

## Angus Council

## Angus Shoreline Management Plan SMP2

### Appendix F – Policy Development



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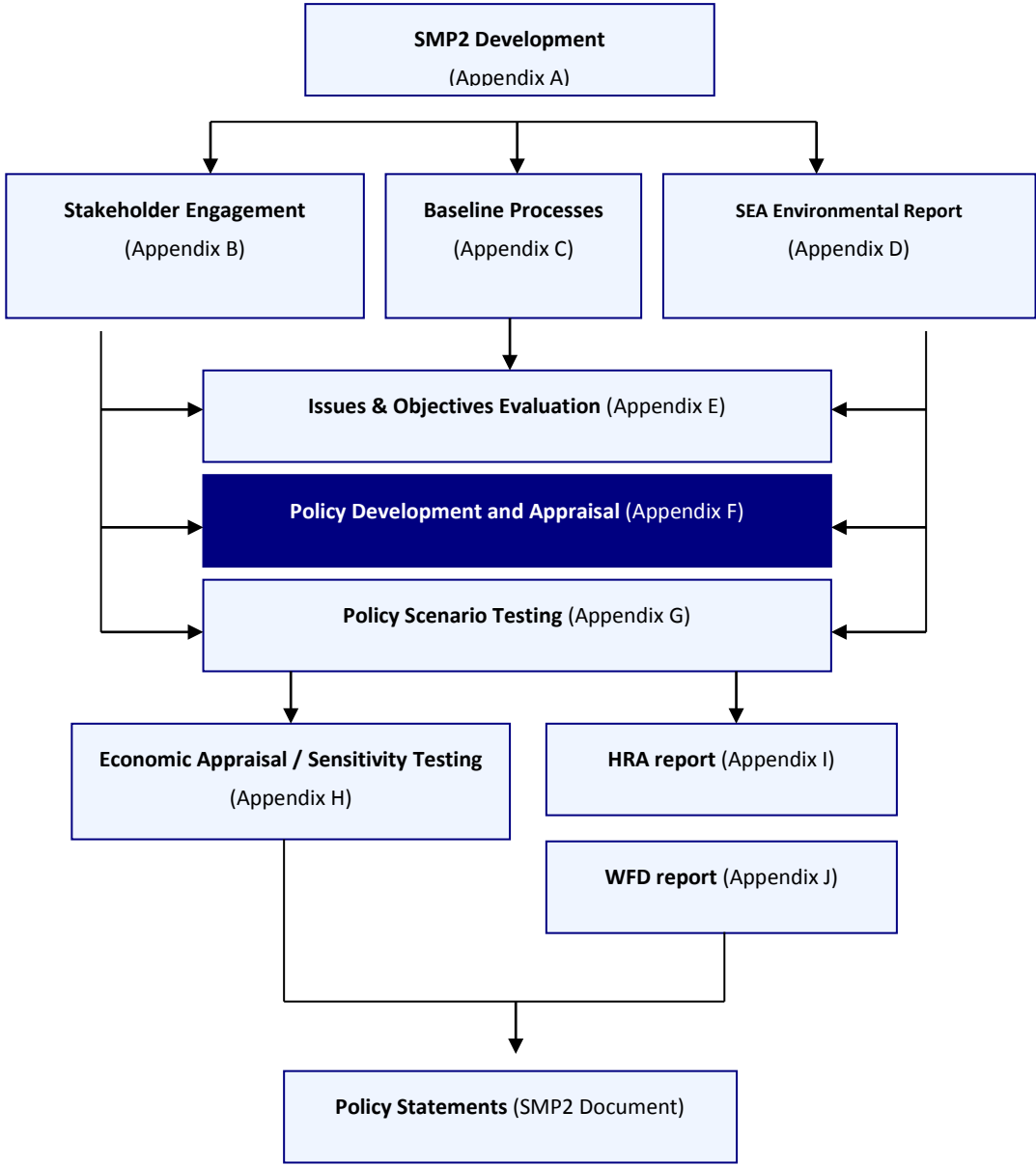
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## The Supporting Appendices

These appendices and the accompanying documents provide all of the information required to support the Shoreline Management Plan. This is to ensure that there is clarity in the decision-making process and that the rationale behind the policies being promoted is both transparent and auditable. The appendices are:

A: SMP2 Development	This reports the history of development of the SMP2, describing more fully the plan and policy decision-making process.
B: Stakeholder Engagement	All communications from the stakeholder process are provided here, together with information arising from the consultation process.
C: Baseline Process Understanding	Includes baseline process report, defence assessment, NAI and WPM assessments and summarises data used in assessments.
D: Strategic Environmental Assessment (SEA) Environmental Report	This report identifies and evaluates the baseline environmental features (human, natural, historical and landscape) and presents an overview of the environmental assessment process, showing how the requirements of the EU Council Directive 2001/42/EC (the Strategic Environmental Assessment Directive) are met.
E: Issues & Objectives Evaluation	Provides information on the issues and objectives identified as part of the Plan development, including appraisal of their importance.
F: Policy Development and Appraisal	Presents the consideration of generic policy options for each frontage, identifying possible acceptable policies, and their combination into 'scenarios' for testing. Also presents the appraisal of impacts upon shoreline evolution and the appraisal of objective achievement.
G: Preferred Policy Scenario Testing	Presents the policy assessment and appraisal of objective achievement towards definition of the Preferred Plan (as presented in the Shoreline Management Plan document).
H: Economic Appraisal and Sensitivity Testing	Presents the economic analysis undertaken in support of the Preferred Plan.
I: Habitat Regulations Assessment	Presents an assessment of the effect the plan will have on European sites.
J: Water Framework Directive Assessment	Presents the Water Framework Directive assessment of the potential hydromorphological changes and consequent ecological impact of the preferred SMP2 policies.
K: Metadatabase and Bibliographic database	All supporting information used to develop the SMP2 is referenced for future examination and retrieval.

