Wainui Beach Management

Key Stakeholder Forum Meeting 3

28 November 2012

n278698

GISBORNE DISTRICT COUNCIL

Purpose

- To understand survey feedback re what is important to KSF that WBMP addresses
- To endorse WG recommendations, or request further work
- To agree format & high level content for WBMP Discussion Document

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Agenda

1. Welcome
2. Apologies
3. Minutes - KSF 17 October 2012
4. Purpose
5. Planning controls
   Decision Item
6. KSF Survey Feedback
7. Working Group Progress Report & Recommendations
   Decision Item
8. WBMP Discussion Document
   a. Format
   b. Process & Timeline for Drafting
   Decision Item
9. Wrap Up

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Planning Controls – Topics Covered

- 2010 Rock Revetment Consent (why refused)
- Research on how coastal hazard planning controls being applied
- Issues with current hazard planning
- Decision on content for WMBP discussion document

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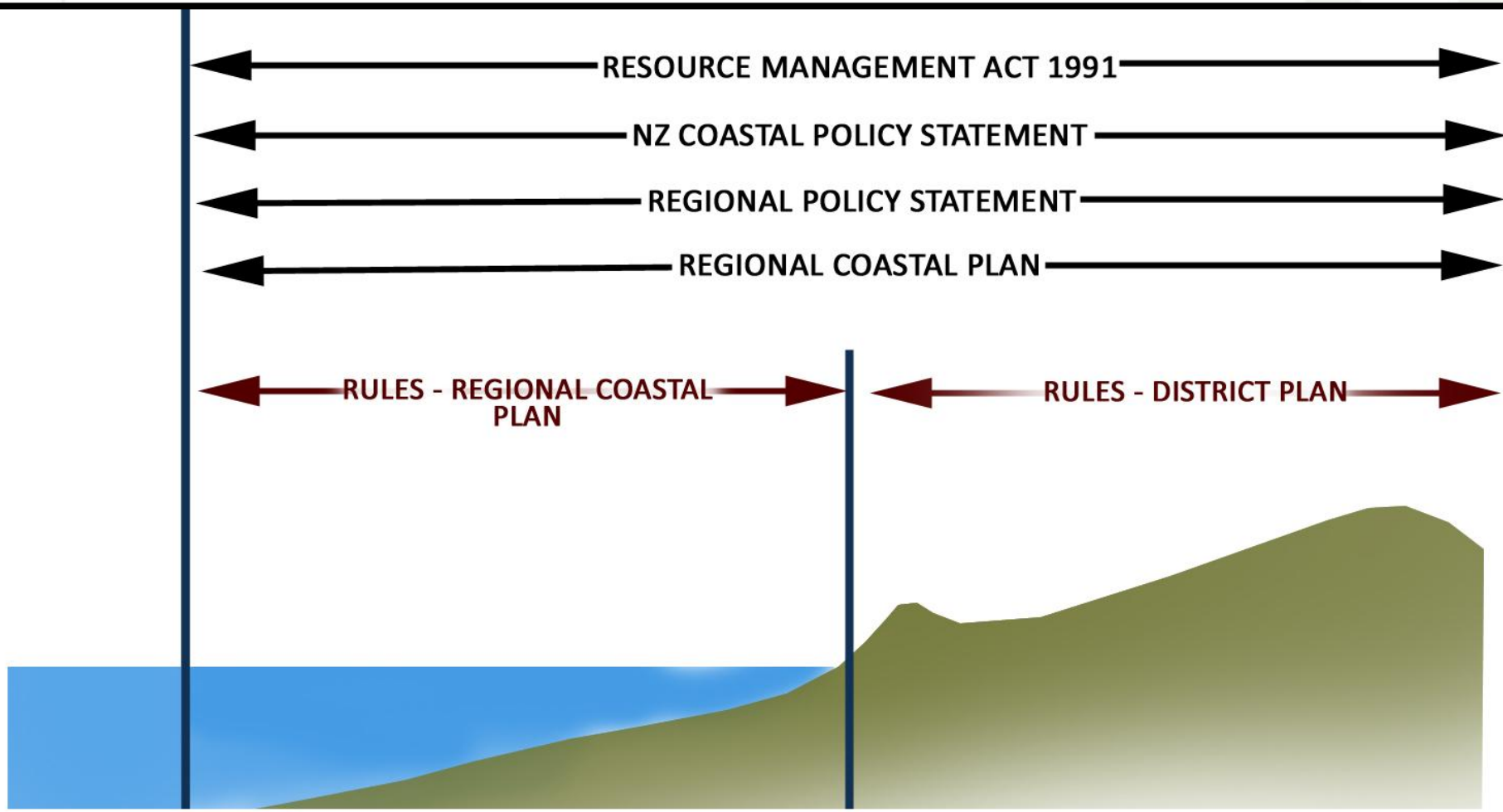
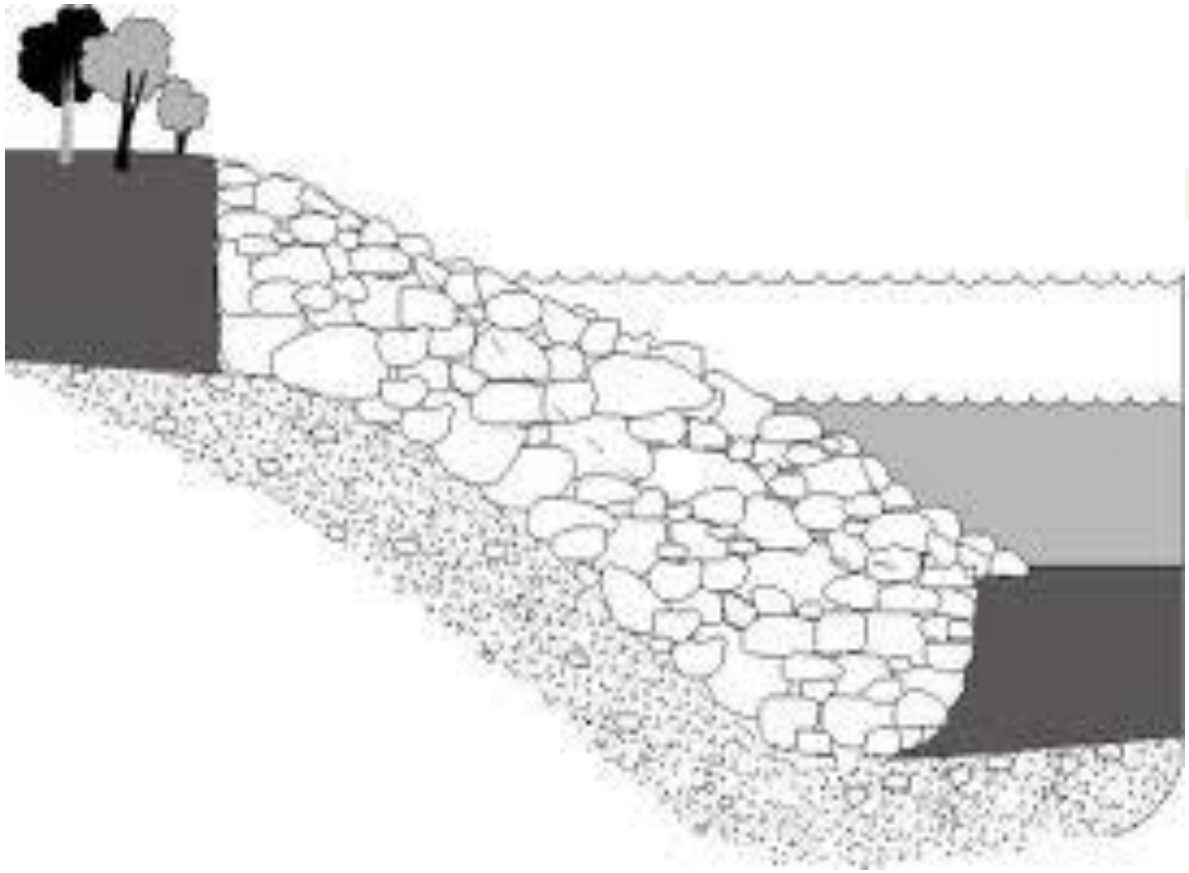
Policy Framework for the Coastal Environment



