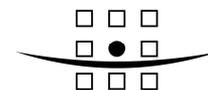


ROYAL HASKONING

Appendix H Economic Appraisal



ROYAL HASKONING

Appendix H Economic Appraisal

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H1 Introduction

A review of economic viability of the preferred plan for each area has been carried out. The review is undertaken in the context of each management area taking account of the economic consequences associated with each policy unit.

It should be noted that further detailed economic analysis will need to be undertaken in justifying any specific scheme in line with principles set out in the FCDPAG series of guidance.

The aim of the current review is to determine to what degree the preferred policy may be justified in economic terms relating to coast protection or sea defence. In addition the review aims to examine the nature of the economic justification; considering whether that justification lies strongly with the defence of clear direct benefits, in terms of direct flood or erosion risk to asset, or derives from associated damages such as amenity, recreation, traffic disruption or is driven by the aims of other plans.

In developing the SMP and policy therefore, the economic appraisal process comes initially from the perspective of risk management, identifying those aspects of the coast that may be lost due to flooding or encroachment of the sea through erosion. These economic values have been broadened considerably over the last 10 to 20 years to include aspects such as amenity and recreation, the cost implications in managing designated habitats and consideration of direct impact on individuals; considering this very much from a national standpoint in relation to loss to the nation. The SMP takes quite a high level approach to this and this is what is reported in the document in the preliminary assessment of each Policy Development Zone. Where possible further detailed information provided by studies or scheme appraisals is included in assessing the overall impact of different scenarios.

However, within the SMP guidance, the point is strongly made that in considering specific management of the coast the SMP should not be solely determined from this economic perspective. The SMP has to be guided by the longer term principles of sustainability, in that:

- What may be economically justified in the short term may in reality set a course of management for the future that would be technically difficult to sustain.
- Action or in-action in one area may have implications for management elsewhere on the coast.

Also, the guidance states that the SMP should be guided by the objectives set nationally; through policy, regionally; through the spatial and regeneration plans, and locally; through understanding the values attached to individual areas and communities. It is at the regional and local scales, in particular, that the emerging ICZM initiative will be most important in the

future. For the present the SMP has had to develop these values through consultation.

The SMP does, therefore, take account of, and is in areas driven by aspects of coastal aspiration. These are valid but often aspects to which monetary economic value cannot be sensibly by derived at present. Such an approach has, however, to be based on reality. There is no benefit in putting forward policy that is technically inappropriate or where there is no realistic expectation of funding. The corollary of this is that the SMP also has to identify where, through collaborative funding approaches, and where it is sustainable to do so, policy can be set which goes beyond the opportunities provided purely in relying on national funding for Flood and Coastal Erosion Risk Management. Where this is the case the SMP clearly states this and also identifies the alternative consequence and policy which would apply if funding is not available. These are seen as key areas where an ICZM approach would be of particular benefit.

In valuing aspects of the coast, as tangible or intangible assets, there are certain areas which are difficult. This applies to such values as community and community cohesion but, in particular, to the historic environment and landscape and the more general landscape and appreciation of the coastal environment. In the first of these, it is acknowledged that heritage assets and their contextual landscape, by their nature, are not something that can adapt. In many cases there is no full mitigation for loss. There is also concern that the funding mechanisms for what mitigation is possible, such as investigation, recording or relocation, are poorly defined. In the second, it is recognised that, while the need for mitigation for loss of internationally important nature conservation sites is defined, the impact on more general bio-diversity and landscape in general can be subjective. While the approach taken within the SMP is largely driven through consultation, these again are areas that needed a more integrated approach to be developed alongside the continuously developing process of shoreline management.

Various information has been used to develop the review. As part of the SMP2 GIS and analysis procedure, damages have been derived from the Modelling and Decision Support Framework (MDSF). This information considers solely values associated with property at risk from flooding and erosion. In addition to this, a considerable amount of work has been undertaken as part of the various strategies or scheme appraisals covering the whole area. The use of these is discussed in section H2 and H3.

The results of the review are reported in summary tables provided in Annex H1 and the development of these tables is discussed in section H4.