Within each appendix cross-referencing highlights the documents where related appraisals are presented. The broad relationships between the appendices are illustrated below.



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## F.1 Introduction

This Appendix outlines the key steps undertaken to identify policies for appraisal in the Angus SMP2. Policy scenarios developed in this appendix have then been taken forward and appraised and the results of this appraisal are presented in **Appendix G**.

The recommended approach in England and Wales (Defra Guidance, 2006) has been followed in this SMP2. The approach involves development of a sustainable final plan through the assessment of policy scenarios; a combination of policies together rather than considering a series of locations in isolation. The aim of this stage has therefore been to identify the appropriate combinations of policies to be appraised for the whole SMP2 frontage. This has involved the following activities:

- Identification of 'key policy drivers' (Section F.2);
- Identification of potential policy options through the broad-level appraisal of the four generic Defra policy descriptors (Section F.3);
- Development of policy scenarios for assessment (Section F.4).

It should be noted that the first two tasks looked at requirements of individual locations in relative isolation, but wider-scale impacts of policies have been assessed during the policy scenario appraisal stage which has looked at the likely shoreline response and evolution both locally and along the SMP2 coast as a whole (see **Appendix G**).

## F.2 Identification of ‘Key Policy Drivers’

### F.2.1 Definition

A ‘key policy driver’ can be defined as a feature that has sufficient importance in terms of the benefits it provides that it potentially has an overriding influence upon policy selection at the wider SMP2 scale. This may be through either promoting a policy, or discarding a policy, for a particular location or locations.

There are no specific criteria which define a key policy driver, rather it is dependant upon the specific nature of coastline and associated objectives and is slightly intuitive.

Examples of a key driver may include:

- A mainline railway which must be maintained, due to its regional and national significance; or,  
An internationally important habitat which relies on constant sediment feed, driving policy for the up-drift shoreline.

### F.2.2 Methodology

The Issues and Objectives Tables (**Appendix E**) were used to identify draft key policy drivers which were put forward for discussion with the Client Steering Group (CSG). The **key policy drivers** agreed with the CSG are listed below.

Coastal Process Unit	Major towns / assets	Environmental features	Infrastructure
CPU 1	GlaxoSmithKline		
CPU 2	Montrose Montrose Port	Montrose Basin SPA / Ramsar	Railway
CPU 3			Railway
CPU 4			
CPU 5			
CPU 6	Arbroath Arbroath Harbour		Railway Scottish Water Tay wastewater main
CPU 7	Carnoustie Carnoustie Golf Course MoD land	Firth of Tay and Eden Estuary SAC / SPA / Ramsar	Railway Scottish Water Tay wastewater main
CPU 8	Monifieth Broughty Ferry MoD land Monifieth Landfill Broughty Ferry Landfill (Bridge Street)	Firth of Tay and Eden Estuary SAC / SPA / Ramsar	Railway Scottish Water Tay wastewater main

## F.3 Identification of Potential Policy Options & Scenarios

### F.3.1 Methodology

In order to identify potential policy options and scenarios for appraisal, the baseline processes understanding (**Appendix C**), the issues and objectives tables (**Appendix E**), and CSG comments, were used to undertake a 'screening procedure' to identify potential suitable and feasible policy options to appraise for each section of coast. There are four generic Defra policy options to choose from and they are:

- **Hold the line (HTL)** - maintain the existing defence line;
- **Advance the line (ATL)** - build new defences seaward of the existing defence line;
- **Managed realignment (MR)** - allow the shoreline to change with management to control or limit movement;
- **No active intervention (NAI)** - a decision not to invest in providing or maintaining defences.

For each of these frontages the key policy drivers and potential policy options to test (Section F3.2) were discussed with the CSG, from which an agreed set of policy options were determined for the consultant to test (Section F3.3).

When consulting with the CSG, each attendee was asked to:

- Provide a practical vision for the coastline over the short (0-20 years), medium (20-50 years) and long term (50-100) years;
- Consider the relative importance of their issues against those of others;
- Where there might be a conflict of interest, consider possible areas for compromise or acceptable change, especially where the relative importance of a particular issue might alter over time.

Minutes from the CSG meeting, documenting discussions on potential policies to test, are included in the relevant Annex in **Appendix B**.

### F3.2 Potential Policy Options to Test

The following tables summarise the key policy drivers and potential policy options to test for each Management Unit (MU) identified in SMP1, resulting from the CSG2 meeting and through initial screening of policies. These tables also include general comments, reasons for discounting certain policies and justification for other policies identified to test.



