Design life of structures – 50 – 100 years?		Life of structures v protection period		
			Determining when protection structures are no longer providing any real benefit	
				Community deciding to use soft management v retreat.

NATURAL CHARACTER

Commentary:

Natural character includes coastal processes, visual elements, ecology.

Landscape south of the Hamanatua Stream is more significantly modified by residential development, which suggests greater potential to absorbe change. However adverse effects must be avoided.

Option 1 ***Protect Properties***	**Option 2** ***Buy Time***	**Option 3** ***Maintain Structures***	**Option 4** ***Soft Management & Community-led Retreat***	**Option 5** ***Retreat Focus***
Impact of structures on coastal processes.				
Visual integration of structures into the landscape.		Visual impact of degrading protection structures.		
Risk of incremental increase in scale extent of structures that may impact on natural character.				
Managing geobag structures impact on natural character esp. as risk of being left as permanent structures.				
Development of appropriate standards for beach scraping.				
		High risk of illegal protection works that could impact natural character?		
		Impact of any abandoned property.		

SURF BREAKS				
COMMENTARY Wainui – Stock Route – Pines- Whales = surf breaks of national significance (NZCPS). Surf breaks require along-shore and across-shore movement of sand to form sand bars. The sand is sourced from local and distant parts of the beach.				
Option 1 ***Protect Properties***	**Option 2** ***Buy Time***	**Option 3** ***Maintain Structures***	**Option 4** ***Soft Management & Community-led Retreat***	**Option 5** ***Retreat Focus***
Impact of structures with sand movement processes may affect surf breaks but assessment of any impact will be complex.				
Long term impact of sea level rise and associated changes in coastal processes.				

OUTSTANDING NATURAL LANDSCAPES

COMMENTARY

Tuaheni Point is an identified outstanding natural landscape and must be protected from inappropriate development. Land-water interface is critical because it is visible and dramatic.

Visual continuity along the beachfront toward the headland is an important consideration.

Option 1 *Protect Properties*	Option 2 *Buy Time*	Option 3 *Maintain Structures*	Option 4 *Soft Management & Community-led Retreat*	Option 5 *Retreat Focus*
Impact of structures on the visual continuity along the beachfront toward the headland.		Impact of degrading structures on the visual continuity along the beachfront toward the headland.		

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PUBLIC AND PRIVATE ACCESS (onto and along the beach)

COMMENTARY

Must avoid or mitigate any loss of public walking access and identify opportunities to restore public walking access. Maintenance and enhancement of public open space qualities also an objective (NZCPS)

Structures must not be located on public land unless there is significant public or environmental benefit in doing so (NZCPS).

Approx. dozen existing public access points providing access to the beach.

Ideally, all-ability access should be available.

Private access onto the beach also important to stakeholders.

Option 1 *Protect Properties*	**Option 2** *Buy Time*	**Option 3** *Maintain Structures*	**Option 4** *Soft Management & Community-led Retreat*	**Option 5** *Retreat Focus*
Potential encroachment of structures into the public beach and loss of public access, especially at high tide.				
Location of any structures on public land – must be significant public or environmental benefit.				
Integration of protection approaches with public access points.				
Private access across any protection structures.				
Managing access to help protect dunes.				
Long term impact of sea level rise on coast and public access.				

CULTURAL VALUES

COMMENTARY

Tangata whenua are concerned about impacts on the waahi tapu site alongside the Wainui Stream and seek enhanced access to the beach, especially at the southern end. Tangata whenua also value naturalness and working with nature, protection of the recreational values of the beach and offsetting any impact on public values for private benefit.

<table>
<tr><th>Option 1
Protect Properties</th><th>Option 2
Buy Time</th><th>Option 3
Maintain Structures</th><th>Option 4
Soft Management & Community-led Retreat</th><th>Option 5
Retreat Focus</th></tr>
<tr><td colspan="2">Potential impacts of structures on natural character.</td><td></td><td></td><td></td></tr>
<tr><td colspan="2">Potential impacts of structures on public access – any ability to offset?</td><td></td><td></td><td></td></tr>
<tr><td colspan="2">Visual integration of structures with the environment and each other</td><td colspan="3">Degrading structures – appearance of neglect.</td></tr>
<tr><td colspan="2">Stream training walls could help protect waahi tapu at Wainui Stream – to be further explored.</td><td colspan="3">Erosion of waahi tapu site adjacent to Wainui Stream.</td></tr>
<tr><td colspan="5">Opportunities to enhance public access at southern end of the beach?</td></tr>
</table>