A discussion of sensitivity is provided in section H5 together with an identification of the approach to assessing the future costs of schemes or maintenance.

References to local studies are provided in the summary tables in section H4.

H2 Using of existing information

There has been a considerable effort put in to developing strategies for individual sections, in line with the recommendations and to address uncertainties identified in SMP1.

These studies have been able to consider the economic consequence for specific areas in far greater detail than would be appropriate for the SMP2. In particular, the strategies have been able to determine specific damages relating to flooding due to overtopping and consider damages relating to aspects such as amenity and uses of the coast. In addition the strategies have developed specific approaches to defence and from this have been able to assess future costs of scheme at least in outline.

However, in many areas the strategies have been developed only over a 50 year horizon and have used discount factors different from that now recommended by Treasury. The strategies also have not necessarily been developed over the same geographic area as policy units now defined in the SMP2. Finally, in some locations the SMP2 is now making recommendation which modify the options and recommendations considered by the strategy.

For these reasons it has been necessary to adapt information from earlier studies to allow this information to be used to effect in the SMP2.

Management of the coast is a continuous process. During the development of the SMP2 further detailed studies or strategies have been on going. While information has been incorporated as it becomes available, it is clearly not possible in the SMP2 document to include detailed information of concurrent studies not completed at the time of completing this document (January 2009). Notes are included in both the following tables and in the main text of the SMP2 document to highlight where further information has or may become available.

The SMP process is continuous, taking in further information and reviewing this in the context provided by the SMP2 document.

H3 Generation of new data

Determination of Damages

In all areas of the SMP2 the MDSF analysis has been used to provide a baseline of economic evaluation.

In simple terms MDSF uses the information contained in the SMP2 GIS to generate this economic assessment. Specifically, MDSF uses the mapping of erosion and flood risk and determines the timing of loss or probability of flooding of all assets identified in the areas affected.

The output of the MDSF provides information in relation to loss due to erosion, determining when an asset is lost, providing a value for that asset and an economic discounted value. This is reported as number and value of properties for each SMP2 epoch.

In terms of flooding and progressive erosion of land, MDSF provides a breakdown of private and commercial properties affected, together with a value of land eroded on average during a year, and determines an annual average value of loss. This is then converted into a present value of loss over a 100 year period appropriate to the SMP2 assessment. In deriving annual average damages it was found that the Environment Agency's basic flood maps provided insufficient information on lower return flood probabilities. Separate mapping was therefore undertaken providing flood returns of 1:10 years, 1:50 years, 1:100 years, 1:250 years and 1:1000 years. Water levels were taken based on current extreme values. No allowance has been made for future sea level rise in this economic assessment, although this has been assessed more generally in developing policy.

Determination of Costs

For much of the coast, where defences are in place, information exists from strategies or appraisals setting out future costs of defence. Where the SMP2 recommends adaptation to these plans, an assessment has had to be made of possible future costs.

In most areas where costs have had to be determined separate from strategies, this has been for works in the medium to long term. It is only possible to provide very outline costs for such work.

Where additional costs are identified the timing of such works is identified in the summary tables.

In some cases strategies have not identified maintenance costs for existing or new defences or have only considered such costs over a period of the next 50 years. In all cases where defence is recommended by the SMP2 an additional cost has been added to allow for routine maintenance over the period of the SMP2. The maintenance costs take into account the existing extent of defence and to a degree the condition or age of the works.

Average baseline costs have been used in estimating works. Typically these have been derived from a series of tables for different structure types. For each structure type the cost per metre of defence is estimated based on tidal and wave exposure. The key structure types are shown in the following tables.

Typical average cost tables, including for optimism bias.