### F3.2.1 Potential Policies to Test

MU (from SMP 1)	Comments and justification for choice of policies to test
<b>Milton Ness to Montrose Harbour</b>	
<b>MU 1/1 Montrose Bay</b>	<p>Nationally environmentally designated. Coastal processes are the key to the conservation of the SSSI. Currently undefended, naturally evolving system.</p> <p><b>NAI appropriate to allow natural processes to continue.</b></p> <p>Minimal assets at risk of flooding therefore there is unlikely to be economic justification to HTL or MR along this frontage. ATL would result in loss of the beach.</p>
<b>MU 1/2 Montrose Golf Course</b>	<p>There is unlikely to be economic justification to HTL along this frontage, also the sustainability of HTL is questionable.</p> <p>The main asset at erosion risk is the Golf Course. <b>Opportunity for MR</b> which should include monitoring and management of erosion of the dunes in the future to maintain the integrity of the natural defence. Set-back of some parts of the Golf Course will be required. Under rising sea levels coastal squeeze may result in further loss of beaches in the long term, therefore restoring / stabilising the upper beach and dune system as a natural form of defence and amenity will be important in the future.</p> <p>ATL would result in the loss of the beach.</p> <p>NAI would be inappropriate as the Golf Course is expected to remain in some form throughout the life of the plan.</p>
<b>MU 1/3 Splash and GlaxoSmithKline</b>	<p>GlaxoSmithKline has been identified as a Key Policy Driver where a policy of protection is required. Economics are likely to justify <b>HTL due to the industrial/commercial asset in flood / erosion risk area</b>, therefore a NAI policy is considered to be unsuitable.</p> <p>The other main assets at erosion risk are the Splash recreation area and caravan park. <b>Opportunity for MR at Splash and the Caravan Park</b> to allow a more natural shoreline alignment to form, to allow a release of sediment back into the system to feed beaches and to reinstate the dunes as a natural line of defence. Under rising sea levels coastal squeeze may result in loss of beaches in the long term, therefore restoring / stabilising the upper beach and dune system as a natural form of defence and amenity will be important in the future. Potential for beneficial use of River Esk South dredged material along the frontage in either HTL or MR schemes.</p> <p>ATL would result in further loss of the beach.</p>
<b>Montrose Basin</b>	
<b>MU 2/1 Harbour and Montrose Railway</b>	<p>Montrose Port, Montrose town and the railway line are identified as Key Policy Drivers where a policy of protection is required.</p> <p>Economics are likely to justify <b>HTL due to density of residential / commercial areas / infrastructure in flood risk area</b>, therefore a NAI policy is considered to be unsuitable.</p> <p>No opportunity for MR along the frontage.</p> <p>ATL would result in loss of designated intertidal areas.</p>

MU (from SMP 1)	Comments and justification for choice of policies to test
<b>MU 2/2</b> <b>Montrose Basin</b>	<p>Montrose town and the railway line are identified as Key Policy Drivers where a policy of protection is required.</p> <p>Economics are likely to justify <b>HTL due to density of residential / commercial areas / infrastructure in flood risk area.</b></p> <p>A policy of protection is likely for the residential areas at <b>Rossie island and Tayock, a HTL policy in these locations</b> may only mean limited intervention is required for reducing risk to properties during extreme conditions.</p> <p><b>NAI remains appropriate along the southern banks of the Basin</b> which are currently undefended areas of higher land. NAI may also be tested at Sleepyhillock Cemetery which is on higher land.</p> <p>A NAI policy is considered to be unsuitable elsewhere in the Basin due to flood risk to agricultural land, residential assets and infrastructure.</p> <p>Test <b>MR in the west</b> of the Basin for habitat creation and to provide accommodation space under rising sea levels – potential technical benefits.</p> <p>International environmental designations (Montrose Basin SPA / Ramsar) identified as Key Policy Drivers, loss of designated intertidal habitat will mean that secondary compensation habitat is likely to be required to provide replacement habitat for Ramsar/SPA birds and other noted Ramsar interests.</p> <p>ATL would result in the loss of internationally designated intertidal areas.</p>
<b>MU 2/3</b> <b>Ferryden to Scurdie Ness</b>	<p>A policy of protection is likely for the residential area at <b>Ferryden, a HTL policy in this location</b> may only mean limited intervention is required for reducing risk to properties during extreme conditions.</p> <p>A NAI policy is considered to be unsuitable at Ferryden due to flood risk to residential assets and infrastructure.</p> <p>No opportunities for MR identified.</p> <p>ATL would not be suitable due to the location of the River South Esk channel and the entrance to the port.</p> <p><b>NAI remains appropriate along the presently undefended rock frontage between Ferryden and Scurdie Ness.</b></p>
<b>Scurdie Ness to Rickle Craig</b>	
<b>MU 3/1</b> <b>Scurdie Ness to Rickle Craig</b>	<p>Nationally environmentally designated. Coastal processes are the key to the conservation of the SSSI.</p> <p>Currently undefended, naturally evolving system.</p> <p><b>NAI appropriate to allow natural processes to continue.</b></p> <p>Minimal assets at risk of flooding / erosion therefore there is unlikely to be economic justification to HTL or MR along this frontage as a whole. The railway line is however identified as a Key Policy Driver and as such, it may be appropriate to allow implementation of local measures if the railway is at risk in the future. Potential works are not expected to affect coastal processes, but may impact on the National designations.</p> <p>ATL would result in loss of the designated intertidal areas and rock platform.</p>
<b>Rickle Craig to Lang Craig</b>	
<b>MU 4/1</b>	<p>Currently mostly undefended, naturally evolving system.</p>

