

Minutes

SMP C	oastal Panel Meeting 8 – Adaptation Pathways
Times & Dates:	Mercury Bay Coast 9:00am-3:00pm Monday 27/09/21
Venues:	Mercury Bay Community Board Room, Whitianga or MS Teams
Chairperson:	Coastal Panel Chair:
	Graeme Osborne (Mercury Bay),
Attendees:	TCDC - Amon Martin, Jamie Boyle, Karen Moffatt-McLeod SMP Consultant (Royal HaskoningDHV) – Sian John, Nick Lewis
	Coastal Panel Members: Carrie Parker, Chris Devenoges, Kim
	Lawry, Howard Saunders, Dave Lameson Via MS Teams: Jill
	Pierce, Jamie Ryan, Robyn Sinclair
	WRC: Alejandro (via MS Teams)
	Observer – Dennis Tegg

Meeting Objective

• To review adaptation options and pathways for each Policy Unit.

Agenda Items

1. Welcome and introduction to the session.

2. Progress:

- a. Minutes of Meeting 7 (July 2021). accepted
- b. Review of Actions

Action Item	Comment
9	NL will be completed by next CP meeting
13	AM – have had meetings with Waka Kotahi – presenting to Thames CP meeting this week. Will share info that goes to Thames with other panels. Encompassing talks on whole of State Highway.
16	16 – AM spoke with Paul M – mostly interested in how pathways will be presented to the community. Preferred pathways may give the idea that we have made the decisions (SG agreed). Will impact development potential – Ngati Maru have land interests Joe Davis – 'not just our issue to decide on' – but it is our rohe and need to have input. Thinks it is more an engineering problem. Suggested talk to Hopper developments about what ideas they may have. Jamie Watson – wanted Paul M or others to guide how he should be involved.

Action Item	Comment
	Some issues are specific to the landowners and people effected – so discussions need to be with them, not just iwi. Unlikely to have Iwi representative on these Coastal panels. GO and Joe Davis catching up tomorrow. AM – Joe suggested to bring in people like Hoppers into the conversations. GO - Do we have any mapping of cultural areas of significance? SJ – yes these have been mapped for each CP area. Can't say if they are comprehensive, some locations of importance to iwi are not recorded in this way. GO – Enquired about mapping of cultural areas of significance? SJ – yes these have been mapped for each CP area and link to be provided to Panel. Can't say if they are comprehensive, some locations of importance to iwi are not recorded in this way.
17	Completed
24	Completed
25	Today
26	Work in progress
27	Drafted a comms plan with key messages for the public open days rather than bullet points. Key messages will be shared with CP's ahead of Public consultation.
	Governance committee needs to review and approve
28	JB – will follow up. WRC did a site mapping and graded in terms of risk matrix – send around asap and prior to Public Consultation
29	GO Meeting with JD tomorrow

Declaration of Interest:

Chris D – now on Mercury Bay Boating Club Committee, Howard Saunders retained by Ngati Hei (previously advised)

- 3. Reflections on the process so far.
 - AM made good progress. Needs to be some acceptance of what the project will and won't achieve. Whole lot of other work streams that will follow on from the work we are doing so doesn't mean that things won't be done.
 - KL happy with the process.
 - CD hopefully will flow on to District Plan.
 - CP- good but finding it difficult on how to report back to Rate Payers Association.
 - HS Hot Water Beach rate payers have been asking him to talk to a meeting, but he directs to the website. There is a lot of concern in the area. Main concern is that development is still going on. Made some suggestions in the feedback about a moratorium. (GO & AM is hopeful that this will be picked up).
 - JP- fine, think we are doing well.
 - Jamie Hutt happy with process, did miss most of last of meeting.
 - Jamie Ryan happy reports are good, lots of interest from community.
 - AM there is a report that goes to Governance on 14th October that has information on the open days. Once confirmation then it should be open information – should be available within a month.

4. Review of adaptation options and pathways.

Inputs:

a. Coastal Panel feedback.

SJ – updated pathways and options based on the feedback and has added the comments. So can be run together with the next agenda item as we go through the PU's

b. Outputs from the Third Pass Risk Assessment.

This is the format we are proposing to present to the public:

New Chums Beach Policy Unit 72	Remove tim 100 year tin						E Guidance n	equires
The Hazard					The Risk	:		
Coastal Inundation mapping comprises: SLR elus 1% AEP levels for storm tide.	Consequence	Туре	Year	AEP	Exposure	Vulnerability	Consequence	
sea level anomaly and wave setup	Insignificant	Erosion	2020	1%	Low		Insignificant	
2120 0.5m SLR (RCP2.6med) 1% AEP 2120 1.0m SLR (RCP3.5med) 1% AEP	Minor	Erosion	2120	1%	Low		Insignificant	
2120 1.3m SLR (RCP8.5max) 1% AEP	Moderate Major	Inundation	2020	1%	Low		Insignificant	
	Extreme	Inundation	2120	1%	Low		Insignificant	
ti de la constante de la consta	able Adaptation Options		Th	e Soli	ution ADAPTATI	ON PATHWAY		
	able Adaptation Options Do nothing		Th	e Soli		ON PATHWAY	1	
Maintain natural defences – rehabilitate native dune spec	Do nothing cies and manage access		The	e Soli		ON PATHWAY		→
Maintain natural defences – rehabilitate native dune spec — me	Do nothing cies and manage access anage whole ecosystem		Th	e Soli		ON PATHWAY		>
Maintain natural defences – rehabilitate native dune spec	Do nothing cies and manage access anage whole ecosystem nent close to the dunes	ST	Th	e Soli				**
Maintain natural defences – rehabilitate native dune spec – m Planning policy should avoid developm	Do nothing cies and manage access anage whole ecosystem nent close to the dunes DINTS / ACTION POINTS	ST	Th		adaptati M	T	LT .	**
Maintain natural defences – rehabilitate native dune spec – m Planning policy should avoid developm	Do nothing cies and manage access anage whole ecosystem nent close to the dunes	ST	Th		ADAPTATI	T	LT .	**

Hazard on the left, the risk on right, the solution at the bottom right.

- GO approach of the RISK matrix showing only two time points (2020 and 2100) is not enough. Suggested that interval be broken down into smaller increments with corresponding risk assessment that includes trigger points not saying what the circumstances are that will trigger that
- CP why are we talking years? We should be referring to trigger points such as sea level rise etc
 - SJ have now just completed TPRA (Third Pass Risk Assessment) which also has the king tides, 100 year and 20 yr events as well as sea level rise. Will need to explain the trigger point to the public – and that they are not based on time – or an event.
 - NL will show more detail
- JR ST, MT, LT if we use that and expect the public to understand that they won't mean anything.
- GO concerned that risk profiling (Low / Moderate / High / Extreme) lacks precision. What do these classifications mean? How were they arrived at?
 - SJ they are not times as some may need to change much sooner we don't have the trigger points on the diagrams as yet.
 - AM when we do go to look at triggers which are area specific, the group will get a better understanding of timeframes for those, then will need to go back out to the community about the triggers. The open days will help identify the triggers.
- JR improving natural defences should include look after the whole eco system not just dune species
- GO who is going to do monitoring and provide metrics for trigger points? How will the monitoring be done? Why aren't we looking at a localised monitoring? Relying on international data is too clumsy ... Can we get local people and University of Waikato (Masters / PhD students?) involved?
 - JB haven't said we are going with either / or as yet. We need to investigate it once signals and triggers worked out.
 - AM doesn't want to try and replicate what has already been done (with bigger budgets and funding)
 - JB potential to tap into 'Nature Resilience Challenge
- GO we need to expect that there is the potential for loud and emotional responses from some sections of the community when we go out to public. We need to ensure our projections are defendable and be fully acquainted with key messages.
 - AM comms plan was done at the start of the project, also a comms plan associated with the public open days – draft has been adopted. Need to spread

the message – this is not a decision/we need feedback from public etc. Also, how we talk about the information we see today. Will be refined for the next lot of issues that come up.