Rock Revetment £/m

Tidal Exposure	Wave Exposure			
	Very Low	Low	Medium	High
Very Low				
Low		200	500	1000
Medium		1000	2000	4000
High		3000	7000	12500

Earth Embankment £/m

Tidal Exposure	Wave Exposure			
	Very Low	Low	Medium	High
Very Low				
Low		200	350	1500
Medium		1500	2000	4000
High		3000	3500	6000

Concrete Seawalls £/m

Tidal Exposure	Wave Exposure			
	Very Low	Low	Medium	High
Very Low	100	150	250	500
Low	200	300	500	1000
Medium	1000	1500	2000	5000
High	2500	4500	7000	12000

Sheet piled walls £/m

Tidal Exposure	Wave Exposure			
	Very Low	Low	Medium	High
Very Low				
Low		200	400	600
Medium		600	1000	2000
High	600	1000	2000	3500

Rock Breakwaters £/m

Tidal Exposure	Wave Exposure			
	Very Low	Low	Medium	High
Very Low				
Low		1500	1500	5000
Medium		2000	4000	8000
High		3000	6000	12500

In addition a cost of £2,500/m has been taken for removal of existing linear structures.

It certain circumstances individual structure costs have been used, represent the possible use of one off structures.

H4 Economic appraisal summary table

Annex H1 provides economic summary tables. The results from these are further summarised in the main SMP2 text.

The tables are produced for each management area. The tables comprise:

- The assessment of damages derived from MDSF. Three scenarios are considered for comparison and to allow an assessment of sensitivity. The three scenarios are No Active Intervention, With Present Management and the Preferred Plan. Associated with each MDSF report is an identification of other relevant information; either in terms of information from other studies or in terms of what additional damages might be considered in relation to the specific scenario. For each scenario a total damages is reported with notes to explain how this has been derived from the information.
- The assessment of costs. This is provided for the With Present Management scenario and for the Preferred Plan. In many cases this may be the same. As above the reference with respect to costs is identified and a brief explanation of how this has been used to derive a cost for the Preferred Plan.
- Finally, the table provides a brief comment or discussion in relation to the economic analysis and justification of the preferred policy. Where the Preferred Plan is shown solely from the summary of results not to be economically justified this is highlighted in terms of either additional benefits which might be considered or in terms of other values which the plan is attempting to address.

H5 Sensitivity

The critical uncertainties with respect to policy are highlighted and discussed in the main text of the SMP2. With respect to the economics, there is recognised uncertainty particularly in relation to erosion rates and possible timing of required works. Such uncertainty affects both the timing of the occurrence of damages and when works might be required. As such these aspects tend to balance in the economics.

Certainly within the scope of the SMP2, to assess the likely affordability and overall sustainability of policies such issues of timing are already accounted for. Clearly in terms of actual loss and hence planning of individual situations, timing may be quite important and the SMP2 has recommended monitoring to improve information.

Where the preferred policy changes from present management, the tables in Annex H1 allow comparison of the economics associated with this change. This highlights, purely from an economic perspective, the sensitivity of decisions being made.

Annex H1 Supporting Economic Appraisal Data – Damages/Benefits and Costs

Economic Assessment

Policy development Zone (PDZ)1

Management Area (MA): 01

Location: Lowestoft Ness and Outer Harbour (CH. 4 TO 5.5)

Policy Units (PU):1.1, 1.2, 1.3.

DAMAGES

Scenario: **No ACTIVE INTERVENTION**

MDSF Assessment

Annual average damages (AAD):			AAD (£k)	PVd 2025 (£k)	PVd 2055 (£k)	PVd 2105 (£k)	Total Present Value (£k)		
Flooding damages			150.36	2052.49	1678.67	1145.15	4876.3		
Continuing erosion of agricultural land			0	0	0	0	0		
Present value of erosion									
0-20 yrs			20 to 50 yrs			50 to 100 yrs			0
No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	
0	0	0	0	0	0	0	0	0	
							Total Damages		4876.3

Other information

Source: no assessment available	PV value (£k)	0
Notes: Includes all floodzone A and one tenth of floodzone B	Total NAI Damages (£k)	4876.3

Scenario: **WITH PRESENT MANAGEMENT**

MDSF Assessment

Annual average damages (AAD):			AAD (£k)	PVd 2025 (£k)	PVd 2055 (£k)	PVd 2105 (£k)	Total Present Value (£k)		
Flooding damages			17.32	236.42	193.36	131.91	561.7		
Continuing erosion of agricultural land			0	0	0	0	0		
Present value of erosion									
0-20 yrs			20 to 50 yrs			50 to 100 yrs			0
No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	
0	0	0	0	0	0	0	0	0	
							Total Damages		561.7

Other information

Source: no assessment available	PV value (£k)	0
Notes: Includes all floodzone A and one tenth of floodzone B	Total WPM Damages (£k)	561.7

Economic Assessment

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Policy development Zone (PDZ)1

Management Area (MA): 01

Location: Lowestoft Ness and Outer Harbour (CH. 4 TO 5.5)

Policy Units (PU): 1.1, 1.2, 1.3.