ECOSYSTEMS, HABITAT AND INDIGENOUS VEGETATION				
COMMENTARY Terrestrial habitats are extensively modified by human development. Some native species remain. Should restore natural character and habitat by using indigenous species, preferably of local genetic stock.				
Option 1 *Protect Properties*	**Option 2** *Buy Time*	**Option 3** ***Maintain Structures***	**Option 4** ***Soft Management & Community-led Retreat***	**Option 5** ***Retreat Focus***
Given the existing level of modification any new structures may have little additional impact.				
Opportunities to enhance through dune enhancement.				
Long term impact of sea level rise and climate change.				

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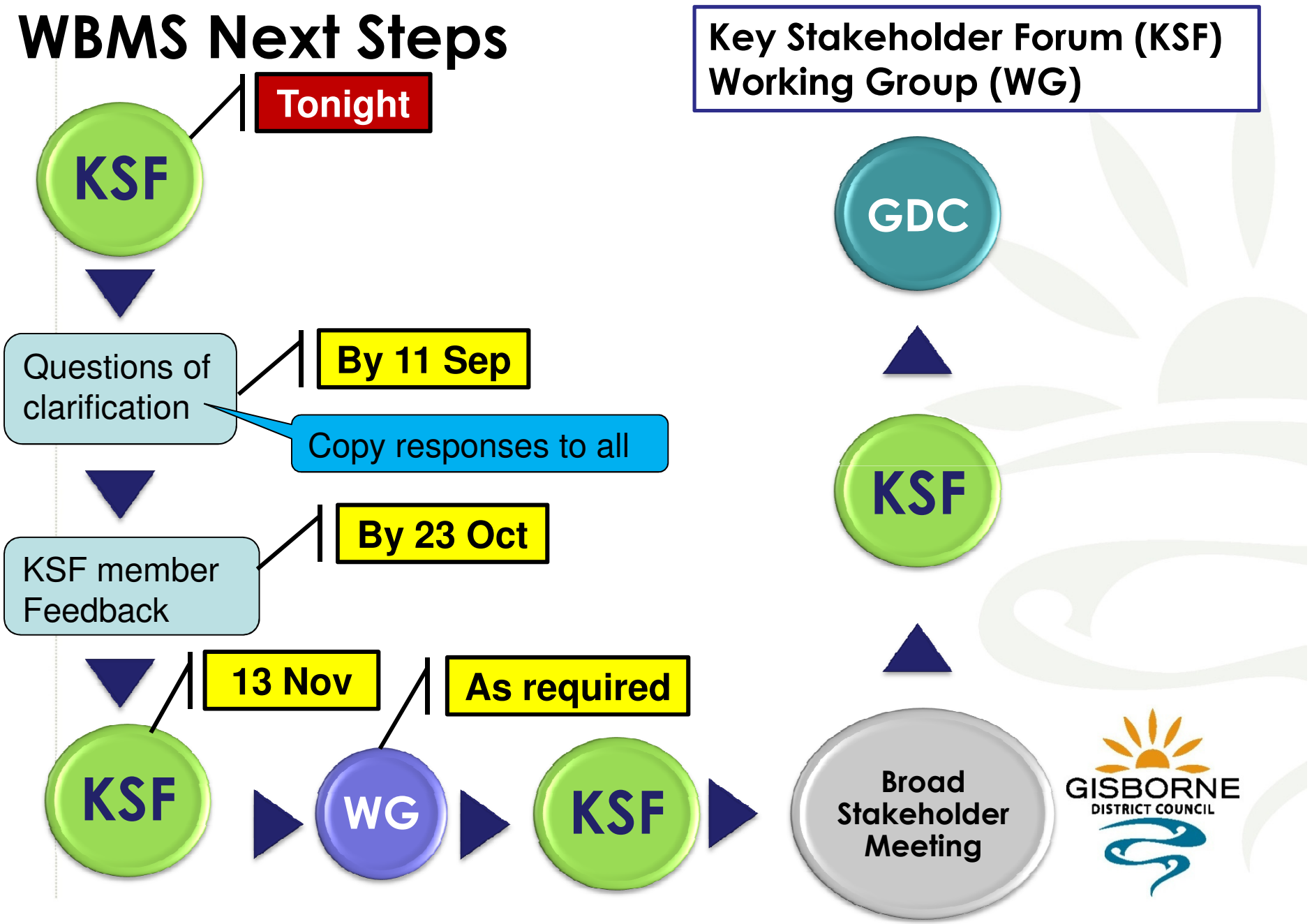
RELATIVE COST (monetary)

Indicative costs only have been estimated.