MU (from SMP 1)	Comments and justification for choice of policies to test
Lunan Bay	<p><b>NAI appropriate to allow natural processes to continue.</b></p> <p>Economics are unlikely to justify HTL or MR at Corbie Knowe into the future; however it is appropriate to test <b>HTL here in the short term.</b></p> <p>ATL would result in loss of the beach.</p>
<b>Lang Craig to Whiting Ness</b>	
<b>MU 5/1 Lang Craig to Whiting Ness</b>	<p>Nationally environmentally designated. Coastal processes are the key to the conservation of the SSSI.</p> <p>Currently undefended, naturally evolving system.</p> <p><b>NAI appropriate to allow natural processes to continue.</b></p> <p>Minimal assets at risk of flooding / erosion therefore there is unlikely to be economic justification to HTL or MR along this frontage as a whole.</p> <p>ATL would result in loss of the designated intertidal areas and rock platform.</p>
<b>Whiting Ness to West Haven</b>	
<b>MU 6/1 Victoria Park and Seagate</b>	<p><b>Arbroath town is identified as a Key Policy Driver where a HTL policy is required.</b></p> <p>Economics are likely to justify HTL due to density of residential / tourism / economic areas and infrastructure in the flood risk area, therefore a NAI policy is considered to be unsuitable.</p> <p><b>Opportunity for MR</b> at Victoria Park to be tested to allow a more natural shoreline alignment to form, to allow a release of sediment back into the system to feed beaches and restore / stabilise the upper beach as a natural form of defence and amenity in the future.</p> <p>ATL rejected as would result in the further loss of the beach and rock platform.</p>
<b>MU 6/2 Danger Point to Inchcape Park (Arbroath Harbour)</b>	<p><b>Arbroath Harbour and the Scottish Water Tay wastewater main are identified as Key Policy Drivers where a policy of HTL is required.</b></p> <p>Economics are likely to justify HTL, therefore a NAI policy is considered to be unsuitable.</p> <p>No opportunities for MR identified.</p> <p>ATL could result if the harbour arms are extended; however, this policy has been rejected on the grounds of having adverse affects on coastal processes and sediment movement.</p>
<b>MU 6/3 Inchcape Park to West Links</b>	<p><b>Arbroath town and the Scottish Water Tay wastewater main are identified as Key Policy Drivers where a HTL policy is required.</b></p> <p>Economics are likely to justify HTL due to density of residential / tourism / economic areas and infrastructure in the flood risk area, therefore a NAI policy is considered to be unsuitable.</p> <p>No opportunities for MR identified.</p> <p>ATL rejected as would result in the further loss of the beach.</p>
<b>MU 6/4 West Links to West Haven</b>	<p>Currently mostly undefended, naturally evolving system.</p>

MU (from SMP 1)	Comments and justification for choice of policies to test
	<p><b>NAI appropriate to allow natural processes to continue.</b></p> <p>Minimal assets at risk of flooding / erosion therefore there is unlikely to be economic justification to HTL or MR along this frontage as a whole. The railway line is however identified as a Key Policy Driver and as such, it may be appropriate to allow implementation of local measures if the railway is at risk in the future as potential works are not expected to affect coastal processes. Therefore it is appropriate to test <b>localised HTL</b> at Dowrie (contaminated land) and at Hatton in front of the railway.</p> <p>A policy of <b>HTL</b> should also be tested at East Haven to assess impacts of this policy on adjacent coastal frontages.</p> <p>NAI should include monitoring to assess risks to the water works, outfall and to East Haven village.</p> <p>ATL would result in loss of the beach.</p>
<b>West Haven to Buddon Ness</b>	
<b>MU 7/1 West Haven to Carnoustie Railway Station</b>	<p><b>Carnoustie town and the railway are identified as Key Policy Drivers where a HTL policy is required.</b></p> <p>Economics are likely to justify HTL due to density of residential / tourism / economic areas and infrastructure in the flood / erosion risk area, therefore a NAI policy is considered to be unsuitable. Currently some defences are buried and therefore, a future HTL policy may only mean limited intervention is required for reducing risk to properties.</p> <p>No opportunities for MR identified.</p> <p>ATL rejected as would result in the loss of the beach and rock platform.</p>
<b>MU 7/2 Carnoustie Bay</b>	<p><b>Carnoustie town, the railway, Golf Course and Scottish Water Tay wastewater main are identified as Key Policy Drivers where a HTL policy is required.</b></p> <p>Economics are likely to justify HTL due to density of residential / tourism / economic areas and infrastructure in the flood / erosion risk area, therefore a NAI policy is considered to be unsuitable.</p> <p>No opportunities for MR identified.</p> <p>ATL rejected as would result in the loss of the beach.</p>
<b>MU 7/3 Barry Sands East</b>	<p><b>The MoD land on Buddon Ness is identified as a Key Policy Driver where a HTL policy is required,</b> therefore a NAI policy is considered to be unsuitable.</p> <p>International environmental designations (Firth of Tay and Eden Estuary SAC / SPA / Ramsar) identified as Key Policy Drivers, loss of designated intertidal habitat will mean that secondary compensation habitat is likely to be required to provide replacement habitat for Ramsar/SPA birds and other noted Ramsar interests.</p> <p>ATL rejected as would result in the loss of the beach.</p> <p>The dunes are nationally designated. Managed erosion of the dunes may support the conservation of the SSSI and therefore if any land use change occurs on Buddon Ness, it would be appropriate to test <b>MR in this location in the medium and long term.</b></p>