• JP - what does 'sub tilting' mean - spelling mistake

ioestal.		and a local diversion of the second sec	1:	Policy			Exposure		v	ulnerabil	ty	C	insequer	ce
Panel		partment	23	Unit No.	and and		1% AEP			1% AEP		-	1% AEP	_
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						Low	Moderaha	Moderate .	Low	Maderate	Moderate	Minut 1	Moderate	Moders
			ET	74	Whangap ous Beach Estuary	Iotal Exposed buildings: 10, 4% of total % of exposed buildings assumed dwellings: 60% Natural environment: 1,39 he of Local Purpose Roserve exposed; or 85% of total area within PU;	Indiana and the second	Esposed same of PU Boundary, 33.74 ha; 50% of unler Exposed buildings; 110,47% of total % of exposed buildings assumed develops; 50% Natural environment; 1.53 ha of Loval Purpose Reservo esposed, or 53% of build area within PU/ 2.27 ha of Recreation Reserve exposed, or 59% of total area within PU Human (society & culture); 1 archaeotogical site						
					-	100	C LW	1.78	COLUMN ST	COLUMN TWO IS NOT	1000	Insignificant	Insignificant	Insignific
				75	Whangap Out Beach	Built environment: 16 beach access steps Natural environment: 1.29 ha of Local Purpose Reserve exposed; or 83% of total area within PU;	total Exposed buildings: 15: 4% of total % of exposed buildings assumed skellings: 73% Built environment: 19 basch access steps Natural environment: 1.32 ha of Local Purpose Reserve exposed; or 65% of total area within PU.	Exposed areas of PU Boundary, 5-18 hat, 17% of total Exposed buildings; 54; 9% of total Exposed buildings assumed deelings; 79% Built environment; 1:34 ha of Local Purpose Reserve exposed; of 8% of total area within (PU), 2:21 ha of Recruipion Reserve exposed; or 49% of bola areas within (PU)						
			-			Moderate	High	High	Low	Moderate	High	ALC: NO.	Mode/ale	Majo
	£	Whangap oxa Hartour and Coaot		78	de)	Reserve exposed; or 63% of total area within PU; 1.3 ha of Recreation Reserve exposed; or 91% of total area within PU	Intelligence was in the properties of total Exposed buildings, 314, 44% of total % of exposed buildings assumed dwellings, 44% Natural environment: 7,1 ha of Local Purpose Reserve exposed; or 83% of total area within PUL 1.39 ha of Resenation Reserve exposed; or 97%	Elizabed amis of PLI Boundary, 191.62 hrs; 80%, el 964 Electronisti bunklinge: 5% 68% of total Tsi of exposed huidings assumed dwellings; 39% hasteria environment; 7.28 har of Locat Purpose Reserve esposed; or 95% of total area within PLI of both area within PLI; 0.01 har of Historic Reserve esposed; or 25% of total area within PLI Humen (anciety & culture); 22 antheological sile						
				<u> </u>		Low	Liny	Los	Low	the Low	1.00	Insignificant	Insignificant	Insignify
			ES	79	Boach (West)	Exposed area of PLI Boundary, 5.14 ha; 2% of total Built environment: 2 beach accesseasys Natural environment: 2.28 ha of Local Purpose Reserve exposed; or 4% of total area within PU, 1.09 ha of Recretion Reserve exposed; or 4% of total area within PU.		Exposed area of PU Boundary, 16.87 ha; 15% of total Built environment: 2 beach accessosarys Natural environment: 3.26 ha of Local Purpose Reserve exposed; of 9% of built area within PU 2.96 ha of Recretion Reserve exposed; or 11% of total area within PU						

NL - storm events, sea level rise scenarios, king tides summary

			nor -		Units		Exposure			Vulnerability	1		Consequenc	Ð	
Coastal			Coastal 5 Policy			1% AEP				1% AEP		1% AEP			
Panel				Unit No.	Policy	2040	2070	2120	2040	2070	2120	2040	2070	2120	
			E1	74	Whangapoua Beach Estuary	Low	Low	Low	Low	Low	Low	Insignificant	Insignificant	Insignificant	
		Whangap		75	Whangapoua Beach	High	High		Moderate	High		Moderate	Major		
	E	oua		78	Matarangi (Harbourside)	Low	Low	Low	Low	Low	Low	Insignificant	Insignificant	Insignificant	
Whangap		and Coast	E3	79	Matarangi Beach (West)	Low	Low	Moderate	Low	Low	Moderate	Minor	Minor	Moderate	
oua				80	Matarangi Beach (East)	High	High	Extreme	Moderate	Moderate	High	Moderate	Moderate	Extreme	
and				97	Ohuka (Brophys Beach)	Moderate	High	Extreme	High	Extreme	Extreme	Moderate	Extreme	Extreme	
Mercury Bay				98	Buffalo Beach (North)	Moderate	Moderate	High	High	High		Major	Major		
Coast			F2	99	Buffalo Beach Reserve	Moderate	High	Extreme	Low	Moderate	Extreme	Minor	Moderate	Extreme	
	F	Mercury Bay		100	Buffalo Beach (South)	Low	Moderate	Moderate	Low	Low	Moderate	Minor	Minor	Moderate	
		Day		101	Whitianga Outer Harbour	Low	Low	Low	Low	Low	Low	Minor	Minor	Minor	
			F4	105	Cooks Beach Estuary	Low	Low	Low	Low	Low	Low	Insignificant	Insignificant	Insignificant	
				106	Cooks Beach	Moderate	High		Moderate	Moderate	High	Moderate	Moderate	Major	

In addition to Second Pass Risk Assessment (SPRA)

- JR can we do our own monitoring? And partner with national organisations?
 - AM monitoring is both technical and community maybe as simple a having a stake in the ground – we need the people who are there every day to notice the changes

Whangapoua Beach	(North)			-		-	for the MT derate, it is	to LT? A – not requ Minor.
The Hazard	Castal Invancation mapping comprises: CSL rg Jus 15: 45: An Privers for storem tilde, see level accounty and wave setup 2020 11: 45: CRL (PCP2 Soney) 11: ACP 2120 10: Stu SLR (PCP2 Soney) 11: ACP 2121 Acp Element		The Risk					
TRUCK	Conse	equence	Туре	Year	AEP	Exposure	Vulnerability	Consequence
		nsignificant	Erosion	2020	1%		Low	Insignificant
ASSA	-	Minor Moderate	Erosion	2120	1%		Moderate	Minor
		Major	Inundation	2020	1%			Insignificant
	_	Extreme	Inundation	2120	1%	Low	Low	Insignificant
			The	e Solu	tion			
	Viable Adaptatio	72270			AD	APTATION PA	THWAY	
	Do Maintain natural defences – rehabilita	o nothing 🔹						
	dune species and maba	ge access	ST			МТ		LT
	SMP Project	0	athurau					

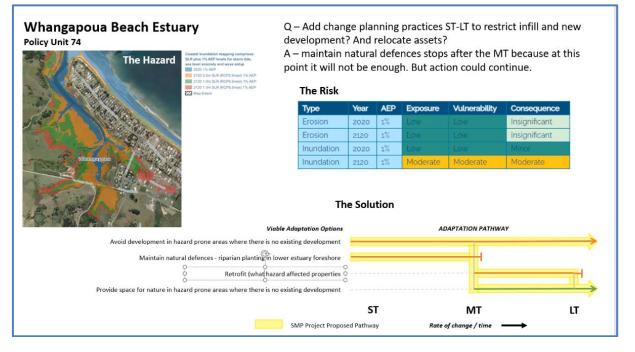
Panel comments are shown at the top.