Scenario: **PREFERRED POLICY**
MDSF Assessment

Annual average damages (AAD):			AAD (£k)	PVd 2025 (£k)	PVd 2055 (£k)	PVd 2105 (£k)	Total Present Value (£k)
Flooding damages			17.32	236.42	193.36	131.91	561.7
Continuing erosion of agricultural land			0	0	0	0	0
Present value of erosion							
0-20 yrs			20 to 50 yrs			50 to 100 yrs	
No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)
0	0	0	0	0	0	0	0
Additional damages:							
Total Damages							561.7

COSTS

Present management assessment

	PV value (£k)
Source: no assessment available, outline assessment made.	
Costs based on refurbishment of defence in year 10, (£1000k) with maintenance in year 20 (£80k)	£750
Maintenance every 10 years (£200k)	£258
Major works in year 75 (£10000K) with maintenance every 10 years	£1430
Notes:	

Preferred Policy

Description	PV value (£k)
Hold the line of defence and raise defence in the future	£2500
Notes:	

RECONCILIATION

The damages associated with the frontage only include flood damages. There is major port infrastructure and the area is considered important for future regeneration. Future works would assume continued use as a port area and some costs would be met from other sources.

Economic Assessment

Policy development Zone (PDZ)1

Location: Inner Harbour (CH. 5.5 TO 6)

Management Area (MA): 02

Policy Units (PU):2.1, 2.2.

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DAMAGES

Scenario: **No ACTIVE INTERVENTION**

MDSF Assessment

Annual average damages (AAD):			AAD (£k)	PVd 2025 (£k)	PVd 2055 (£k)	PVd 2105 (£k)	Total Present Value (£k)	
Flooding damages			2807.30	38323.30	31343.43	21381.68	91048.4	
Continuing erosion of agricultural land			0	0	0	0	0	
Present value of erosion								
0-20 yrs			20 to 50 yrs			50 to 100 yrs		
No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)
0	0	0	0	0	0	0	0	0
Total Damages								91048.4

Other information

Source: no assessment available	PV value (£k)
	0
Notes: Includes the majority of floodzone B and one third of C, assumes overtopping of estuary bank	Total NAI Damages (£k)
	91048.4

Scenario: **WITH PRESENT MANAGEMENT**

MDSF Assessment

Annual average damages (AAD):			AAD (£k)	PVd 2025 (£k)	PVd 2055 (£k)	PVd 2105 (£k)	Total Present Value (£k)	
Flooding damages			134.18	1831.74	1498.12	1021.98	4351.8	
Continuing erosion of agricultural land			0	0	0	0	0	
Present value of erosion								
0-20 yrs			20 to 50 yrs			50 to 100 yrs		
No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)
0	0	0	0	0	0	0	0	0
Total Damages								4351.8

Other information

Source: no assessment available	PV value (£k)
	0
Notes: Includes the majority of floodzone B and one third of C, assumes overtopping of estuary bank	Total WPM Damages (£k)
	4351.8

Economic Assessment

Policy development Zone (PDZ)1

Location: Inner Harbour (CH. 5.5 TO 6)

Management Area (MA): 02

Policy Units (PU):2.1, 2.2.

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Scenario: **PREFERRED POLICY**
MDSF Assessment

Annual average damages (AAD):			AAD (£k)	PVd 2025 (£k)	PVd 2055 (£k)	PVd 2105 (£k)	Total Present Value (£k)	
Flooding damages			0	0	0	0	0	
Continuing erosion of agricultural land			0	0	0	0	0	
Present value of erosion								
0-20 yrs			20 to 50 yrs			50 to 100 yrs		
No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)
0	0	0	0	0	0	0	0	0
Additional damages: Significant regeneration planned for the area. It is assumed that future development would include a review of potential damages and this would be addressed through appropriate planning..								
Total Damages determined from current management							4351	

COSTS

Present management assessment

Source:	PV value (£k)
.	0
Notes: Costs in this area would be subject of regeneration plan.	