MU (from SMP 1)	Comments and justification for choice of policies to test
<b>Buddon Ness to Broughty Castle</b>	
<b>MU 8/1 Buddon Ness and Barry Sands West</b>	<p><b>The MoD land and training facility on Buddon Ness is identified as a Key Policy Driver;</b> however, minimal assets at risk of flooding / erosion therefore there is unlikely to be economic justification to HTL or MR along this frontage as a whole.</p> <p>International environmental designations (Firth of Tay and Eden Estuary SAC / SPA / Ramsar) identified as Key Policy Drivers, loss of designated intertidal habitat will mean that secondary compensation habitat is likely to be required to provide replacement habitat for Ramsar/SPA birds and other noted Ramsar interests. Dunes are nationally designated.</p> <p><b>Coastal processes are the key to maintaining these designations and therefore continue to test NAI.</b></p> <p>ATL policy rejected due to loss of designated intertidal – potential environmental impacts.</p>
<b>MU 8/2 Monifieth</b>	<p><b>Monifieth, the local landfill site and Scottish Water Tay wastewater main are identified as Key Policy Drivers where a HTL policy is required.</b></p> <p>Economics are likely to justify HTL due to density of tourism areas, contaminated land and infrastructure in the flood / erosion risk area, therefore a NAI policy is considered to be unsuitable. The frontage is currently accreting and defences are buried, therefore, a future HTL policy may only mean limited intervention is required for reducing risk to assets.</p> <p>No opportunities for MR identified.</p> <p>International environmental designations (Firth of Tay and Eden Estuary SAC / SPA / Ramsar) identified as Key Policy Drivers, loss of designated intertidal habitat will mean that secondary compensation habitat is likely to be required to provide replacement habitat for Ramsar/SPA birds and other noted Ramsar interests.</p> <p>ATL rejected as would result in the loss of the beach and designated intertidal areas.</p>
<b>MU 8/3 Monifieth West</b>	<p><b>Monifieth and Scottish Water Tay wastewater main are identified as Key Policy Drivers where a HTL policy is required.</b></p> <p>Economics are likely to justify HTL due to density of residential and tourism areas and infrastructure in the flood / erosion risk area, therefore a NAI policy is considered to be unsuitable.</p> <p>No opportunities for MR identified.</p> <p>International environmental designations (Firth of Tay and Eden Estuary SAC / SPA / Ramsar) identified as Key Policy Drivers, loss of designated intertidal habitat will mean that secondary compensation habitat is likely to be required to provide replacement habitat for Ramsar/SPA birds and other noted Ramsar interests.</p> <p>ATL rejected as would result in the loss of the beach and designated intertidal areas.</p>
<b>MU 8/4 Barnhill</b>	<p><b>Monifieth, Broughty Ferry, the railway and Scottish Water Tay wastewater main are identified as Key Policy Drivers where a HTL policy is required.</b></p> <p>Economics are likely to justify HTL due to density of residential / tourism / economic areas and infrastructure in the flood risk area, therefore a NAI policy is considered to be unsuitable.</p>

MU (from SMP 1)	Comments and justification for choice of policies to test
	<p>No opportunities for MR identified.</p> <p>International environmental designations (Firth of Tay and Eden Estuary SAC / SPA / Ramsar) identified as Key Policy Drivers, loss of designated intertidal habitat will mean that secondary compensation habitat is likely to be required to provide replacement habitat for Ramsar/SPA birds and other noted Ramsar interests.</p> <p>ATL rejected as would result in the further loss of the beach and designated intertidal areas.</p>
<p><b>MU 8/5 Broughty Ferry East</b></p>	<p><b>Broughty Ferry, the local landfill site and Scottish Water Tay wastewater main are identified as Key Policy Drivers where a HTL policy is required.</b></p> <p>Economics are likely to justify HTL due to density of residential / tourism / economic areas and infrastructure in the flood risk area, therefore a NAI policy is considered to be unsuitable.</p> <p>No opportunities for MR identified.</p> <p>International environmental designations (Firth of Tay and Eden Estuary SAC / SPA / Ramsar) identified as Key Policy Drivers, loss of designated intertidal habitat will mean that secondary compensation habitat is likely to be required to provide replacement habitat for Ramsar/SPA birds and other noted Ramsar interests.</p> <p>ATL rejected as would result in the loss of the beach and designated intertidal areas.</p>
<p><b>MU 8/6 Broughty Ferry</b></p>	<p><b>Broughty Ferry and Scottish Water Tay wastewater main are identified as Key Policy Drivers where a HTL policy is required.</b></p> <p>Economics are likely to justify HTL due to density of residential and tourism areas and infrastructure in the flood / erosion risk area, therefore a NAI policy is considered to be unsuitable. The frontage is currently accreting towards the south and therefore, a future HTL policy may only mean limited intervention is required for reducing risk to assets.</p> <p>No opportunities for MR identified.</p> <p>International environmental designations (Firth of Tay and Eden Estuary SAC / SPA / Ramsar) identified as Key Policy Drivers, loss of designated intertidal habitat will mean that secondary compensation habitat is likely to be required to provide replacement habitat for Ramsar/SPA birds and other noted Ramsar interests.</p> <p>ATL rejected as would result in the loss of the beach and designated intertidal areas.</p>

## F.4 Development of Policy Scenarios for Assessment

Potential policy options have been assigned to each Management Unit (MU) identified in the Angus SMP1 (Angus Council, 2004). In some cases the original SMP1 MUs have been sub-divided further where deemed appropriate to distinguish between different management options along the frontage.