SJ – haven't included it as not predicting risk in the longer term. JB/JR – no soft engineering, let the eco system work naturally

Soft engineering can be push ups, restorations, helping the eco system shift etc – not yet clearly defined

GO – would like definitions defined clearly (particularly for the open days) definition posters
 JP – some slides have 2 pathway charts – but not saying if it is inundation or erosion.
 SJ – assumes people will look at the risk and know that the pathway relates to the risk. When there is both – then have 2 maps and 2 pathways.

JP - can this be clearly indicated on the slides if it is erosion or inundation (for solution)



CP - need a definition for 'retro-fit'

JR - perhaps use drawings or icon as well for the definitions

Whangapoua Beach Policy Unit 75 The Hazard		aintenance oorates this	and Eros comm	othe sion r	rs soft er isk in no	ngineering. It believed	and the second
	Legend	Туре	Year	AEP	Exposure	Vulnerability	Consequence
	2020 Coastal Erosion Hazard Line 2040 Coastal Erosion Hazard Line	Erosion	2020	1%	Moderate	Moderate	Moderate
	2070 Coastal Erosion Hazard Line	Erosion	2120	1%	Astrone		Enterna
	2120 Coastal Erosion Hazard Line TCDC Coastal Erosion Line Current	Inundation	2020	1%	Low		Insignificant
	TCDC Coastal Erosion Line Future Existing Protection	Inundation	2120	1%	Low	Low	Insignificant
is a start of the		The Solu	ution				Consequence Insignificant Minor Moderate
JAC BRANC	Viable Adaptation Maintain natural defences Beach pushups	Options		ADA		THWAY	Major Extreme
	Sediment recycling						
Soft engineering – enhance the dunc Change planning practices – plan for retreat a	through set back and planting t the eastern end of the beach					*	\longrightarrow
Relocate assets at the eastern end; soft engineering likely to	be enough at the western end						
		ST			MT		LT
▶	SMP Project Pro	posed Pathway		ŀ	Rate of change	e/time 🗕	→

JP – what is 'sediment recycling'?

SJ – taking sediment from one end of the beach and taking it down to the other end if this is not occurring naturally.

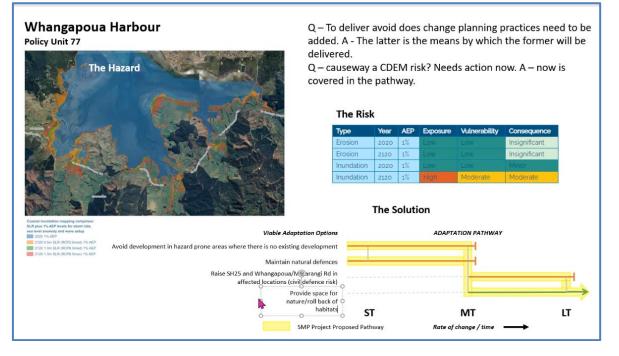
Push-ups are incurring on the beach already – may give a false impression of the erosion risk (NL – will re-look)

GO – we will face some constraints in implementation, budget being one. Will the comms plan manage expectations?

SJ – towards the back end – need to be careful on where we invest the money. The decision will ultimately come down to the council.

JB – once we have the recommendations adopted – then we can increase what we need to meet recommendations. (also depends on the consents – e.g push ups)

JR – can every slide have the 'where the image was taken from'? perhaps a key SJ – can do a poster that points out where every PU is



GO – Losing the causeway will mean loss of access – seems like quite a big issue? AM – tidal issue will be less of an impact, if the road is lost then it is a far bigger impact.

Matarangi (Harbourside) Policy Unit 78 The Hazard	Q – Are the changing sandbanks at the harbour entran issue? Recent erosion of the Golf Club has been signifi Need for a stronger response? Q – are we exaggerating the harbour side risk – land h raised? PS – this is for a 1% AEP event in 100 years. Pla would be ineffective here.									
	The Risk	Туре	Year	AEP	Exposure	Vulnerability	Consequence			
		Erosion	2020	1%	Low		Insignificant			
		Erosion Inundation	2120	1%	Low		Insignificant Minor			
		Inundation	2020	1%	Low	High	Maior			
0.4 m	o Is this the	Solution?	– no	t fixe	ed o					
06m 08m Viable Adaptation Options	-	1	DAPTAT	TION PA	THWAY					
10e Avoid [or mitigate] development in hazard prone areas where 12e there is no existing development – lease hold options				Т		>				
Implement good foreshore management practices; and plant vegetation Retrofit/raise hazard affected properties – future				T						
- Should the proposed pathway proof new deveopment Innovative infrastructure -										
clude changing planning practices relocate WWT plant ³				T						
w? And relocate assets (e.g., Change planning practices	10.00						-			
W). Causeway is part of PU 77. Relocate hazard affected properties							\rightarrow			
eed to add a footnote re. land	ST			ΜТ		L	Т			
vels being raised, and mitigation SMP Project Pro	oposed Pathway		Rate of c	hange /	time 🗕	→				

- GO what was meant by 'innovative infrastructure'? SJ - Will look at what this was.
- GO how is the Matarangi sewage plant renewal impacted?
 - AM considered in planning with a number of options decision to put it back where it is. Requested the panel be kept informed
- GO is the flushing of the harbour an issue (or incomplete flushing)
 - JB with SLR there is more accommodation for flushing
 - AM land has been raised since the map was done houses may not be as low as what is assumed.
 - SJ acknowledging people could stay there but possible change of the way services are delivered.

AM – there has been discussion about removing 'proposed' pathways from the summaries. Could take them off in some areas so that it is more open for public consultation (without giving the impression we have already made the decision). Matter will be taken to the Governance Committee. Changed wording from 'preferred' to 'proposed' – needs to be made clear

JR – can we have a 'feedback' box for people to write ideas on and submit.

(SJ - can add that)

DL – if an area has been zoned for residential, but not built on and floods significantly – recommendation will be not to build there.

AM - 240 sections have had the ground raised – so not really an inundation risk. $JB - lidar data \ ls \ 2013$

KL - has enough mitigation been done? What is the flow-on effect?