1. 2010 Rock Revetment Consent



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2010 Revetment Consent - Facts

- Application by GDC to replace 412m rail iron/log wall with a rock revetment of limestone riprap or sandstone boulders between Tuahine access and Wainui Stream
- located both sides of mean high water springs i.e. CMA (foreshore) and general land (private property and Council reserve) and extending 1-4m seaward of existing rail iron/log wall.
- sloped at approx 1:3 with crest at a max. height of 3m above msl.
- cut 0.5m into the underlying papa or estuarine silt.
- intended to provide 'partial' protection and accepted that major storms will overtop the crest of the proposed revetment
- wide range of consents needed

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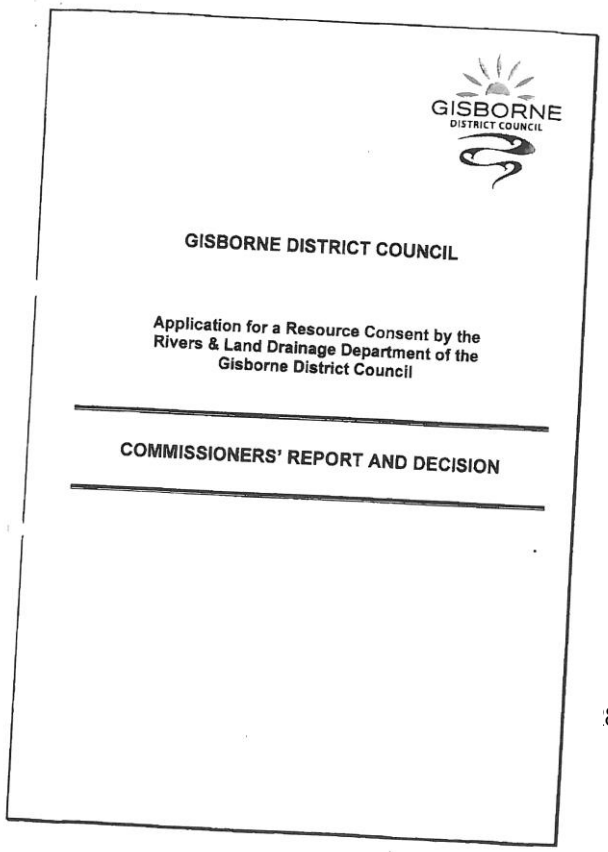
Rock Revetment – Outcome

- Heard by 3 Commissioners, one appointed by Minister of Conservation.
- Declined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Application for a Resource Consent by the Rivers & Land Drainage Department of the Gisborne District Council

COMMISSIONERS' REPORT AND DECISION

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Rock Revetment –Issues

- Insufficient Information/Analysis
  - public access, visual impact and natural character, implications of climate change on structure design and coastal hazards, NZCPS
- Public Access
  - Access along the beach may be reduced when beach widths and sand levels are low.
- Natural character
  - Structure bigger and generally more visible than existing structures when natural sand levels are low.
  - Rocks will not be in sympathy with the beach when exposed.

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Rock Revetment –Issues

- Not all the property owners supported the application
- Effectiveness of Design at Protecting Properties
  - Commissioners worried that it will be enlarged in the future to provide greater protection, with adverse effects on natural character and public access, amenity.
  - Not all the houses along length of revetment at immediate risk – so not best practicable option.

Rock Revetment –Issues

- Lack of long term erosion to justify the structure
  - Believe there is extreme erosion risk with 6 houses at immediate risk but queried whether there is a long term trend for retreat
  - Accept some long term erosion likely due to climate change but lack of analysis.
  - Think hazard zones need to be reviewed
  - Lack of consideration of alternatives e.g. believe planting of dunes to encourage trapping of sand in between episodic erosion events

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Rock Revetment –Issues

- Potential Adverse Effects on the Beach
  - Lack information about design and not consistent with Dr Komar's design (missing cobble beach) or backed up by other expert
  - Scouring/Erosion of the shelf underlying the sand in this area of the beach. Not convinced that the structure would minimise adverse effects on coastal processes and features.
  - Commissioners felt precautionary approach needed to the structure consistent with NZCP.