Having identified potential policy options to test for each MU, the policies were combined into '**policy scenarios**' for appraisal. The development of these policy scenarios needed to allow for consideration of the interactions between adjacent areas, for example if a Key Policy Driver (a feature that has sufficient importance in terms of the benefits it provides that it potentially has an overriding influence upon policy selection at the wider SMP2 scale) requires HTL in one area, then policy setting for adjacent and interacting frontages need to take account of the implications of this on wider shoreline management into account.

The following tables contain the final policy scenarios identified to test for each '**scenario area**'. Between one and three policy scenarios were identified per area. *Policies highlighted in shaded cells/blue text represent changes to the policy tested in the previous scenario.* The table also provides the preferred SMP1 policies and Management Units from the Angus SMP1 (Angus Council, 2004) for comparison to show where changes have been made in SMP2.

**F4.1 Policy Scenarios for Assessment: Scenario Area 1- Montrose**

CPU	SMP 1			SMP 2 Scenario Area 1 - Montrose							
	Management Area 1	SMP1 Policies		Revised Management Units	KEY POLICY DRIVERS	Policies to test – Scenario A			Policies to test – Scenario B		
		Short term	Long term to 2050			0-20 yrs	20-50 yrs	50-100 yrs	0-20 yrs	20-50 yrs	50-100 yrs
1	MU 1/1 Montrose Bay	No Active Intervention (<5-10 years)	No Active Intervention If dune erosion becomes an issue the policy may need to be changed to: Limited Intervention to allow dune stabilisation measures.	MU 1/1 Montrose Bay (Milton Ness to Montrose Links)		NAI	NAI	NAI	NAI	NAI	NAI
	MU 1/2 Montrose Golf Course	Limited Intervention / Managed Retreat (relocate golf holes at risk) (<5-10 years)	No Active Intervention	MU 1/2 Montrose Golf Links		MR	MR	MR	MR	MR	MR
	MU 1/3 Splash and GlaxoSmithKline	Hold the Line (<5-10 years)	Hold the Line	MU 1/3 (a) Splash (The Faulds)		HTL	HTL	HTL	MR	MR	MR
				MU 1/3 (b) South Links Holiday Park		HTL	HTL	HTL	MR	MR	MR
				MU 1/4 GlaxoSmithKline	GlaxoSmithKline	HTL	HTL	HTL	HTL	HTL	HTL



#### F4.2 Policy Scenarios for Assessment: Scenario Area 2 – Montrose Basin

CPU	SMP 1		SMP 2 Scenario Area 2 – Montrose Basin								
	Management Unit 2	SMP1 Policies		Revised Management Units	KEY POLICY DRIVERS?	Policies to test – Scenario A			Policies to test – Scenario B		
		Short term	Long term to 2050			0-20 yrs	20-50 yrs	50-100 yrs	0-20 yrs	20-50 yrs	50-100 yrs
2	MU 2/1 Harbour and Montrose Railway	Hold the Line (<5-10 years)	Hold the Line	MU 2/1 (a) Montrose Port (north bank – Glaxo to A92 bridge)	Montrose Port	HTL	HTL	HTL	HTL	HTL	HTL
				MU 2/1 (b) Montrose Port (south bank –A92 bridge to Ferryden)	Montrose Port	HTL	HTL	HTL	HTL	HTL	HTL
	MU 2/2 Montrose Basin	Selectively Hold the Line: Hold the line (Taycock, Rossie Island, Western flank) / No active Intervention (part) (<10-15 years)	Selectively Hold the Line: Managed Realignment (part) / Hold the line (part) / No active Intervention (part)	MU 2/2 (a) Montrose West (A92 Bridge to the end of railway defences)	Railway Montrose Montrose Basin SPA / Ramsar	HTL	HTL	HTL	HTL	HTL	HTL
				MU 2/2 (b) Montrose West (Railway defences to Tayock River)	Railway Montrose Montrose Basin SPA / Ramsar	HTL	HTL	HTL	HTL	HTL	HTL
				MU 2/3 (a) Tayock (Tayock village)	Montrose Basin SPA / Ramsar	HTL	HTL	HTL	HTL	HTL	HTL
				MU 2/3 (b) Tayock (Sleepyhillock Cemetery)	Montrose Basin SPA / Ramsar	HTL	HTL	HTL	NAI	NAI	NAI
				MU 2/4 West Montrose Basin (west of Tayock to Old Montrose)	Montrose Basin SPA / Ramsar	HTL	HTL	HTL	MR	MR	MR
				MU 2/5	Montrose Basin	NAI	NAI	NAI	NAI	NAI	NAI

CPU	SMP 1			SMP 2 Scenario Area 2 – Montrose Basin								
	Management Unit 2	SMP1 Policies		Revised Management Units	KEY POLICY DRIVERS?	Policies to test – Scenario A			Policies to test – Scenario B			
		Short term	Long term to 2050			0-20 yrs	20-50 yrs	50-100 yrs	0-20 yrs	20-50 yrs	50-100 yrs	
				<b>Old Montrose to Railway Bridge</b>	SPA / Ramsar							
				<b>MU 2/6 Rossie Island to A92</b>	Montrose Basin SPA / Ramsar	HTL	HTL	HTL	HTL	HTL	HTL	HTL
	MU 2/3 Ferryden to Scurdie Ness	Selectively Hold the Line: Hold the line (Ferryden) / No active Intervention (part) (<5-10 years)	Selectively Hold the Line: Hold the line (Ferryden) / No active Intervention (part)	<b>MU 2/7 Ferryden</b>		HTL	HTL	HTL	HTL	HTL	HTL	HTL
				<b>MU 2/8 Ferryden to Scurdie Ness</b>		NAI	NAI	NAI	NAI	NAI	NAI	NAI