DL – either avoid or mitigate remedy – avoid may not be a correct term for this location (avoid, mitigate, remedy might be better)

JR – perhaps on posters have 'is this the solution?' so it looks like a question

Matarangi Beach (West) Policy Unit 79 The	Hazard		an iss a stro	sue –	erosion	anks at the currently si e?	
and the second sec		Туре	Year	AEP	Exposure	Vulnerability	Consequence
and the second sec	COR.	Erosion	2020	1%	Low	Low	Insignificant
	in the states	Erosion	2120	1%	Moderate	Moderate	Moderate
		Inundation	2020	1%	Low		Insignificant
		Inundation	2120	1%	Low	Low	Insignificant
Legend 2020 Costatil Enson Hazard Line TODC Costatil Enson Line Current TODC Costatil Enson Line Future 2000 Costatil 2000 Costati	The Solu	tion					
Viable Adaptation Options		ADA	PTATION	PATHW	AY		
Do nothing at the far western end; the area fronting the golf course			- 1	1			
Maintain natural defences in the area fronting the foreshore reserve; maintain/rehabilitate native dune plants and manage access							>
↔ Provide space for nature at the far western end							>
Option for beach push ups and	ST		МТ			ιT	
groynes around Golf Course (as							
proposed by owners) – add, not	osed Pathway	Rate	of change	time / time	\rightarrow		
advocate							

GO – Significant erosion at the western end of the spit ... golf course currently in private ownership – but there is an expectation it will change to public open space. Owners looking at a remedy with Greg Jenks. (sand push ups and planting, groynes)

SJ – doesn't think that would be effective – would just be lost again? JB – just fighting natures processes.

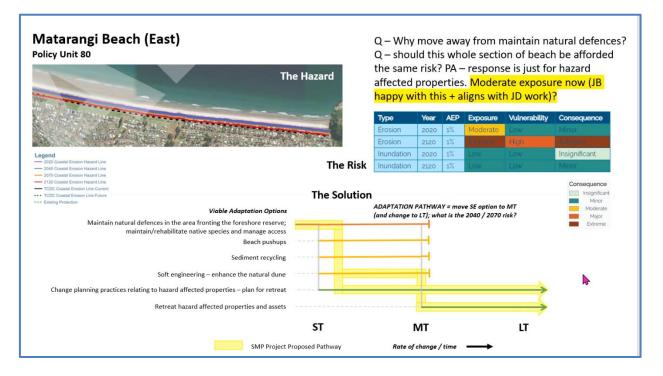
GO – massive accumulation of sand (over last 5 years) in the harbour entrance AM – note what we are suggesting is different from the private owners – but we don't need to align with them

JP – acknowledged in the 1970's that it was a risk area – is that why it was a golf course, not housing? (Not sure about this comment – Matarangi wasn't developed until 1982?)

SJ – beach push-ups/groynes would not be effective – needs to be noted here. GO – disagree with SJ. We need to leave space for private owners to come up with their own solutions and try for consent

JP – similar to Omaha (Auckland) issues

AM – from consenting perspective – some obstacles – affects rest of the area – would not be likely to get resource consent if it was against the adapted plan



SJ - Significant erosion risk in the longer term. Some assets are not going to be able to stay (far eastern end Kenwood Dr) – some maybe able to move back on their own properties, some not.

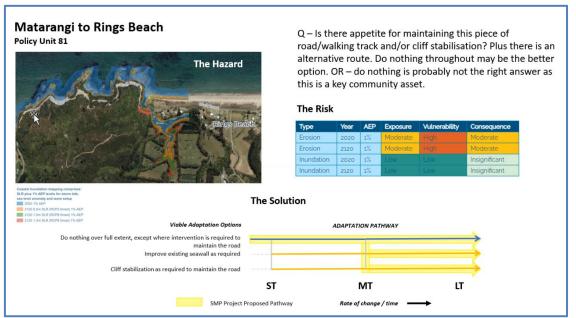
GO – queried whether risk profile for Matarangi Beach East was too high and sought basis for 'moderate / High / Extreme' risk classification? Apart from the 2008 storm, Matarangi East was in a prolonged accretion phase. Expressed concern about absence of statistical precision and referred to the last 26 years since he had lived there.

KL – pathway will be determined by triggers rather than theoretical risk

JR – exposure risk / vulnerability – seems like arguments are about vulnerability column GO –Doesn't agree with the Risk Table (lived there 26 years) may stimulate an unintended and unnecessary ratepayer response.

NL – we do have more information to add to this now e.g. time/sea level rise between present day and 2121.

GO – suggested the Council Reserve should be considered part of the Dune system and planted with dune plants.



Bluff road only (not including Rings Beach)

CP – view is where are we going to be wise on where we spend our money. People can go over the Vodafone track if walking. Do we want to spend a lot of money on maintaining a bike track?

GO – had the opposite view as bikes it every day. Is there a consistent District position on coastal walkways? The Vodafone Hill is not bikeable, and not suited for less able walkers KL – comes down to the practicality of the cost

CP - is letting costs influence the preferred pathways - should I be doing this?

GO - the value the community puts on it needs to be considered alongside dollar value?

Rings Beach Policy Unit 82							
The Hazard	Q – Whe	ere is t	he e	rosion ris	k moderate	e?	
Ministration and a state of the	The Risk						
Man - 1 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2	Туре	Year	AEP	Exposure	Vulnerability	Consequence	
The state of the s	Erosion	2020	1%	Moderate	Moderate	Moderate	Consequence Insignificant
	Erosion	2120	1%	High	Moderate	Moderate	Minor Moderate
	Inundation	2020	1%	Low		Insignificant	Major
	Inundation	2120	1%	Low	Low	Minor	Extreme
The S	Solution						
Viable Adaptation Options		A	DAPTA	TION PATHWA	Y		
Maintain/rehabilitate native species and manage access				Th:		\rightarrow	
New seawall along Bluff Road frontage				-		-	
Relocate Bluff Road and hazard affected properties, if and as necessary						\rightarrow	
	ST			MT		LT	
SMP Project Proposed	l Pathway	Rat	e of cho	inge / time	→		

Hazard lines not on maps - can't see where the risk is

SJ – don't have modelling/data for here. WRC inundation tool does not predict risk NL – risk is to do with the road – important asset.

JB/GO - thought the road was in general quite secure

CP - houses on beach side of road at eastern end

SJ – similar to other areas assumption is erosion would be an issue at the eastern end of beach

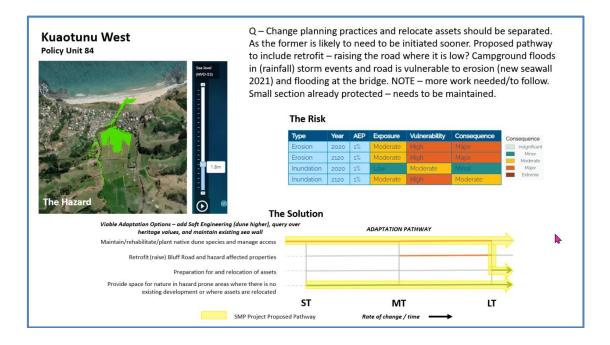
NL – elevation can go against you when the risk is erosion

JR – is anything being done about the lack of modelling? We are being asked to make decisions without in depth info

JB – areas that don't have info are usually quite safe. Resilience to nature challenge will help in the future with this type of work.

GO – uncomfortable that this is a best guess. Need more evidence based thinking for projections to be defendable.

DL – needs to be noted that there is no data on this area for the public consults SJ – will add footnotes to areas like this



Again – don't have data here. Used info from WRC and inundation tool. Will be doing more work on this area

CP – retrofit = raising the road (in front of houses)

SJ – wasn't identified as a place at risk in the past – so no data

CP - where wall is now - there is no reserve.

AM – small section that requires hard protection which puts the road at risk GO/CP/DL – road vital, and has access roads/driveways off the road

AM – need to advocate protecting that part of the road

DL – how do you provide space for nature with the road there? We need to protect the road or put another road in somewhere else. Some bits have needed hard engineering JR – where is the hard engineering?

CP - hard engineering only down western end.

