North Devon and Somerset Coastal Authorities Group Hartland Point to Anchor Head SMP2

Policy Scenarios to Test - DRAFT FOR STAKEHOLDER FORUMS

NAI No Active Intervention

HTL Hold The Line

MR Managed Realignment

ATL Advance The Line

Blue values = CFMP Policy

for 'B' and 'C', yellow boxes are where policy differs from 'A'

NAI NAI NAI

Date Updated: 12th January 2009

Scenario A Initital Starting Point for appraisal based on what could be an appropriate policy scenario on technical, economic, environmental and social grounds.

Scenario B Modification of Scenario A, assuming primary driver is a return to more natural situation.

Scenario C Modification of Scenario A, assuming primary driver is to protect most assets, so greater armouring of coast.

Related							Scenar	rio A			Scenar	io B	Scenario C				
Process Unit		P	ossible Policy Unit	SMP1 Policy	0-20 year	20-50 year	50-100 year		0-20 year	20-50 year	50-100 year		0-20 year	20-50 year	50-100 year	Comments	
	1	1	Landing Beach	Hold the Line	HTL	HTL	HTL	Defences at Landing Beach protect the only									
Lundy Island		2	Rest of Lundy Island	Do Nothing	NAI	NAI	NAI	access from the shoreline to the properties on Lundy. Continued defence is needed to maintain this key link.									
Related							Scenar	rio A			Scenar	io B			Scenar	rio C	
Process Unit		Р	Possible Policy Unit	SMP1 Policy	0-20 year	20-50 year	50-100 year		0-20 year	20-50 year	50-100 year		0-20 year	20-50 year	50-100 year	Comments	
	2	1	Hartland Point to Clovelly	Do Nothing	NAI	NAI	NAI	North Devon CFMP (Policy Unit 1A) covers the small streams in this area. CFMP Policy = No Active Intervention though flood warning	,								
Hartland Point to Westward Ho!		2	Clovelly	Hold	HTL	HTL	HTL	will be provided due to the sudden high energy nature of flood events that occur here (i.e. 'flash flooding' through steep valleys) such that risk to life is reduced.									
	2	3	Clovelly to Rock Nose	Do Nothing	NAI	NAI	NAI	Clovelly defended primarily by harbour structures that also provide defence function.									
Related							Scenar	rio A			Scenar	io B			Scenar	rio C	
Process Unit		Р	Possible Policy Unit	SMP1 Policy	0-20 year	20-50 year	50-100 year		0-20 year	20-50 year		Comments	0-20 year	20-50 year	50-100 year	Comments	
			Westward Ho!	Hold	HTL	HTL	HTL		HŤL	HTĹ	HTL		HTL	HTĹ	HTĹ		
			Pebble Ridge	Retreat	MR	MR MR	MR	OFMO Dally (or To office Entroy Albert	NAI	NAI	NAI		HTL	HTL	HTL		
			Skern Saltmarsh West of Appledore	Retreat Retreat	MR MR	MR	MR MR	CFMP Policy for Taw/Torridge Estuary (North Devon CFMP - Policy Unit 2) is <i>Take action</i>	NAI MR	NAI MR	NAI MR		HTL HTL	HTL HTL	HTL HTL		
			Appledore	Hold	HTL	HTL	HTL	to increase the frequency of flooding. This	HTL	HTL	HTL		HTL	HTL	HTL		
	3	6	Appledore to Northam	Do Nothing	HTL	HTL	HTL	is interpreted to = Managed Realignment in strateic locations within the estuary.	MR	NAI	NAI		HTL	HTL	HTL		
	3	7	Northam to Bideford (south)	Hold	HTL	HTL	HTL	The CFMP Policy for Barnstaple (Policy Unit	HTL	HTL	HTL		HTL	HTL	HTL		