Option 1 *Protect Properties*	Option 2 *Buy Time*	Option 3 *Maintain Structures*	Option 4 *Soft Management & Community-led Retreat*	Option 5 *Retreat Focus*
New structures have relatively expensive initial capital costs and ongoing maintenance costs.				
Maintenance costs of existing structures that continue to be supported as part of the protection scheme.				
Costs of reviewing plans to ensure more effective avoidance of the risk in the long term.				
Potential loss or costs to private property in the short term – esp for the 28 properties with dwellings in the Extreme Hazard Zone; particularly those protected by 'lesser' structures.				
Potential loss of property in the long term as sea level rise may make continued shore protection unviable.		Potential loss of property in the long term due to sea level rise.		
			Costs of any financial instruments to support retreat.	
				Enforcement costs for forced retreat – could be significant for Council.

WBMS Next Steps



Council Process & Timeline

2 months after receive KSF WBMS Recommendations

Council Meeting

- Considers recommendations
- Council decision re amendments to WBMS

Council

- Communicates Council decision to all stakeholders

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Where to From Here?

- Familiarise self with document
- If questions of clarification → Kevin by 11 September
- If representing a group, consultation with constituent stakeholders
- Feedback through Survey Monkey by 23 October
- Project Team collate feedback → KSF by 6 November
- KSF workshop to determine preferred option(s) for in-depth analysis on 15 November

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Feedback Sought

1. Focus on Section 5: Strategy Development
2. Range of Tools
   - Position re each tool (Strongly Agree → Strongly Disagree)
   - Position re each tool (Strongly Agree → Strongly Disagree)
3. 5 proposed options
   - Position re each option (Strongly Agree → Strongly Disagree)
   - Position re each tool (Strongly Agree → Strongly Disagree)
4. Rank 5 options in order of preference
5. Recommended composite or alternative approach