#### F4.3 Policy Scenarios for Assessment: Scenario Area 3 – Scurdie Ness to Rickle Craig

CPU	SMP 1			SMP 2 Scenario Area 3 – Scurdie Ness to Rickle Craig							
	Management Unit 3	SMP1 Policies		Revised Management Units	KEY POLICY DRIVERS?	Policies to test – Scenario A			Policies to test – Scenario B		
		Short term	Long term to 2050			0-20 yrs	20-50 yrs	50-100 yrs	0-20 yrs	20-50 yrs	50-100 yrs
3	MU 3/1 Scurdie Ness to Rickle Craig	No Active Intervention (<10-15 years)	Selectively Hold the Line: Hold the line (Railway) / No active Intervention	<b>MU 3/1 Scurdie Ness to Rickle Craig</b>	Railway	NAI	NAI	NAI	-	-	-

#### F4.4 Policy Scenarios for Assessment: Scenario Area 4 – Lunan Bay

CPU	SMP 1			SMP 2 Scenario Area 4 – Lunan Bay							
	Management Unit 4	SMP1 Policies		Revised Management Units	KEY POLICY DRIVERS?	Policies to test – Scenario A			Policies to test – Scenario B		
		Short term	Long term to 2050			0-20 yrs	20-50 yrs	50-100 yrs	0-20 yrs	20-50 yrs	50-100 yrs
4	MU 4/1 Lunan Bay	Selectively Hold the Line: Limited Intervention / Hold the Line (Corbie Knowe) (<10-15 years)	Selectively Hold the Line: Limited Intervention / Hold the Line (Corbie Knowe)	<b>MU 4/1 Lunan Bay</b>		NAI	NAI	NAI	NAI	NAI	NAI
				<b>MU 4/2 Corbie Knowe</b>		NAI	NAI	NAI	HTL	NAI	NAI

#### F4.5 Policy Scenarios for Assessment: Scenario Area 5 – Lang Craig to Whiting Ness

CPU	SMP 1		SMP 2 Scenario Area 5 – Lang Craig to Whiting Ness											
	Management Unit 5	SMP1 Policies		Revised Management Units	KEY POLICY DRIVERS?	Policies to test – Scenario A			Policies to test – Scenario B					
		Short term	Long term to 2050			0-20 yrs	20-50 yrs	50-100 yrs	0-20 yrs	20-50 yrs	50-100 yrs			
5	MU 5/1 Lang Craig to Whiting Ness	No Active Intervention	No Active Intervention	MU 5/1 Lang Craig to Whiting Ness		NAI	NAI	NAI	-	-	-			

#### F4.6 Policy Scenarios for Assessment: Scenario Area 6 – Arbroath to West Haven

CPU	SMP 1		SMP 2 Scenario Area 6 – Arbroath to West Haven											
	Management Unit 6	SMP1 Policies		Revised Management Units	KEY POLICY DRIVERS?	Policies to test – Scenario A			Policies to test – Scenario B			Policies to test – Scenario C		
		Short term	Long term to 2050			0-20 yrs	20-50 yrs	50-100 yrs	0-20 yrs	20-50 yrs	50-100 yrs	0-20 yrs	20-50 yrs	50-100 yrs
6	MU 6/1 Victoria Park and Seagate	Hold the Line (<10-15 years)	Hold the Line	MU 6/1 (a) Victoria Park		HTL	HTL	HTL	MR	MR	MR	HTL	HTL	HTL
				MU 6/1 (b) Seagate	Arbroath town	HTL	HTL	HTL	HTL	HTL	HTL	HTL	HTL	HTL
	MU 6/2 Danger Point to Inchcape Park (Arbroath Harbour)	Hold the Line (<10-15 years)	Hold the Line	MU 6/2 Arbroath Harbour	Arbroath Harbour Scottish Water Tay wastewater main	HTL	HTL	HTL	HTL	HTL	HTL	HTL	HTL	HTL
	MU 6/3 Inchcape Park to West Links	Hold the Line	Hold the Line	MU 6/3 Inchcape Park to Westway Road	Arbroath town Scottish Water Tay wastewater main	HTL	HTL	HTL	HTL	HTL	HTL	HTL	HTL	HTL
MU 6/4 West Links to West	Selectively Hold the Line: No	Selectively Hold the Line:	MU 6/4 (a) West Links to East	Railway	NAI	NAI	NAI	NAI	NAI	NAI	HTL	HTL	HTL	