	3	8	Bideford (south) to Weare Gifford (Torridge West)	N/A	HTL	HTL	HTL	11) and Bideford (Policy Unit 12) is Take further action to reduce flood risk. This is interpreted to = Hold the Line by upgrade of	NAI	NAI	NAI		HTL	HTL	HTL		
	3	9	Weare Gifford to East-the- Water (Torridge East)	N/A	HTL	HTL	HTL	defences to reduce the number of assets at risk of flooding.	NAI	NAI	NAI		HTL	HTL	HTL		
	3	10	East-the-Water to Torridge Bridge (A39)	N/A	HTL	HTL	HTL	The area south of Bideford and south of Bickington is covered by CFMP Policy Unit 3 which is <i>To continue with existing or alternative actions</i> . This is interpreted here	HTL	HTL	HTL	Crow Point formed as a result of human influence and is an artificial feature. NAI would allow it to continue to evolve.	HTL	HTL	HTL		
	3	11	Torridge Bridge to Instow	Hold	HTL	HTL	HTL	as = Hold the Line , although the CFMP policy includes for consideration to be given	HTL	HTL	HTL	NAI at Northam Burrows would not involve	HTL	HTL	HTL		
Westward Ho!			Instow	Hold	HTL	HTL	HTL	to relocating any non-permanent assets (eg	HTL	HTL	HTL	action to repair breaches in the pebble ridge,	HTL	HTL	HTL	Assumes that allowing erosion of the old	
to Saunton	3	13	Instow to Yelland Home Farm Marsh	Hold	HTL	HTL	HTL	caravans) to reduce flood risk, and providing flood storage areas to reduce flood risk in	MR	MR	MR	though it is likely that a secondary defence	HTL	HTL	HTL	landfill site at Northam Burrows is an unacceptable pollution risk and so defence is	
Down	3	14	(Yelland to Fremington (east))	Retreat	HTL	HTL	HTL	other parts of the estuary. Within the Taw/Torridge Estuary, HTL primarily involves	MR	MR	MR	would be required to protect Westward Ho! even under this scenario.	HTL	HTL	HTL	required to prevent this occurring.	
	3	15	Fremington to Penhill Point	Do Nothing	HTL	HTL	HTL	maintenance of existing embankments.	NAI	NAI	NAI	Assumes within the estuary an alternative interpretation of how the CFMP policies are	HTL	HTL	HTL		
	3	16	Penhill Point to A361 Road Bridge (Bickington)	N/A	HTL	HTL	HTL		HTL	HTL	HTL	transposed into SMP2.	HTL	HTL	HTL		
	3	17	Upper Torridge Estuary (A361 to Tidal Limit near Bishops Tawton)	N/A	HTL	HTL	HTL	The northern end of Northam Burrows contains a former landfill site which, if eroded, would pollute the estuary. MR would involve a combination of secondary defence provision to protect Westward Ho! and action to repair	NAI	NAI	NAI		HTL	HTL	HTL		
	3	18	A361 Road Bridge to West Ashford (Barnstaple)	N/A	HTL	HTL	HTL	breaches in the pebble ridge. Chivenor Air Base is already considering	HTL	HTL	HTL		HTL	HTL	HTL		
	3	19	West Ashford to River Caen	Hold	MR	MR	MR	realigning defences which would then be held at the new alignment.	MR	MR	MR		MR	MR	MR		
	3	20	River Caen to the White House	Hold / Observe & Monitor	MR	MR	MR	MR at Crow Point controls movement of	MR	MR	MR		MR	MR	MR		
	3	21	Crow Point	Observe & Monitor	MR	MR	MR	feature into the estuary.	NAI	NAI	NAI		MR	MR	MR		