Rock Revetment –Learnings

- Natural character of the coast & public access are critical
- Strict and precautionary approach to hard protection structures…even tougher now under new NZCPS policy 25 and 27 'discourage hard protection structures and promote use of alternatives' v old NZCPS 'best practicable option' test
- Importance of good analysis and evidence:
  - Visual impacts (natural character)
  - Hazard processes incl. climate change
  - Impact on beach processes

2. Application of Hazard Planning Controls

Hazard Planning – Why?

- Regional Policy Statement:
  - Wants change to patterns of development not affected by hazards and which do not worsen or induce impacts and allow natural features to migrate inland.
- District Plan:
  - Wants a pattern of human settlement that avoids risk to property/infrastructure & provides personal safety
  - Intends to avoid development in extreme hazard areas & not allow development that will induce or accelerate risk
- NZCPS:
  - Intends to avoid increased risk of harm; avoid redevelopment that would increase risk
  - Encourages redevelopment that would reduce risk incl. managed retreat by relocation of structures or their abandonment in extreme circumstances & designing for relocatability

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Risk = people and property exposed to natural hazards

Hazard Planning - Summary Rules

4 hazard overlays with rules for each:

- **Extreme Risk** – erosion could occur in a single storm; significant possibility of damage in any one year *(subdivision for new development & new buildings prohibited; building additions need consent)*
- **High Risk** – high probability of erosion by 2050. Shoreline forecast to lie inland by 2050 *(subdivision for new comm/resid development prohibited; new buildings and building additions need consent)*
- **Moderate Risk** - high probability of erosion by 2100. Shoreline forecast to lie inland by 2100 *(subdivision and residential/habitable development need consent)*
- **Safety Buffer** – likely to be affected beyond 2010 *(subdivision needs consent)*

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Hazard Planning – Application of Rules

- Audited consents for new buildings/alterations in coastal hazard zones south of Hamanatua Stream 2000-2012
- Total 20 consents, all granted, all non-notified.
- 5 building extensions in Extreme Hazard Zone (verandah, lounge extension, garage + deck, additional second-storey room)
- 9 building extensions in High Hazard Zone – some significant e.g. new second storey, new rooms and decks.
- 3 new dwellings (demolish existing dwellings), 2 included parts of dwelling in the High Hazard Zone

Hazard Planning – Reasons Applications Approved

- Other neighbouring dwellings in similar or seaward position
- Extensions not for bedrooms (not a risk to personal safety)
- Extensions 'minor' compared to existing house
- Extensions not on seaward side of building
- Relocatability

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Hazard Planning – Application of Rules a Success?....No???

- Not avoiding development in extreme hazard areas (DP) (approval of 5 consents for building additions in areas with significant possibility of erosion in any one storm, in any one year).
- Not developing a pattern of human settlement that avoids risk to property/infrastructure?
- Not avoiding redevelopment that would increase risk (NZCPS)
- *Note: some negotiation to modify proposals is occurring and is not obvious on the consent audit. Controls may also be working to discourage other development applications*
- Addressing relocatability to reduce risk (NZCPS) to some extent, but limited analysis.

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Hazard Planning – Issues

- Hazard Zones need review
  - Last reviewed in 2001 & author recommends review within 10 years
  - Sea level rise predictions have increased.
  - But…resourcing issues Coastal Hazard assessments still outstanding for some communities
- Difficulty of refusing individual applications in an environment of existing development combined with broad discretion to consider each application
- Inconsistency between rights of property owners and philosophy of personal responsibility for risk v philosophy of risk avoidance in NZCPS, RPS &District Plan.

Possible Content for WMBP Discussion Document

Council Planners propose:

- Review Hazard Zones
- Consider options to guide decisions on applications for new development in hazard zones e.g.
  - Where any increase in development is & isn't acceptable,
  - Where relocatability is acceptable & design assessment processes
- Consider best practice in other districts
- Consider how long term retreat may be supported by Council plans

KSF View?

- Questions of Clarification?
- Any discussion?
- KSF Consensus?