CPU	SMP 1			SMP 2 Scenario Area 6 – Arbroath to West Haven											
	Management Unit 6	SMP1 Policies		Revised Management Units	KEY POLICY DRIVERS?	Policies to test – Scenario A			Policies to test – Scenario B			Policies to test – Scenario C			
		Short term	Long term to 2050			0-20 yrs	20-50 yrs	50-100 yrs	0-20 yrs	20-50 yrs	50-100 yrs	0-20 yrs	20-50 yrs	50-100 yrs	
	Haven	Active Intervention (part) / Limited Intervention (part) / No (part) / Hold the Line (part) (<10-15 years)	Hold the Line (part) / Limited Intervention (part) / No Active Intervention (part)	<b>Haven</b>											
				<b>MU 6/4 (b)</b>		NAI	NAI	NAI	NAI	NAI	NAI	HTL	HTL	HTL	
				<b>MU 6/4 (c)</b>		NAI	NAI	NAI	NAI	NAI	NAI	NAI	NAI	NAI	NAI
				<b>East Haven to West haven</b>											

#### F4.7 Policy Scenarios for Assessment: Scenario Area 7 - Carnoustie

CPU	SMP 1			SMP 2 Scenario Area 7 - Carnoustie										
	Management Unit 7	SMP1 Policies		Revised Management Units	KEY POLICY DRIVERS?	Policies to test – Scenario A			Policies to test – Scenario A					
		Short term	Long term to 2050			0-20 yrs	20-50 yrs	50-100 yrs	0-20 yrs	20-50 yrs	50-100 yrs			
7	MU 7/1 West Haven to Carnoustie Railway Station	Selectively Hold the Line: Limited Intervention / Hold the Line (<10-15 years)	Selectively Hold the Line: Limited Intervention / Hold the Line	<b>MU 7/1</b>	Carnoustie Railway	HTL	HTL	HTL	-	-	-			
	MU 7/2 Carnoustie Bay	Hold the Line	Hold the Line	<b>MU 7/2</b>	Carnoustie Golf Course	HTL	HTL	HTL	-	-	-			
				<b>West Haven to Carnoustie Station</b>										
				<b>Carnoustie Station to Barry Burn</b>										

#### F4.8 Policy Scenarios for Assessment: Scenario Area 8 – Buddon Ness

CPU	SMP 1			SMP 2 Scenario Area 8 – Buddon Ness							
	Management Unit 8	SMP1 Policies		Revised Management Units	KEY POLICY DRIVERS?	Policies to test – Scenario A			Policies to test – Scenario B		
		Short term	Long term to 2050			0-20 yrs	20-50 yrs	50-100 yrs	0-20 yrs	20-50 yrs	50-100 yrs
7	MU 7/3 Barry Sands East	Hold the Line	Hold the Line	<b>MU 8/1 Barry Sands East</b>	Carnoustie Golf Course MoD land Firth of Tay and Eden Estuary SAC / SPA / Ramsar	HTL	HTL	HTL	HTL	MR	MR
8	MU 8/1 Buddon Ness and Barry Sands West	No Active Intervention	No Active Intervention	<b>MU 8/2 Barry Buddon &amp; Barry Sands West</b>	MoD land Firth of Tay and Eden Estuary SAC / SPA / Ramsar	NAI	NAI	NAI	NAI	NAI	NAI

#### F4.9 Policy Scenarios for Assessment: Scenario Area 9 – Monifieth and Broughty Ferry

CPU	SMP 1			SMP 2 Scenario Area 9 – Monifieth and Broughty Ferry							
	Management Unit 8	SMP1 Policies		Revised Management Units	KEY POLICY DRIVERS?	Policies to test – Scenario A			Policies to test – Scenario B		
		Short term	Long term to 2050			0-20 yrs	20-50 yrs	50-100 yrs	0-20 yrs	20-50 yrs	50-100 yrs
8	MU 8/2 Monifieth	Hold the Line (<10-15 years)	Hold the Line	<b>MU 9/1 MoD Boundary to west Tayview Caravan Park</b>	Monifieth landfill Firth of Tay and Eden Estuary SAC / SPA / Ramsar	HTL	HTL	HTL	-	-	-
	MU 8/3 Monifieth West	Hold the Line (<10-15 years)	Hold the Line	<b>MU 9/2 Monifieth West</b>	Monifieth Firth of Tay and Eden Estuary SAC / SPA / Ramsar	HTL	HTL	HTL	-	-	-
	MU 8/4 Barnhill	Hold the Line (<10-15 years)	Hold the Line	<b>MU 9/3 Barnhill to the</b>	Railway Monifieth	HTL	HTL	HTL	-	-	-

CPU	SMP 1			SMP 2 Scenario Area 9 – Monifieth and Broughty Ferry								
	Management Unit 8	SMP1 Policies		Revised Management Units	KEY POLICY DRIVERS?	Policies to test – Scenario A			Policies to test – Scenario B			
		Short term	Long term to 2050			0-20 yrs	20-50 yrs	50-100 yrs	0-20 yrs	20-50 yrs	50-100 yrs	
				<b>Esplanade</b>	Broughty Ferry Broughty Ferry Landfill (Bridge Street) Firth of Tay and Eden Estuary SAC / SPA / Ramsar							
	MU 8/5 Broughty Ferry East	Hold the Line (<10-15 years)	Hold the Line	<b>MU 9/4 Broughty Ferry East</b>	Broughty Ferry Firth of Tay and Eden Estuary SAC / SPA / Ramsar	HTL	HTL	HTL	-	-	-	
	MU 8/6 Broughty Ferry	Hold the Line (<10-15 years)	Hold the Line	<b>MU 9/5 Broughty Ferry</b>	Broughty Ferry Firth of Tay and Eden Estuary SAC / SPA / Ramsar	HTL	HTL	HTL	-	-	-	