Hard engineering – is there for 15 years

CP - thinks not taking inland inundation into the broader view may disappoint the public

AM - add to next TAG meeting to discuss

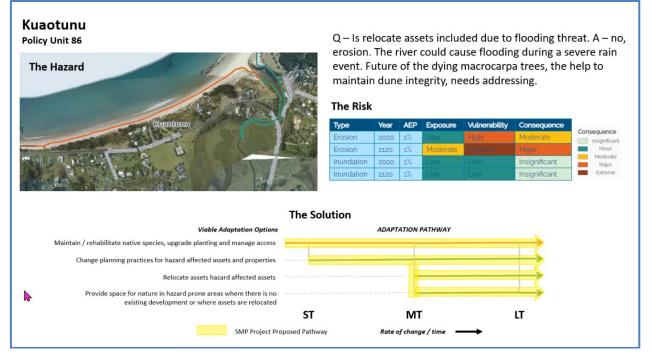
SJ will re-work on this one.

After the meeting will work on the presentation/posters and send back out to the group before printing.

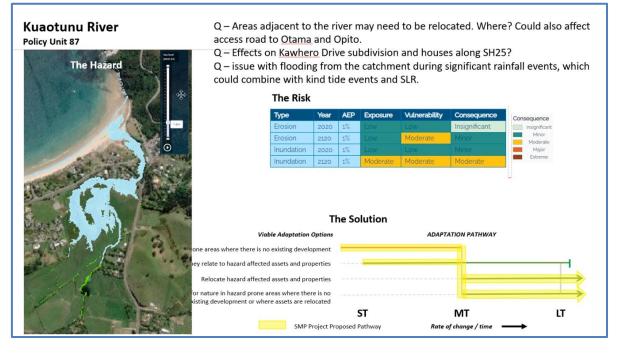
Kuaotunu West to Kuaotunu (SH25) Policy Unit 85					•		
A Company	The Risk						
A SAN AND A SAN A SAN AND A SAN	Туре	Year	AEP	Exposure	Vulnerability	Consequence	Consequence
	Erosion	2020	1%	High			Insignificant Minor
	Erosion	2120	1%	Falments		Tanonin	Moderate
The Hazard	Inundation	2020	1%	Low		Insignificant Insignificant	Major Extreme
	manadom	2120	- 210	HAN W.	Provide Land	magnineant	
The	Solution						
Adaptation Options			P	ATHWAY			
Improve existing defences New seawall along the SH25 frontage where there are no existing coast protection assets (possibly sooner)							
	ST			MT		LT	
SMP Project Proposed	Pathway	1	Rate of c	hange / time	\rightarrow		

- CP west of the boat ramp is much shorter-term issue. Where would you re-route road to? *AM* – *new road is expensive, new bridges, cut through hills etc*
- DL queried cost benefit given it was a low use road
- CP hard engineering solutions need to be bought forward

AM – having conversations with Waka Kotahi – a lot of the section of the road, hard engineering solutions are the most likely option. Road design may change is they can not provide another alternative – for a lot of sections along the coastline.



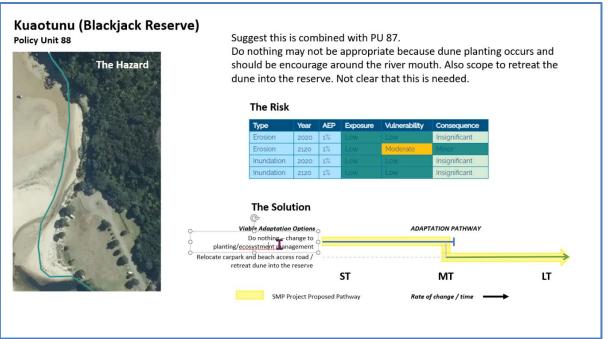
CP - with SLR will the tidal impact cause the Kuaotunu stream to overflow its banks?



SJ - WRC inundation tool – showing 1.6m SLR (beyond 100 yr timeframe) check relativity of SLR

JB – we don't know combination of *SLR* and rainfall? Note modelling hasn't been done and need a strategy for replacement of the trees.

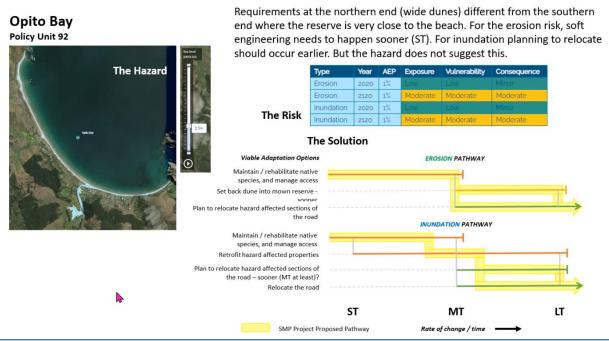
 CP – at public meeting owners of the 9 properties will need to be talked to *NL* – not just coastal inundation, influence of storm water run-off and fluvial events as well as SLR. In this location it is driven by the fluvial events. *AM* – fire station may be vulnerable



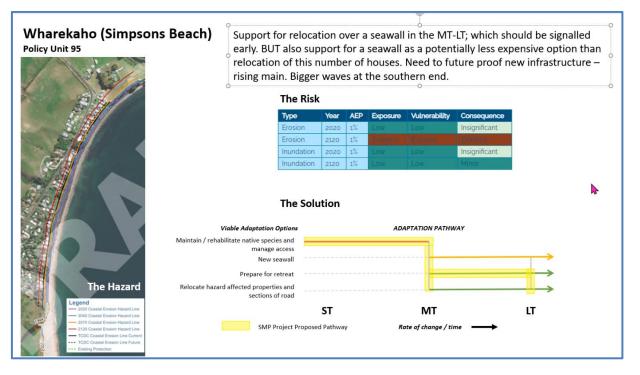
KL – planting going on already on edge of reserve – may be this should be maintained
 JB – look at pulling back dune system into the reserve? Needs to be more planting
 JR – look at the whole eco system

Otama Beach Policy Unit 90		and the advoca end w e issue ch acc eed to by be a in the alread ue eros	he ap te ma here es wit ess. T conti need futur	proach E aintainin the roac h the clo here has nue to st l to prote e. curs in m	o Nothing. g the dune. l is close to seness of tl been dune rengthen tl cct the road	
	The Risk	Year	AEP	Exposure	Vulnerability	Consequence
	Erosion	2020	1%	Exposure	vullerability	Insignificant
	Erosion	2120	1%	Low	Moderate	Minor
	Inundation	2020	1%	Low	Low	Insignificant
	Inundation	2120	1%	E STOLEN	Moderate	and the second se

KL – where you first come down to Otama – the road is very close to the beach. Planting has been going on and should be maintained.



SJ - equal risks with both erosion and inundation



GO – What is the extent of the erosion / flood risk from the stream coming onto the beach at the norther end?

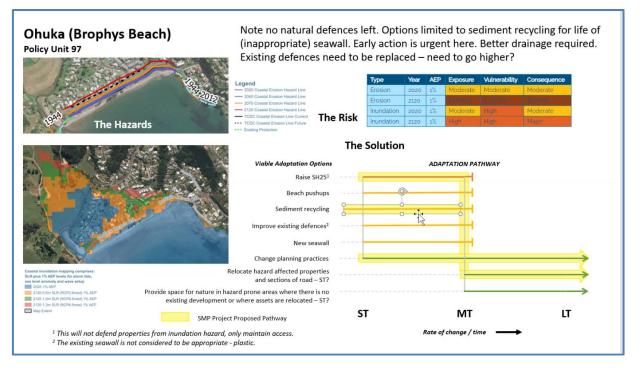
JR – is there another option for moving the road further away.