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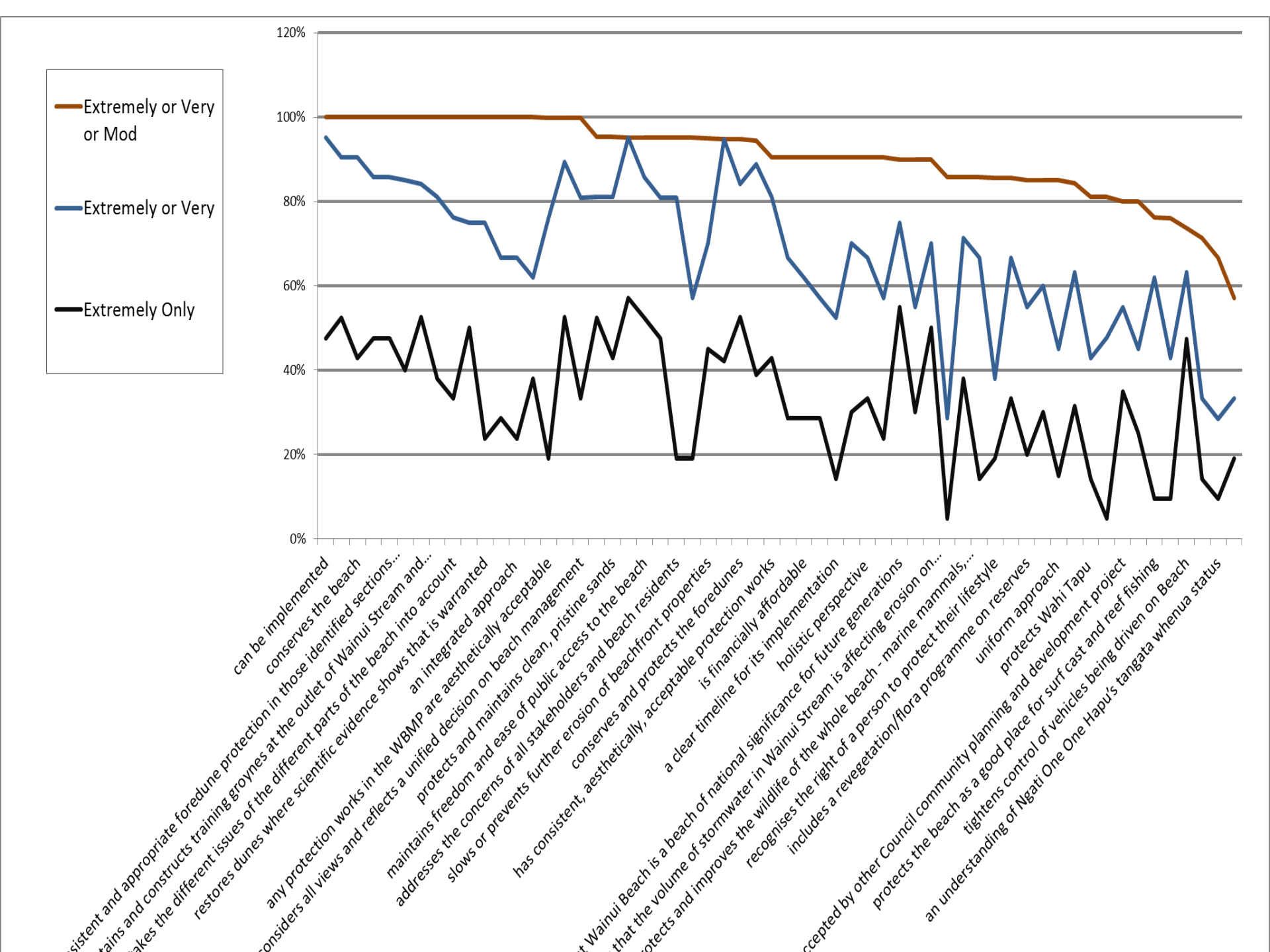
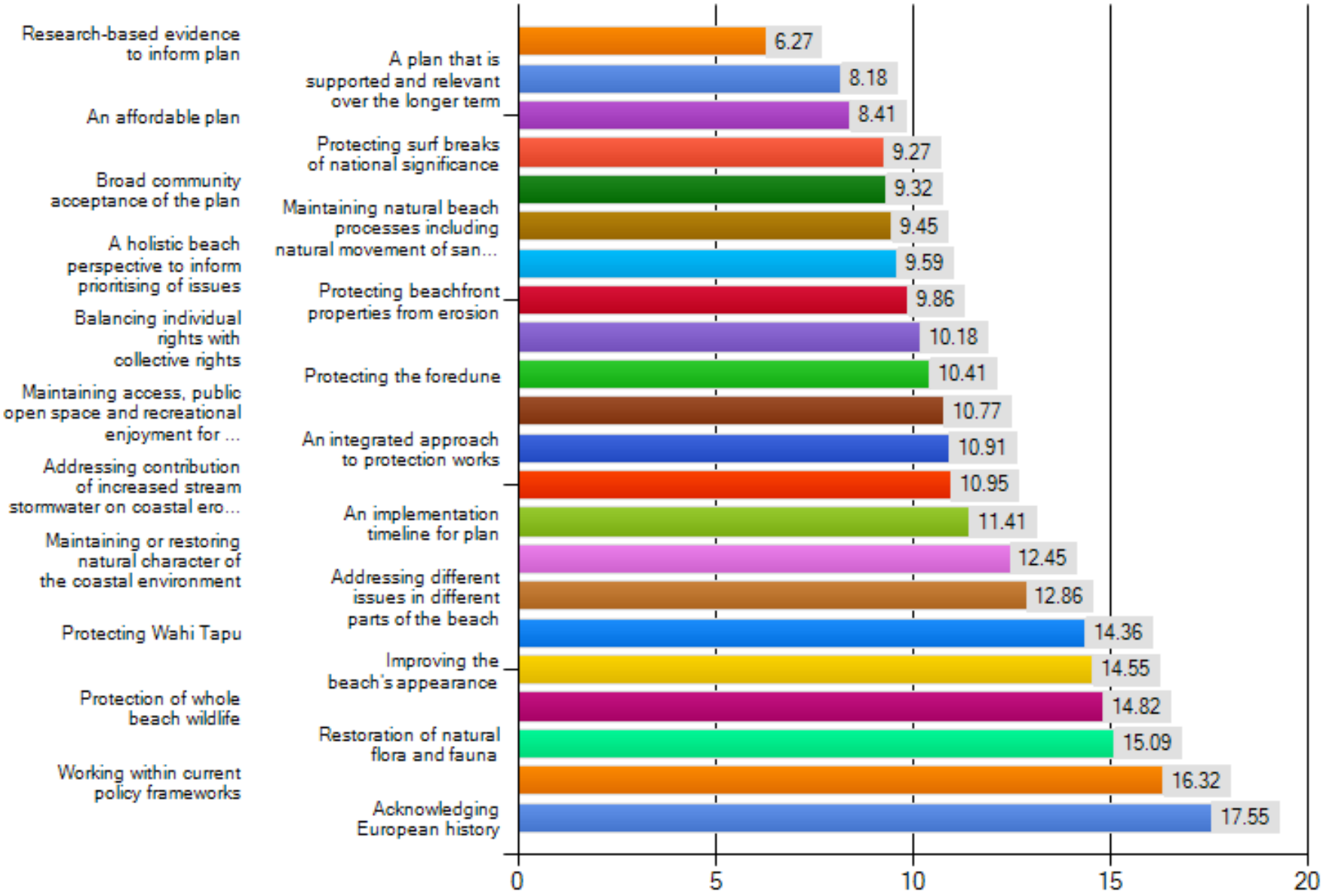
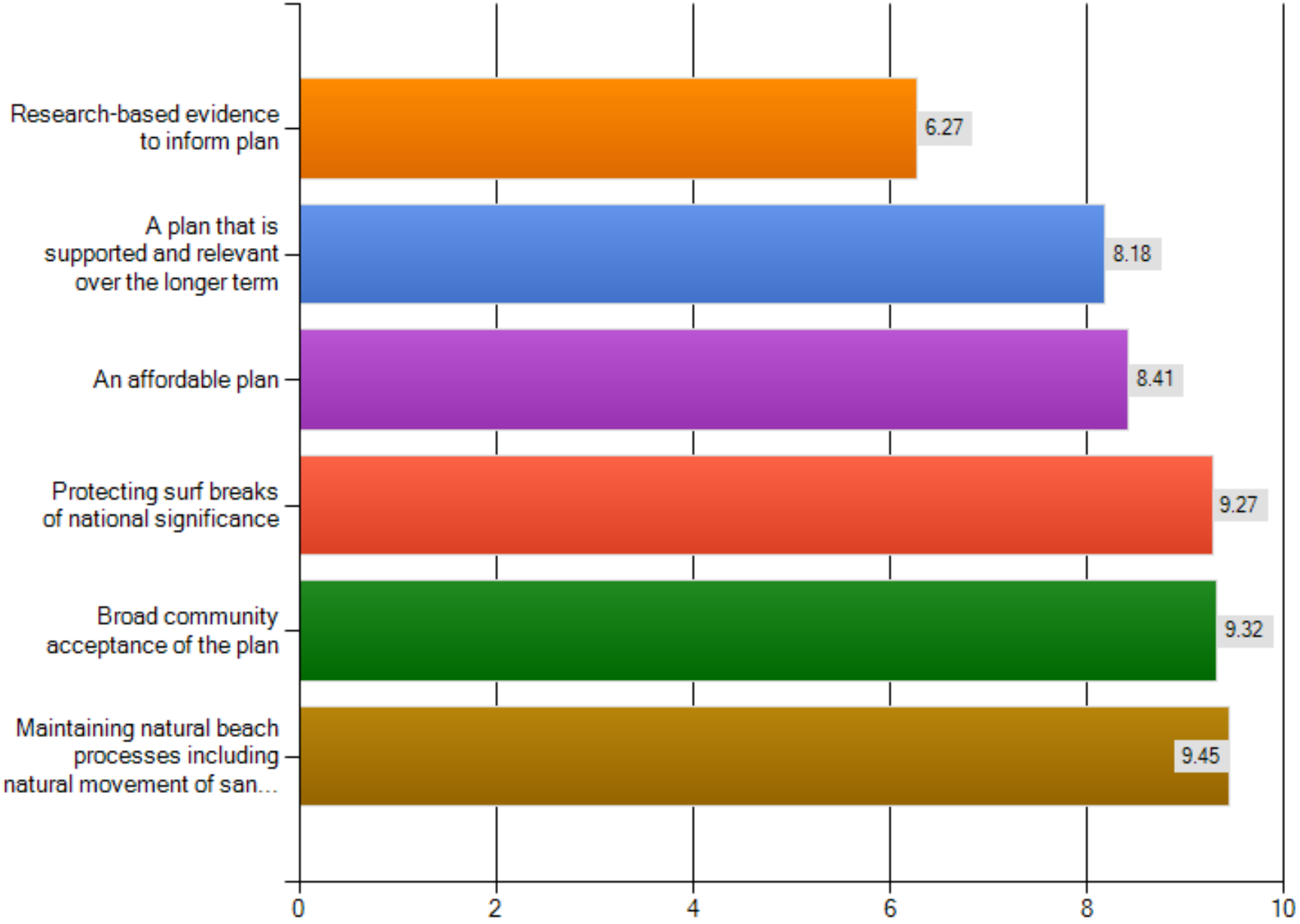
KSF Survey Feedback