NAI NAI NAI

	3	23	Saunton Down	Do Nothing	NAI	NAI	NAI		NAI	NAI	NAI		NAI	NAI	NAI	
Related		P	Possible Policy Unit	SMP1 Policy			Scenar				Scenar	-			Scena	
Process Unit	1			Olili 11 cliey	0-20 year	20-50 year	50-100 year	Comments	0-20 year	20-50 year	50-100 year	Comments	0-20 year	20-50 year	50-100 year	Comments
	4	1	Croyde Sands	Observe & Monitor	NAI	NAI	NAI	North Devon CFMP (Policy Unit 1B) covers the small streams in this area. CFMP Policy =	NAI	NAI	NAI		NAI	NAI	NAI	
	4	2	Middleborough Hill	Hold	MR	NAI	NAI	No Active Intervention though flood warning will be provided such that risk to life is reduced.	NAI	NAI	NAI		HTL	HTL	HTL	
Saunton Down to Morte Point	4		Middleborough Hill to Baggy Point	Do Nothing	NAI	NAI	NAI	It is unlikely to be feasible to continue to defend this area and so MR would allow assets in risk areas to be relocated and natural processes to occur. NAI in the rest of the unit allows beach to be conserved.	NAI	NAI		Assumes that slow rate of recession is such that cliff top assets can be relocated without need to intervene in short term whilst such measures are developed.	NAI	NAI	NAI	Assumes it is feasible to protect the holiday park.
Related Process Unit		P	Possible Policy Unit	SMP1 Policy	0.00		Scenar		0.00	00.50	Scenar		0.00	00.50	Scenar	
	5	4	Baggy Point to Napps	Do Nothing	0-20 year NAI	20-50 year NAI	50-100 year NAI	Comments	0-20 year NAI	20-50 year NAI	50-100 year NAI	Comments	0-20 year	20-50 year	50-100 year	Comments
-		'	Cliff (Putsborough)	•				North Devon CFMP (Policy Unit 1B) covers								
	5	2	Vention	Hold	HTL	HTL	MR	the small streams in this area. CFMP Policy =	HTL	MR	MR					
	5		Vention to Woolacombe Beach	Do Nothing	NAI	NAI	NAI	No Active Intervention though flood warning will be provided such that risk to life is	NAI	NAI	NAI					
Saunton	5		Woolacombe Beach	Observe & Monitor	NAI	NAI	NAI	reduced.	NAI	NAI	NAI					1
Down to Morte Point	5	5	Woolacombe to Morte Point	Do Nothing	NAI	NAI		MR in the longer term as it becomes less feasible to continue to defend the areas where this is proposed. At the southern end o the beach this could conserve more beach material locally. At the northern end some relocation of assets away from risk areas would be required.	NAI	NAI	NAI	Assumes MR is undertaken earlier in order to conserve more beach material.				
Related		D	Possible Policy Unit	SMP1 Policy			Scenar	rio A			Scenar	io B			Scenar	rio C
Process Unit	-		ossible Folicy Offic	SWIFT FOILTY	0-20 year	20-50 year	50-100 year	Comments	0-20 year	20-50 year	50-100 year	Comments	0-20 year	20-50 year	50-100 year	Comments
	6	1 1	Morte Point to Ilfracombe (West)	Do Nothing (Hold at Lee)	NAI	NAI	NAI	North Devon CFMP (Policy Unit 1B) covers					HTL	HTL	HTL	
	6	2	Ilfracombe	Hold	HTL	HTL	HTL	the small streams from Morte Point to Ilfracombe. CFMP Policy here = No Active Intervention though flood warning will be provided such that risk to life is reduced.					HTL	HTL	HTL	
	6		Ilfracombe (East) to Combe Martin	Do Nothing (Hold at Hillsborough, Hele Bay and Watermouth Slipway)	NAI	NAI	NAI	North Devon CFMP (Policy Unit 1C) covers the small streams from Ilfracombe to Combe Martin. CFMP Policy here = No Active Intervention though flood warning will be provided such that risk to life is reduced.					HTL	HTL	HTL	
Morte Point to Minehead	6	4	Combe Martin	Hold	HTL	HTL	HTL	North Devon CFMP (Policy Unit 7) covers Ilfracombe. CFMP Policy here = Take further action to reduce flood risk. North Devon CFMP (Policy Units 9 and 10)				-	HTL	HTL	HTL	Test HTL at a number of locations where there are very short lengths of defence such as Lee, Hele Bay, Hillsborough and Watermouth.
	6	5	Combe Martin to Lynmouth	Do Nothing	NAI	NAI		cover Combe Martin and Lynmouth. CFMP Policy here = Take further action to sustain the current level of flood risk. North Devon CFMP (Policy Unit 5) covers Combe Martin to Lynmouth. CFMP Policy					NAI	NAI	NAI	
	6	6	Lynmouth	Hold	HTL	HTL	HTL	here = Take action to increase the frequency of flooding. The coast along this section is well indented and linkages are very limited (if at all present). Therefore holding small sections is					HTL	HTL	HTL	
	6	7	Lynmouth to Foreland Point	Do Nothing	NAI	NAI	NAI	unlikely to have a significant effect.					NAI	NAI	NAI	
Related			Possible Policy Unit	SMP1 Policy			Scenar	io A			Scenar	in R			Scena	do C