SJ – road isn't at risk – just 1 pinch point in 100 yr risk is beach front properties AM – only private home-owners – no other infrastructure involved. Future proof – all houses will gravity feed down to a low point which is probably in the low zone

JR - if a hard structure was put in – how would this effect other areas in the rest of the bay in terms of sediment.

JB – sediment transport pathway – closed beach so would only impact that beach SJ – we don't have to show the pathway on some areas to get more feedback from the public – before recommending preferred pathway. Any seawall would need to be paid for by the residents

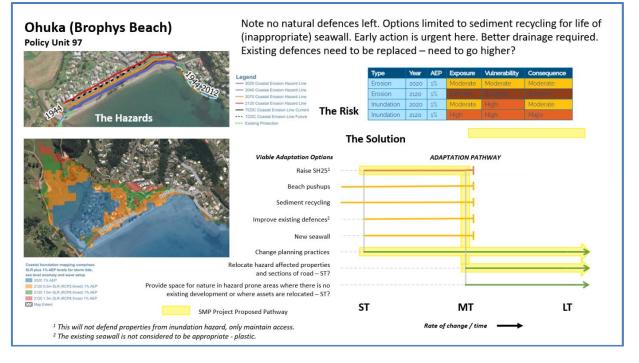
SJ - Decision to go to public with existing pathway – note AM has to take to governance group which may have a differing opinion



GO – are the geotextile sand containers appropriate from an environmental perspective? They might be effective but represent a plastics issue – maybe investigate options? SJ – no, they are plastic and not sustainable

SJ – significant inundation is occurring now

JR – will cost a lot – change the pathway and relocate properties etc moved to short term rather than medium term, rather than spend money in the short term using methods that won't work long term?



DL - need to protect the road is the most important

GO - need to keep talking about and defining the trigger points

DL - Is raising floor levels feasible?

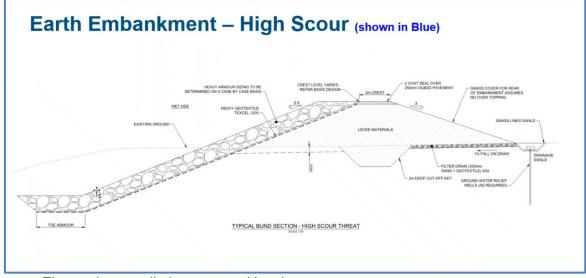
JB – what do we do to mitigate storm events as the reserve is not going to withstand without maintenance / work done

<u>NL Presentation</u> - For some areas around the Coromandel we were asked to do some high-level concept designs for protection (one option of many). Hypothetical situations with

SLR/timeline with 100yr storm. The Thames exercise is proving useful in terms of understanding values/costs/issues, indicators. Helped determine pathways and what the impact is on certain values.

Whitianga:

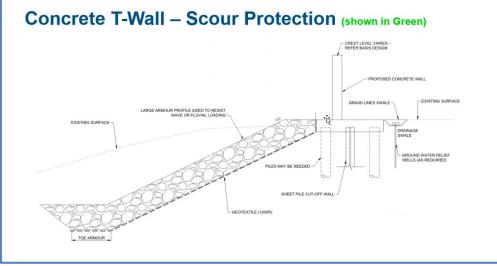
Criteria	BoD	Comments
Timeframe	100 years	Includes Sea Level Rise over this period.
Coastal Storm	100 year (1% AEP)	(incl. SLR of 1.4m). Ultimate Scenario
Freeboard	0.5m / 0m	<u>RHDHV</u> have provided a conservative crest height for the coastal defences as shown in the schematic. We are currently undertaking overtopping assessment to determine if overtopping rates are acceptable in a no freeboard scenario.
Run up / Overtopping	No overtopping / Overtopping rate TBC	Wave runup only applicable on seaward facing areas, otherwise excluded in crest level determination and 0.3m allowance provided for local chop.
Fluvial / Stormwater Flood (with coastal storm)	100yr Coastal Storm with 20yr Fluvial/Stormwater Rainfall Event	
Fluvial / Stormwater Flood (without coastal storm)	100yr Fluvial Flood with MHWS	This scenario to be tested for gravity drainage.



Elevated sea wall above ground level

Similar to:



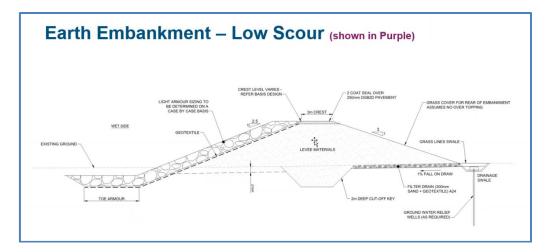


Treatment where there is no space to build stop bank or seawall

Example:



Third option:

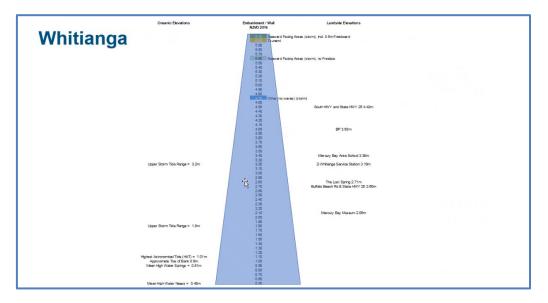


Best in areas without significant waves e.g. back of harbour

Example:

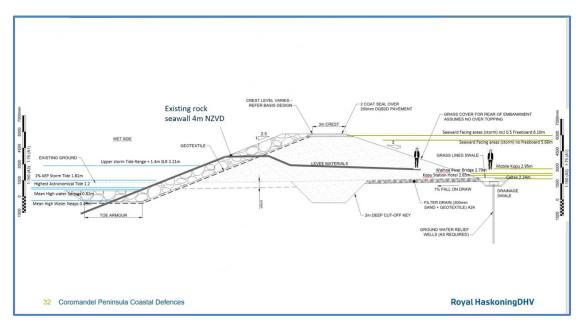


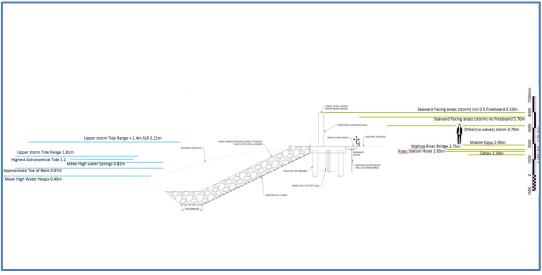
Schematic



Left hand side is ocean facing side Right hand side – localities around town (centre) level you would need Real life cross sections:







CD - do the waterways present a problem?

NL – need more info on floor levels of those buildings, but limited impacts from 100 yr storms, some flooding but not complete inundation. Extra protection – could be 'gates' 'seawall' or some sort of vertical structure or raise the buildings.