Extremely or Very or Mod
Extremely or Very
Extremely Only
120%
100%
80%
60%
40%
20%
0%
can be implemented
conserves the beach
sistent and appropriate foredune protection in those identified sections...
tains and constructs training groynes at the outlet of Wainui Stream and...
kes the different issues of the different parts of the beach into account
restores dunes where scientific evidence shows that is warranted
an integrated approach
any protection works in the WBMP are aesthetically acceptable
considers all views and reflects a unified decision on beach management
maintains freedom and ease of public access to the beach
protects and maintains clean, pristine sands
addresses the concerns of all stakeholders and beach residents
slows or prevents further erosion of beachfront properties
has consistent, aesthetically, acceptable protection works
conserves and protects the foredunes
is financially affordable
a clear timeline for its implementation
holistic perspective
t Wainui Beach is a beach of national significance for future generations
that the volume of stormwater in Wainui Stream is affecting erosion on...
otects and improves the wildlife of the whole beach - marine mammals,...
recognises the right of a person to protect their lifestyle
includes a revegetation/flora programme on reserves
uniform approach
protects Wahi Tapu
cepted by other Council community planning and development project
protects the beach as a good place for surf cast and reef fishing
tightens control of vehicles being driven on Beach
an understanding of Ngati One One Hapu's tangata whenua status

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



Wainui Beach Management Plan: The 6 Key Issues Receiving the Highest Average Priority Rating



WG Work Plan (KSF 17 Oct)

- Identify & Consider:
  - Issues
  - Hard solutions (Technical)
  - Soft solutions (Non-Technical)
- Summary of protection works on the beach & how effective they are
- Summarise findings & present to KSF for discussion

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Process

- For each statement agreed by WG:
  - Questions of Clarification?
  - Any Discussion?
  - KSF Consensus?
- If considerable discussion needed or no initial consensus → will hold to discuss in more detail in small groups
- Feedback on: areas of agreement & disagreement; proposed amendments
- KSF Consensus

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WG Report Effectiveness of Existing Infrastructure 1

WG agreed following re GROYNES:

- Hamanatua Stream training wall works in terms of controlling stream
- Southern groynes 2, 3 & 4 buried since training wall constructed and are ineffective
- Re effectiveness/impact of groyne 27 at Southern end – periodically causes beach scouring to the north locally, lowering the beach sand levels, (eddy effect) and adds to the backshore erosion pressure.

(Note: Expert advice is that groyne 27 is not having an impact on Stockroute area)

KSF View?

- Questions of Clarification?
- Any discussion?
- KSF Consensus?