Morte Point to Minehead	7	1 Foreland Point to Gore Point	Do Nothing	NAI	NAI	NAI	West Somerset CFMP (Policy Unit 1) covers the small streams in this area. CFMP Policy = No Active Intervention though flood warning will be provided such that risk to life is reduced.								
Related		Possible Policy Unit	SMP1 Policy			Scena				Scenar	rio B			Scenar	rio C
Process Unit			SWIFT FOILCY	0-20 year	20-50 year	50-100 year	Comments	0-20 year	20-50 year	50-100 year	Comments	0-20 year	20-50 year	50-100 year	Comments
	8	Gore Point to Porlock Weir	Observe & Monitor	NAI	NAI	NAI	West Somerset CFMP (Policy Unit 4) covers this area. CFMP Policy = Take further action to sustain current scale of flood risk into the								
Morte Point to	8	2 Porlock Weir	Hold	HTL	HTL	MR	future. MR is the current policy of the National Trust								
Minehead	8	Porlock Weir to Hurlstone Point	Retreat	MR	MR	MR	along its section of Porlock Bay. MR of Porlock Weir may be necessary in the longer term as it becomes less feasible to retain defences here due to reduced beach levels.								
Related		Describe Baller Hall	OMBA BULL			Scena	rio A			Scenar	rio B			Scenar	rio C
Process Unit		Possible Policy Unit	SMP1 Policy	0-20 year	20-50 year	50-100 year		0-20 year	20-50 year	50-100 year		0-20 year	20-50 year	50-100 year	
	9	Hurlstone Point to Minehead (west)	Do Nothing	NAI	NAI	NAI	West Somerset CFMP (Policy Unit 7) covers					NAI	NAI	NAI	
Morte Point to Minehead /	9	2 Minehead	Hold	HTL	HTL	HTL	the western end of this area. CFMP Policy = No Active Intervention. CFMP Policy for Minehead (Policy Unit 6) = Take further action to reduce flood risk. CFMP Policy for Minehead to Blue Anchor (Policy Units 4 and 5) = Take further action to					HTL	HTL	HTL	Assumes there is a driver to protect tourism
Minehead to Hinkley Point	9	3 The Warren to Ker Moor	Observe & Monitor	MR	MR	MR	sustain current scale of flood risk. MR for much of this section could be feasible as there are few assets at risk and MR could provide both habitat and a wider coastal area that allows both retention of beach and coastal defence function in the medium to					HTL	HTL	HTL	assets in-situ (e.g. Dunster)
	9	4 Blue Anchor	Hold	HTL	HTL	MR	long term.					HTL	HTL	HTL	
Related		Barrell La Ballion Hall	OMBA BULL			Scena	rio A			Scenar	rio B			Scenar	rio C
Process Unit		Possible Policy Unit	SMP1 Policy	0-20 year	20-50 year			0-20 year	20-50 year	50-100 year	a	0-20 year	20-50 year	50-100 year	-
	10	1 Blue Anchor to Watchet	Do Nothing	NAI	NAI	NAI	West Somerset CFMP Policy for the section	NAI	NAI	NAI		NAI	NAI	NAI	
	10		Hold	HTL	HTL	HTL	between Blue Anchor and St Audries Bay (Policy Units 4 and 9) = Take further action to sustain current scale of flood risk.	HTL	HTL	HTL		HTL	HTL	HTL	
Minehead to Hinkley Point		3 Watchet to east Helwell Bay	Observe & Monitor	HTL	HTL	MR	CFMP Policy for the section St Audries Bay to Lilstock (Policy Unit 11) = No Active	HTL	MR	MR	If erosion increases due to climate change then MR earlier than Scenario A may be appropriate.	HTL	HTL	HTL	Assumes there is justification to Hold the Line at these locations to retain infrastructure and to protect toruist assets in-situ (e.g Doniford
			Observe & Monitor / Hold	NAI	NAI	NAI	Intervention. MR would involve relocating assets away	NAI	NAI	NAI	αρριομπαισ.	HTL	HTL	HTL	camp)
		9 Lilstock 10 Lilstock to Hinkley Point	Hold Do Nothing	HTL NAI	HTL NAI	NAI NAI	from risk areas such as coastal erosion occurs in the longer term.	NAI NAI	NAI NAI	NAI NAI		HTL NAI	HTL NAI	NAI NAI	
			_0												
Related		Descible Dell's 11-11	CMD4 Bull			Scena	rio A			Scenar	rio B			Scenar	rio C
Process Unit		Possible Policy Unit	SMP1 Policy	0-20 year	20-50 year	50-100 year		0-20 year	20-50 year	50-100 year		0-20 year	20-50 year	50-100 year	
	11	1 Hinkley Point	Hold	HTL	HTL	HTL]	HTL	HTL	HTL		HTL	HTL	HTL	