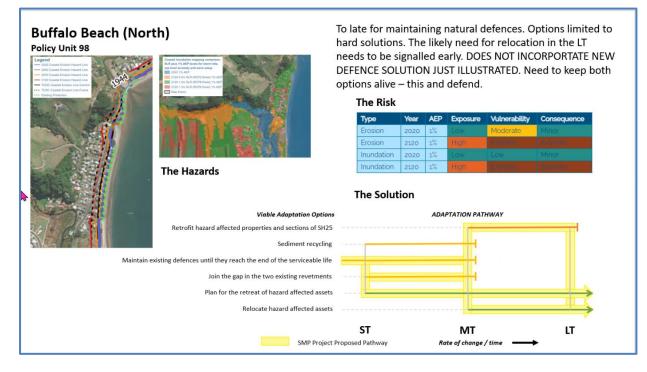
- JP has creation of waterways increased inundation in that area.
 - NL doesn't believe it has.
 - NL Space constraints all the way around

Hypothetical scenario effectively creates a dam – this creates issues with storm water management. Town would need to rely on pumped storm water management. DL – can the wall be built in stages

NL – yes

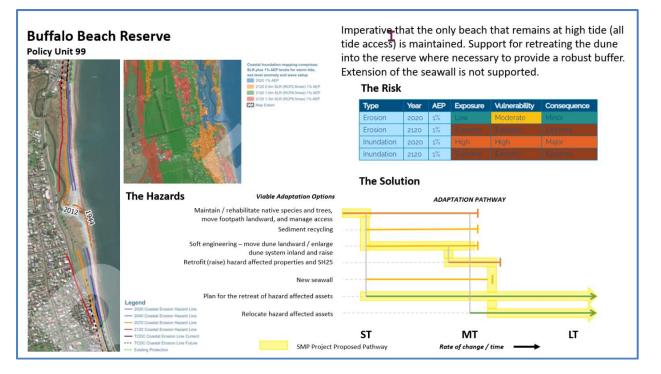
NL – any wall would need to be at least 2*m* high at the top end of Brophy's. If you wanted to lose the reserve, it could be a low scour structure.

JR – what sort of maintenance would the walls need? Will forces erode under them? NL – High Scour goes well below beach level to combat this. Pumps require huge amount of maintenance and upkeep. (GO noted: Precedent exists for pumping and drainage systems as flood gates and pumping stations are used to enable intensive dairy farming on the Hauraki Plains)



SJ – need to disconnect this area from Brophy's (above '1944' on map above is Brophy's and the rest of the Whitianga area). We weren't thinking about a great big embankment around Whitianga which would change our approach here. We may need to have an 'Alternative' Poster for Whitianga

This is what you could do (a solution) with the hypothetical structure around Whitianga.



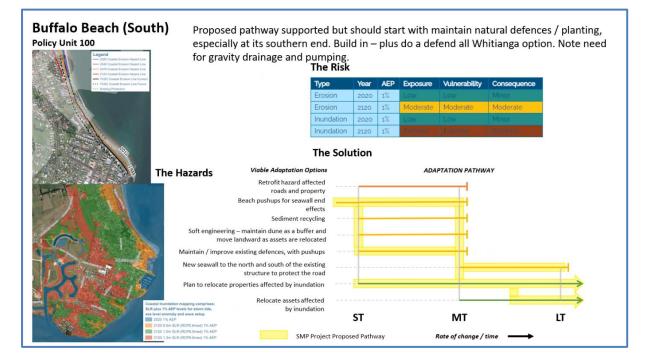
Need to Acknowledge defend option (whole of Whitianga solution)

SJ – aligns with aspirations and values that we would keep this beach. You would treat the North one way, the Reserve another and the South yet another way, allows you to keep the beach. If you went for a 'lets defend the whole of Whitianga' approach, you would lose that to some extent.

JR - do you mean widen or move the Dunes?

SJ – move them inland.

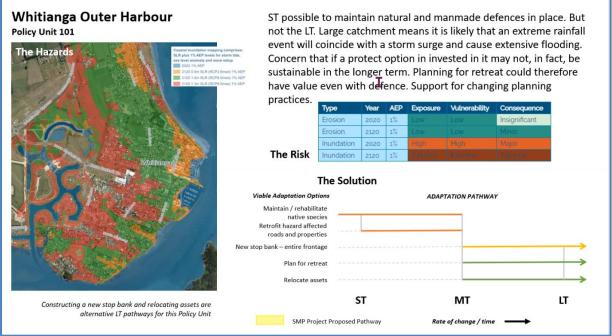
JB – with community buy-in you could start to raise the dunes so they resist overtopping



Slightly different for the South as we had talked about defence anyway. Moving towards a harder (engineering) solution here anyway.

JR - can we add a note about adding pump structure to the new sea wall

AM – options for gravity drainage as well



Significant inundation risk

SJ – defence options include flood gates for the waterways.

DL - people come to Whitianga as a visitor destination, will they still want to come if it has a wall around it?

CP - it is not just a town of coastal properties, it is a service town for a very large area.

GO - we know there are big issues but see what the community says.

JR – there is a lot of farmland out of Whitianga – maybe it is cheaper to move the properties?

CP - do we need a table to show cost of the stop bank vs moving houses

AM – compare costs (real options analysis) what is the cost vs what we are

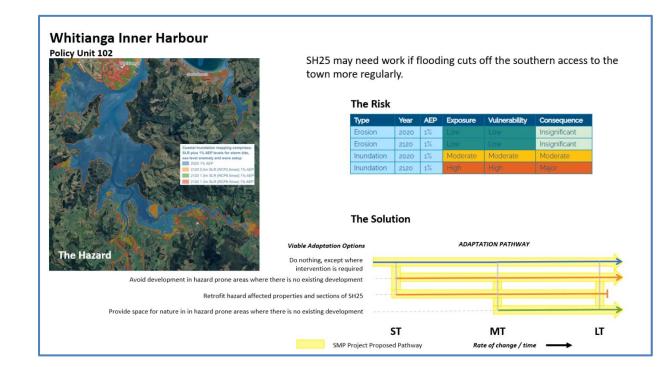
protecting – one part of the discussion that we will look at for Whitianga.

CP/DL - where / what does Whitianga want to look like?

JR – maybe increase the maps to show the wider Whitianga area – showing flat/farmland as well.

DL - flat land - just as much flooding

SJ – have to leave this more open

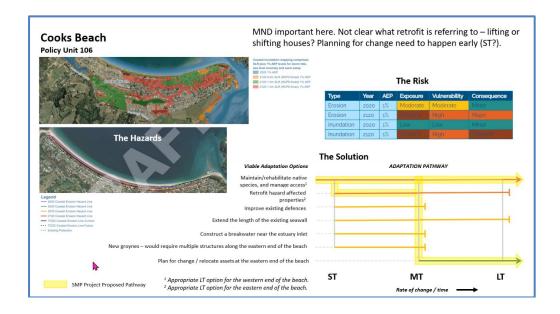


	add retrofit to deal w intolerable. Support f stabilisation.	or MNI				
	The Ris		150	0	14.1	
	Type	2020	AEP	Exposure	Vulnerability	Consequence
The Hazard	Erosion	2120	1%	Moderate	Moderate	Moderate
	Inundatio	1 2020	1%	Low	Moderate	Minor
	Inundatio	1 2120	1%	Low	Moderate	Minor
	The So Viable Adaptation Options native species, upgrade planting	ution		ADAPTA	TION PATHWAY	
	1 1 1 0					
	fences - eastern end of the beach	hr				
New seawall in those locations where	aps exist in the existing defence eastern end of the beach				-	
New groynes - would require multiple stru	ctures - eastern end of the beach					
	Cliff stabilization where required					

JR - sustainability on defence - e.g. there are Geotextile bags in place there too