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WG Report Effectiveness of Existing Infrastructure 2

WG agreed following re SEAWALLS:

- May help protect properties directly behind them
- Negative in terms of sand on beach - cause scouring

KSF View?

- Questions of Clarification?
- Any discussion?
- KSF Consensus?

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WG Report Effectiveness of Existing Infrastructure 3

WG agreed following re RIPRAP:

- Helps protect properties directly behind them
- Improved performance (relative to seawall) on coastal processes enhanced by flatter slope and porosity
- Positive (relative to seawall) in terms of sand on beach (does not prevent sand coming back) - minimal scouring
- Take a bigger footprint on the beach (relative to seawall)
- Noted that end of Lloyd George Rd (23) is best example - built to specific Dave Peacock specifications

KSF View?

- Questions of Clarification?
- Any discussion?
- KSF Consensus?

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WG Report Effectiveness of Existing Infrastructure 4

WG agreed following re GABIONS:

- Work short term – property protection at toe
- Similar characteristics to a seawall
- Because of height are overtopped
- Most of time buried therefore minimal effect on natural sand flow
- Have a limited effect in some storm situations
- Can use small rock (that may be more readily available)

KSF View?

- Questions of Clarification?
- Any discussion?
- KSF Consensus?

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Cyclical vs Long Term Erosion

WG view re LONG TERM EROSION:

1.There is cyclical erosion with storm events and long term erosion

2.Predominant effect of waves from the South which, in conjunction with lowering of the reef, impacts on beach rotation

3.But also there are cyclical erosion from NE swell

4.If one holds the control point between beach and cliff it has the potential to slow the long term land retreat but will not prevent long term rotation of the beach

5.Tuaheni point is eroding over time (abt 1 – 2 metres per decade landward retreat – ref Gibb 2001)

6.There is long term erosion of Makorori Point that may increase sand movement to the north and loss from the beach system

7.Also noting: When is a lot of stormwater runoff from land, which permanently erodes property, the beach takes a long

KSF View?

Questions of

Clarification?

Any discussion?

KSF Consensus?

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WBMP TIMEFRAME

WG agreed following re TIMEFRAMES:

Now: 0 - 20 years

Mid: 20 – 50 years

Long Term: 50 – 100 years

KSF View?

- Questions of Clarification?
- Any discussion?
- KSF Consensus?

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Small Group Process

- For each decision area:
  - Areas for more clarification? (WG member at each table)
  - Points of agreement?
  - Points of disagreement?
  - Recommendations?
- Write up your key points
- Feedback key points from group to plenary
- Will capture on data projector
- Statements amended if appropriate
- Check for KSF Consensus

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Preliminary Options Screening Approach

Options	Relative Cost/100m (H,M,L)	Fit for Purpose (H,M,L)	Proven technology (open coast)	Statutory Appropriate ness (H,M,L)	Life (yrs)
Beach scraping	L	M	U	M	5
Dune enhancement	L	H	Y	H	10
Status Quo	L	L	N	L	10
Gabion baskets	M	L	N	L	10
Beach nourishment	H	H	Y	M	25
Geobag walls	M	L	y	L	25
Beach drainage management	M	L	N	M	25
Under-current stabilisers	M	L	N	M	25
Emergency Geobag protection	L	M	Y	H	25
Prohibiting to 100 HZ	L	H	Y	H	50
Cobble berm revetment	M	H	Y	M	50
Rock Revetments	M	H	Y	L	50
Groynes	H	L	N	L	50
Off-shore reefs	H	M	N	L	50
Seawalls	M	M	Y	L	50
Asset relocation/abandonment	H	H	Y	H	100

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Preliminary Screening Options

OPTIONS	Relative Cost/100m (H,M,L)	Fit for Purpose (H,M,L)	Proven technology (open coast)	Statutory Appropriateness (H,M,L)	Life (yrs)	Scoring: Green = 1, brown=3, red=5
Prohibiting to 100 HZ	L	H	Y	H	50	5
Cobble berm revetment	M	H	Y	M	50	9
Dune enhancement	L	H	Y	H	10	9
Emergency Geobag protection	L	M	Y	H	25	9
Asset relocation/abandonment	H	H	Y	H	100	9
Rock Revetments	M	H	Y	L	50	11
Beach nourishment	H	H	Y	M	25	13
Seawalls	M	M	Y	L	50	14
Beach scraping	L	M	U	M	5	15
Geobag walls	M	L	y	L	25	17
Off-shore reefs	H	M	N	L	50	19
Beach drainage management	M	L	N	M	25	19
Under-current stabilisers	M	L	N	M	25	19
Groynes	H	L	N	L	50	21
Status Quo	L	L	N	L	10	21
Gabion baskets	M	L	N	L	10	23

Important Issues were numbered in priority order (1 being highest)

	Important Issues	Rating Average
1	Research-based evidence to inform plan	6.27
2	A plan that is supported and relevant over the longer term	8.18
3	An affordable plan	8.41
4	Protecting surf breaks of national significance	9.27
5	Broad community acceptance of the plan	9.32
6	Maintaining natural beach processes including natural movement of sand and water	9.45
7	A holistic beach perspective to inform prioritising of issues	9.59
8	Protecting beachfront properties from erosion	9.86
9	Balancing individual rights with collective rights	10.18
10	Protecting the foredune	10.41
11	Maintaining access, public open space and recreational enjoyment for beach users	10.77
12	An integrated approach to protection works	10.91
13	Addressing contribution of increased stream stormwater on coastal erosion	10.95
14	An implementation timeline for plan	11.41
15	Maintaining or restoring natural character of the coastal environment	12.45
16	Addressing different issues in different parts of the beach	12.86
17	Protecting Wahi Tapu	14.36
18	Improving the beach's appearance	14.55
19	Protection of whole beach wildlife	14.82
20	Restoration of natural flora and fauna	15.09
21	Working within current policy frameworks	16.32
22	Acknowledging European history	17.55

Issues were then clustered to help incorporate in planning

Cluster	Issues (Numbers relate to those used in table)
WHY Natural Environment:	4, 6, 10, Maintaining or restoring, recreational enjoyment part of 11, 15, 18, 19, 20
WHY Access:	11a, 11b public open space
WHY Property Protection:	8
HOW	1, 2, 3, 5, 7, 9, 12, 13, 14, 16, 21
WHAT	Cultural & heritage values: 17, 22

3 Key Criteria

1. Access (public & private/beachfront)
2. Property protection (private & public)
3. Protection of natural environment

Options for More Detailed Consideration

WG advocates following for more detailed consideration:

- 7 options (Beach nourishment & above) scored 13 & above plus status quo agreed by KSF for more detailed investigation
- Along with inclusion of beach scraping in emergency & as a starting point for dune enhancement options
- Also training walls for the Wainui and Hamanatua Streams Long Term: 50 – 100 years

KSF View?