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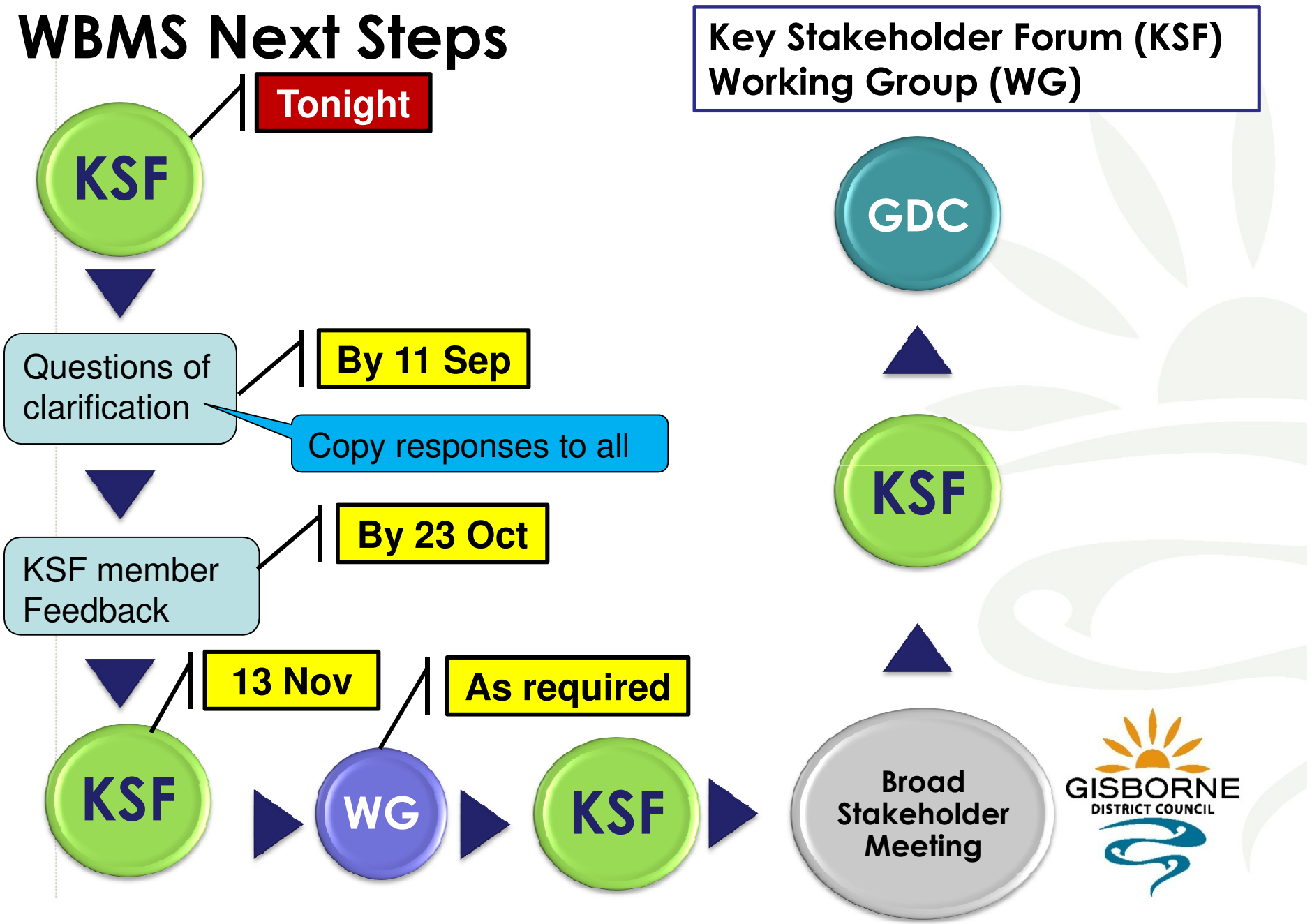
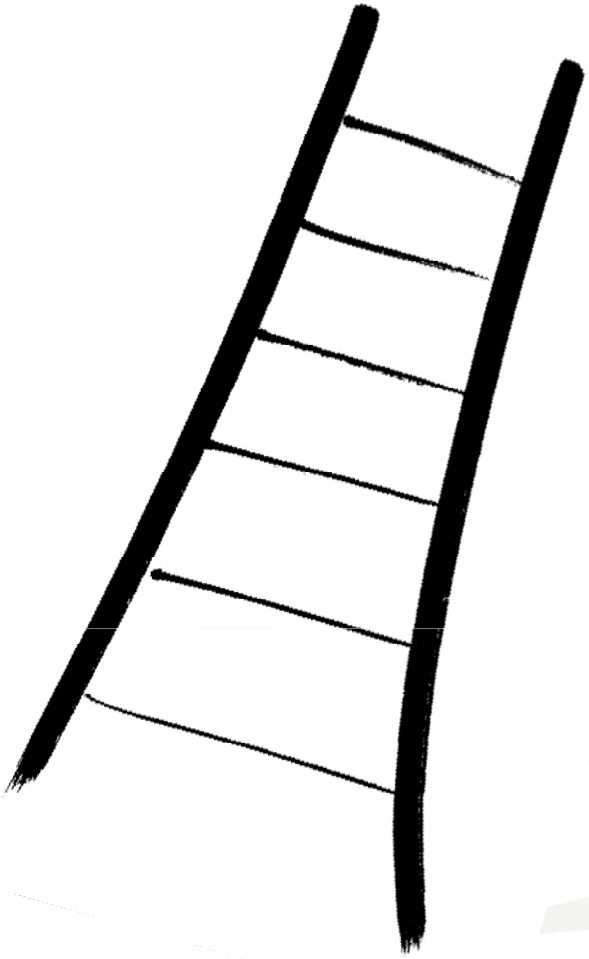
WBMS Next Steps



Next Steps?

- Questions of clarification by 11 September
- Feedback through Survey Monkey by 23 October
- Project Team will collate feedback → KSF by 6 November
- KSF workshop → preferred strategy(ies) for in-depth analysis 13 November



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