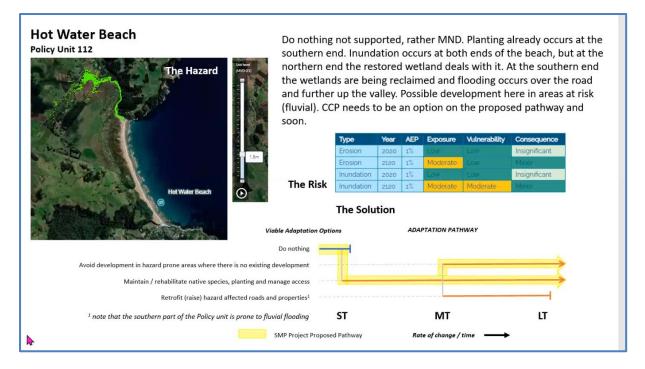
Back of Cooks Beach – around Estuary JB – poor habitat but lots of wetlands adjacent to the area



Г

	Providing space	ce for nature sho	ould be on t	he propo	sed pathway	to ensure	
Policy Unit 107	0.	pment occurs in					
Ceastal Inundation mapping comprises: SLR plus 1% AEP levels for storm tide,			0.1				
sea level anomaly and wave setup		The Risk					
2120 1.0m SLR (RCP8.5mod) 1% AEP 2120 1.3m SLR (RCP8.5mod) 1% AEP			AEP Exposure				
A AND		Type Year Erosion 2020	AEP Exposure	Vulnerabili	ty Consequence		
		Erosion 2120	1% Low		Insignificant	-	
In the state of the		Inundation 2020	1% Low		Insignificant		
A DE CONTRACTOR		Inundation 2120	1% Moderate	Low	Minor		
	The Solution						
		The solution					
GUIRANIEI	Viable Adaptation	Options	A	DAPTATION PAT	THWAY		
	Do nothing, excep intervention is r						
	Maintain / rehabilitate native	species					
	and manag Plan for change in hazard affect						
Contraction in the second	Relocate assets in hazard affect						
The second s	Provide space for nature i						
The Hazard	prone areas where there is no development or where a	existing					
		elocated ST		MT		LT	
	SMP Project	Proposed Pathway	Rate of	change / time	\rightarrow		
ai Beach	Dupo poodr to bo	maintained M	ND Pacolin	o for the	aronocod pat	thursu	
ei Beach Unit 110 The Hazard	Dune needs to be Soft engineering i other areas retrof up Wigmore Strea	may be appropri it and retreat m	ate in parts ay be nece	s and pref ssary in th	erable to a se le LT. Floodin	eawall. In	
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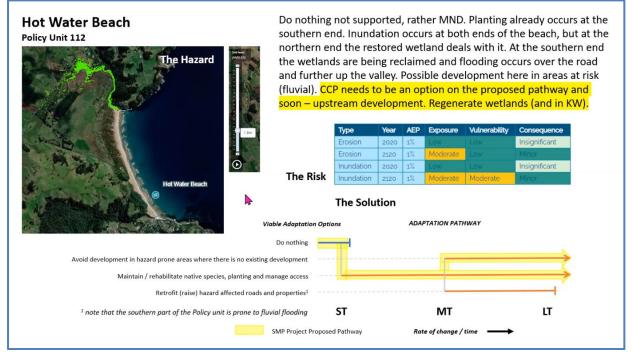
Don't have hazard mapping specifically for this area, but have WRC inundation tool info



WRC inundation tool shows some flooding risk.

HS – need to change change planning practices.

JR – JB talked about expanding wetlands in Cooks Beach – is that applicable here? (And maybe in Kuaotunu?)

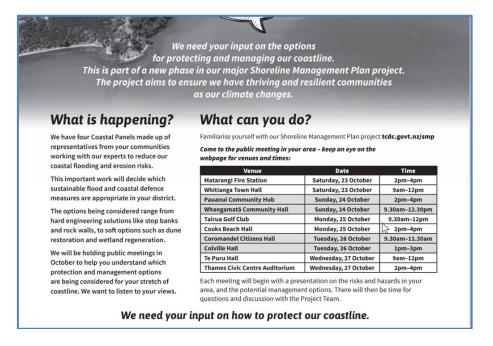


JR – first effort is to protect and expand (natural environments) – maybe breakdown a few of those major points for a poster – this is what we would do first over a lot of the area's? ... then maintaining access

Maybe link back to values? (a poster for open days maybe?)

- 5. Time allowing, discussion on thresholds and triggers (topic for Meeting 9).
- 6. Preparation for Community Consultation.

Note the Western side of the Coromandel dates have now changed post the Thames meeting



AM – presentation at the start of each meeting to give people context and understanding. Then go through some PU's at a high level. Posters around the room of each PU – people can provide feedback on easier and open ones.

Still work to do around triggers, costs, targeted consultation e.g. Moanatiari and others.

JP – why are we not having a Whangapoua CP – or Kuaotunu

AM – doing Matarangi this time (maybe go back to the others next time)

JR – maybe swap these options around so they align with strategy – do soft ones first

The options being considered range from hard engineering solutions like stop banks and rock walls, to soft options such as dune restoration and wetland regeneration.

- 7. Next Meeting Thursday 11th November
- 8. Chair thanked SJ / NL / AM / JB / KM for their work, and SMP members for their contributions.
- 9. For information: Next governance meeting 14th October
- 10. Meeting declared closed 3pm.

Meeting Papers

- I. Agenda (this paper).
- II. Third Pass Risk Assessment. since added to the shared folders
- III. Example 'Poster' for community consultation.

Presentation materials

- I. Policy Unit Risk Assessment Mapping Folium.
- II. Draft Adaptation Pathways (provided to Coastal Panel members following the presentations at the end of August/early September).
- III. Draft Concept Designs for discussion.

Actions Table – SMP 8

No.	Action	Responsible	Status
9	Timeline of storm events for the East coast sought.	JB/WRC	Information on historical analysis now with JB. WRC has not assessed the May 2021 storm but TCDC has gathered information on it
13	Awareness of the SMP Project to be raised with the Regional Transport Committee	Project Office	In progress - presentation proposed for Oct 2021.
16	Iwi representation to be discussed at the SMP Governance Meeting in March 2021	Project Office	Completed. Coastal Panel chairs to attend next SMP Governance meeting on 26 th August 2021.
17	Catchment Management Plans to be considered by Coastal Panel	Project Office/AM	Link to already published info: <u>https://www.waikatoregion.govt.nz/council/policy-and-plans/hazard-and-catchment-management/hcmp/</u> Also in the shared drive
24	add in 'cultural" to driver list for 'triggers'	Project Office	Requested by MB Panel - completed
25	Work out best dates for public consultation in October	Project Team	Completed
26	Include short descriptions on options column for ease of reference	Project Office	To be completed for future presentations
27	Provide Messaging bullet points for all panel members to take back to their community	Project Office/AM	In Progress
28	WRC mapping for contaminated sites around the peninsula including Buffalo Beach, that could be used to inform the risk assessment	WRC/Project Office	To do – data requested from WRC
29	GO to speak with AM regarding iwi participation &	GO/AM	

	have a coffee with Joe Davis to see if there is a way of approaching the iwi engagement.		
30	Provide maps for areas of cultural significance	Project Office	
31	Definition posters for the open days (icons included?)	Project Office	
32	Include on posters if the solution is for erosion or inundation	Project Office	
33	Communications Plan	AM/CB	
34	Kuaotunu West – re-work on the presentation/posters and send back out to the group before printing. Also add to next TAG meeting for discussion	Project Office/SJ AM	