- Questions of Clarification?
- Any discussion?
- KSF Consensus?

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Criteria for Assessing Options

WG promotes the following criteria for assessing options:

1."Implementation Timescale: (0-20, 20-50, 50-100)"
2.Effective Life
3."Laws of Coast (Consider whole beach)"
4."Laws of Coast (Maintain/enhance sand flow)"
5.Enhance/maintain Access (Public) Access (Private)
6.Property Protection (Private) Property Protection (Public)
7."Protection of Natural Environment Dunes/backshore"
8."Protection of Natural Environment Beach/offshore (incl surf breaks)"
9.Cultural/Heritage values acknowledged
10.Relative cost per 100m
11.Based on research evidence

KSF View?

- Questions of Clarification?
- Any discussion?
- KSF Consensus?

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Small Group Process

- Each group
  - Areas for more clarification? (WG member at each table)
  - Points of agreement?
  - Points of disagreement?
  - Recommendations?
- Write up your key points
- Feedback key points from group to plenary
- Will capture on data projector
- Amendments made as appropriate
- Check for KSF Consensus

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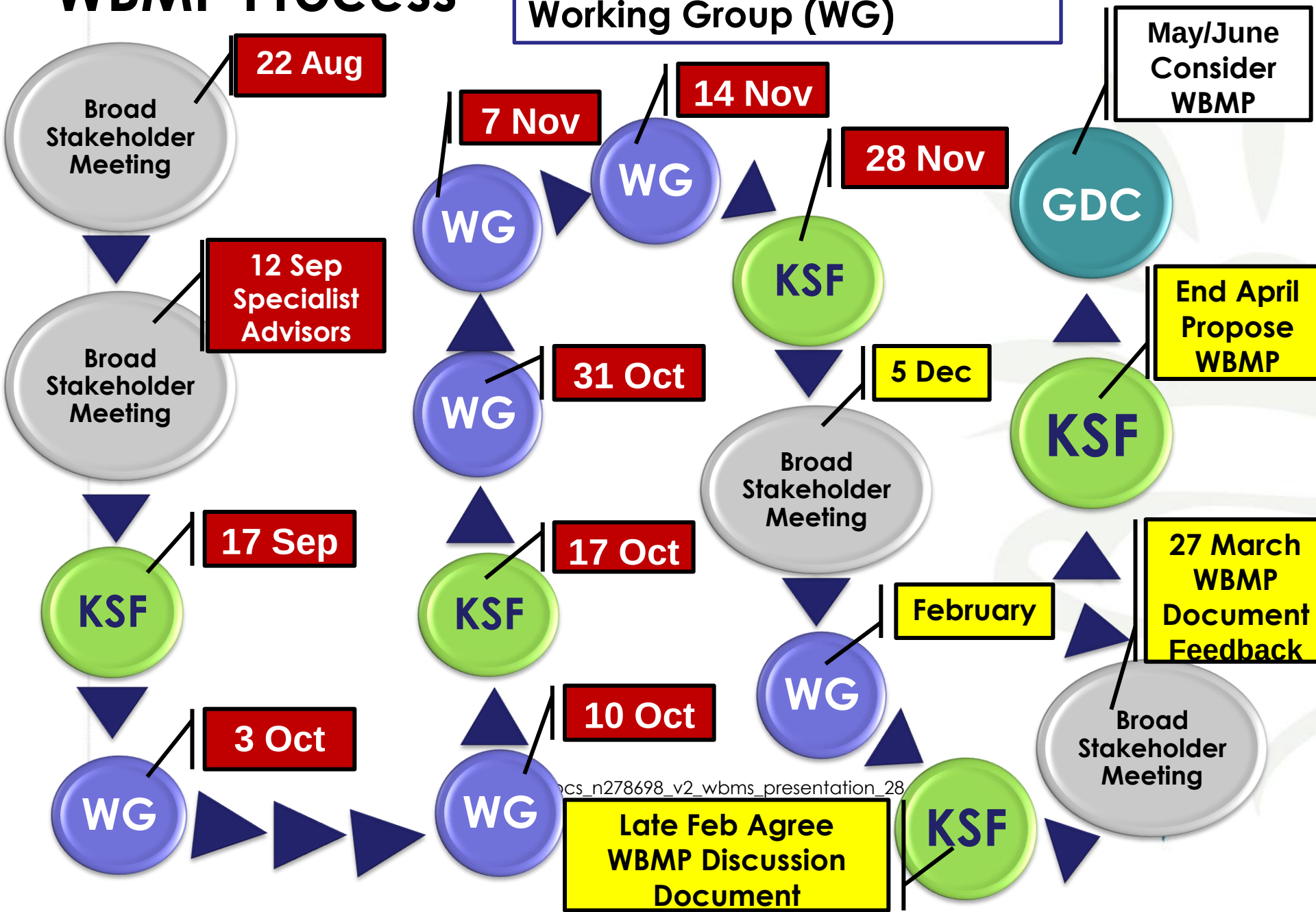
Draft WBMP Discussion Document Framework