	11	1 2	2 Hinkley Point to Stolford	Hold	MR	MR	MR	Both the Parrett CFMP and North & Mid Somerset CFMP provide policies that cover the this section, all of which are interpreted as Hold the Line. Combwich to Bridgwater (Parrett CFMP	MR	MR	MR		MR	MR	MR	
	11	1 3	Stolford to Fenning Island	Observe & Monitor	HTL	HTL	MR	Policy Unit 10) has a policy of Continue with existing or alternative actions to manage flood risk at the current level of flooding	MR	MR	MR		HTL	HTL	HTL	
	11	1 4	Fenning Island to Combwich	Observe & Monitor	HTL	HTL	MR	(accepting that flood risk will increase over time).	MR	MR	MR		HTL	HTL	HTL	
	11	. 5	5 Combwich	Hold	HTL	HTL	HTL	Bridgwater (Parrett CFMP Policy Unit 9) has a policy of Take action to ensure no increase in flood risk over time . This	HTL	HTL	HTL		HTL	HTL	HTL	
	11	ı (Combwich to Bridgwater (Parrett west)	N/A	HTL	HTL	HTL	allows upgrade of existing defences to sustain the current level of flood risk. The area from Bridgwater to the River Brue is	MR	MR	MR		HTL	HTL	HTL	
	11	1 7	7 Bridgwater (Upper Parrett Estuary)	N/A	HTL	HTL	HTL	in part covered by the Huntspill CFMP policy (North & Mid Somerset CFMP Policy Unit 10) which is Continue with existing or	HTL	HTL	HTL		HTL	HTL	HTL	
Hinkley Poin to Brean Down	t 11	1 8	8 Bridgwater (Dunball) to River Brue	Hold	HTL	HTL	HTL	alternative actions to manage flood risk at the current level (accepting that flood risk will increase over time). This policy unit also covers North of Brean village to Brean Down.	MR	MR	MR	Assumes MR is undertaken earlier in places where appraised in Scenario A, and that thei are areas within the Parrett where MR may by viable.	HTL	HTL	HTL	HTL for Fenning Island to Combwich as understood that there are plans to use Regulated Tidal Exchange in this area to create more feshwater habitat.
	11	۱ 9	River Brue to Burnham- on-Sea (North)/Berrow	Hold	HTL	HTL	HTL	Burnham to Brean Village (North & Mid Somerset CFMP Policy Unit 11) policy is	HTL	HTL	HTL		HTL	HTL	HTL	
	11	1	0 Berrow Dunes	Observe & Monitor	NAI	NAI	NAI	Take further action to sustain current scale of flood risk into the future. This allows upgrade of existing defences but not	NAI	NAI	NAI		NAI	NAI	NAI	
	11		11 Brean Village	Hold	HTL	MR	MR	extension of defences.	MR	MR	MR		HTL	HTL	HTL	
	11	1	Brean Village to Brean Down	Hold	HTL	MR	MR	MR around Steart Peninsula is actively being investigated as a management option and it may be feasible to realign more of the site in	MR	MR	MR		HTL	HTL	HTL	
	11	1	3 Brean Down (south side)	Do Nothing	NAI	NAI	NAI	the longer term, as continued defence of Steart village is likely to become less feasible in the longer term. Policies on the open coast and estuary shores need to be complimentary. A similar reasoning is applicable to Brean Village and Brean Down.	NAI	NAI	NAI		NAI	NAI	NAI	

Related	Descible Deliev Unit		Possible Policy Unit	SMP1 Policy			Scena	rio A			Scena	rio B	Scenario C				
Process Unit		Possible Policy Unit		SWIPT POLICY	0-20 year	20-50 year	50-100 year	Comments	0-20 year	20-50 year	50-100 year	Comments	0-20 year	20-50 year	50-100 year	Comments	
	12	1	Brean Down (north side) to Axe Estuary (west)	Do Nothing	NAI	NAI	NAI		NAI	NAI	NAI						
	12		Axe Estuary West Bank (mouth to near Diamond Farm)	Hold (locally Retreat)	HTL	HTL	HTL	The area from Brean Down to the River Axe is covered by North & Mid Somerset CFMP Policy Unit 10, which is Continue with existing or alternative actions to manage flood risk at the current level (accepting that flood risk will increase over time) .	MR	MR	MR						
Brean Down to Anchor Head	12		Axe Estuary East Bank (near Diamond Farm to Uphill)	Hold (locally Retreat)	HTL	HTL	HTL	Uphill to Weston-super-Mare is covered by North & Mid Somerset CFMP Policy Unit 8, which is <i>Take further action to reduce flood risk, both now and in the future</i> . Both CFMP policies are interpreted as Hold the Line .	MR	MR	MR	Assumes that in order to conserve more beach material as sea levels rise, it may be more appropriate to MR Uphill to WSM earlier. NB: any policy along the Axe Estuary needs to compliment the open coast policy,					
	12	4	Axe Estuary East Bank (Uphill to mouth)	Hold (locally Retreat)	HTL	HTL	HTL	MR along the dune section from Uphill to WSM in the longer term would allow natural evolution of the shore as sea levels rise and would be more likely to conserve a greater amount of beach material in this area.	MR	MR	MR	especially between Brean Village and Brean Down.					