A Executive Summary
B Context
B.1 Purpose and Scope
B.2 Historical Background
B.3 Policy Environment
C Planning Process
C.1 Council Project Team & Advisors
C.2 Consultation with Stakeholders
C.3 Key Stakeholder Forum
C.4 Working Group
D Principles Agreed Re Wainui Beach
E Key Considerations
F Preliminary Screening of Options
G Detailed Screening of Potential Options
G.1 Options for Further Investigation
H Timeframes
I Affordability
J Feasibility Designs
K Monitoring
L Recommendations
L.1 Numbered Recommendations
M Other Considerations
M.1 Out of Scope Considerations
M.2 Linkages to Other Strategies & Plans
N Appendices
N.1 Key Stakeholder Forum – Membership and Terms of Reference
N.2 Working Group – Membership & Terms of Reference
N.3 Meetings Held
N.4 Bibliography of Reference Material
N.5 Regulatory and Planning Environment
N.6 Glossary of Terms
N.7 Peer Review

WBMP Process

Key Stakeholder Forum (KSF)
Working Group (WG)



Council Process & Timeline

May/June 2013

Council Meeting

- Considers recommendations
- Council decision re amendments to WBMS

June/July 2013

Council

- Communicates Council decision to all stakeholders

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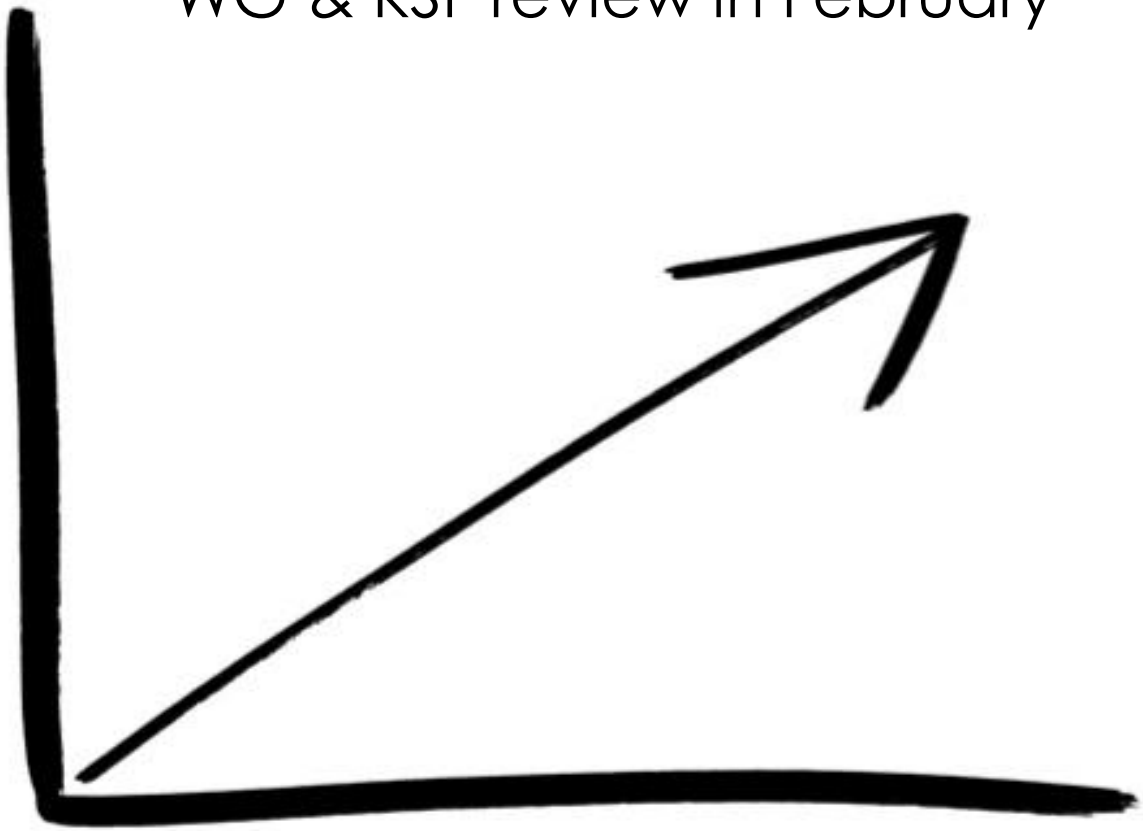
Where to From Here?

- Detailed analysis of potential options for review in February
- Prepare Draft WBMP Discussion Document for WG & KSF review in February



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Public Stakeholders Meeting 5 Dec

Proposed Purpose:

Update stakeholders on progress with Wainui Beach Management Plan

- What's been done to date
- Work in progress
- Where to from here

Proposed Agenda

1. Welcome
2. Apologies
3. Agenda and process for meeting
4. WBMP background & process to-date
5. KSF agreed to-date:
    a. How beach works
    b. Effectiveness of existing infrastructure
    c. Cyclical vs long term erosion
    d. Potential planning controls
    e. Criteria for assessing options
    f. Options to be explored in detail
6. Where to from here
7. Wrap up

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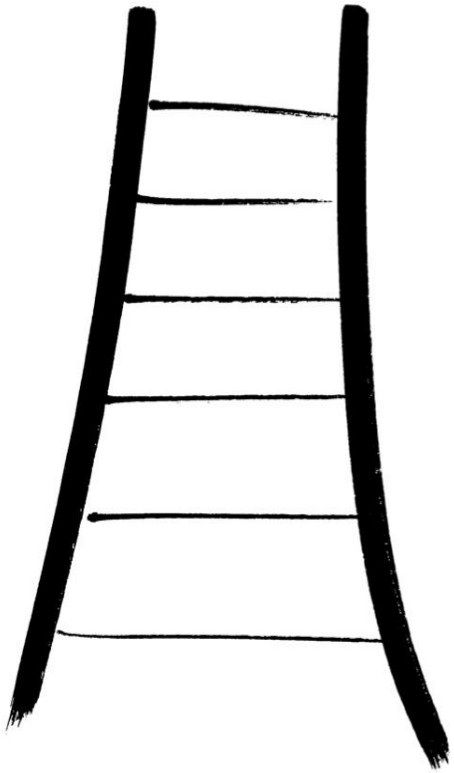
Next Steps?

1. GDC to email out minutes & post on GDC website
2. Public meeting to update broader stakeholders 6pm Wed 5 Dec
3. KSF members attend public meeting 5 Dec & encourage community attendance



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