Preferred Policy

Description	PV value (£k)
Costs in this area would be subject of regeneration plan.	0
Notes:	

RECONCILIATION

There is significant risk under the NAI scenario. The area is subject of a regeneration plan. It is therefore not sensible or practical to identify costs against implementing the SMP policy as detailed works would be determined from the area action plan. However, given the significance of the area for regeneration a policy of HTL is determined. This policy would require alternative collaborative funding.

Economic Assessment

Policy development Zone (PDZ)1

Location: South Beach (CH. 6 TO 8)

Management Area (MA): 03

Policy Units (PU):3.1, 3.2, 3.3.

Page 1 of 2

DAMAGES

Scenario: **No ACTIVE INTERVENTION**

MDSF Assessment

Annual average damages (AAD):			AAD (£k)			PVd 2025 (£k)			PVd 2055 (£k)			PVd 2105 (£k)			Total Present Value (£k)		
Flooding damages			3280.21			44779.13			36623.46			24983.58			106386.2		
Continuing erosion of agricultural land			0			0			0			0			0		
Present value of erosion																	
0-20 yrs					20 to 50 yrs					50 to 100 yrs							
No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)			
0	0	0	81	3148	3181.3	137	9975	2610.8									
												5792.1					
												Total Damages			112178.3		

Other information

Source:	PV value (£k)
Recent PAR indicted amenity damages of £18M to £23M.	0
Notes: Assumes flooding for two thirds of floodzone C comes inland from the coast, not from the estuary. Assumed that agricultural flooding for floodzone C comes from this management area.	
Total NAI Damages (£k)	112178.3

Scenario: **WITH PRESENT MANAGEMENT**

MDSF Assessment

Annual average damages (AAD):			AAD (£k)			PVd 2025 (£k)			PVd 2055 (£k)			PVd 2105 (£k)			Total Present Value (£k)		
Flooding damages			126.93			1732.75			1417.16			966.75			4116.7		
Continuing erosion of agricultural land			0			0			0			0			0		
Present value of erosion																	
0-20 yrs					20 to 50 yrs					50 to 100 yrs							
No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)			
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
												0					
												Total Damages			4116.7		

Other information

Source:	PV value (£k)
no assessment available	0
Notes: Assumes flooding for two thirds of floodzone C comes inland from the coast, not from the estuary. Assumed that agricultural flooding for floodzone C comes from this management area.	
Total WPM Damages (£k)	4116.7

Economic Assessment

Policy development Zone (PDZ)1

Location: South Beach (CH. 6 TO 8)

Management Area (MA): 03

Policy Units (PU):3.1, 3.2, 3.3.

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Scenario: **PREFERRED POLICY**

MDSF Assessment

Annual average damages (AAD):			AAD (£k)	PVd 2025 (£k)	PVd 2055 (£k)	PVd 2105 (£k)	Total Present Value (£k)	
Flooding damages			0	0	0	0	0	
Continuing erosion of agricultural land			0	0	0	0	0	
Present value of erosion								
0-20 yrs			20 to 50 yrs			50 to 100 yrs		
No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)
0	0	0	0	0	0	0	0	0
Additional damages: Part of the area is included with the regeneration plan. It is assumed that the planning approach would address issues of flooding. The policy is HTL and no erosion damages would occur.								
Total Damages based on current management							4,117	

COSTS

Present management assessment

Source: no assessment available	PV value (£k)
Recent PAR indicated long term costs of £11M. This includes for beach recharge and works to maintain amenity. Amenity damages included in PAR amount to £18M to £23M. The preferred option selection includes for maintaining the beach in addition to improving sea walls. The appraisal focuses on the northern end of the frontage and does not include potential flood damages.	
Notes:	

Preferred Policy

Description	PV value (£k)
The SMP allows for an initial repair to the sea wall in year 6 (£1,750K) and on-going maintenance and beach management of £250k every 5 years. This maintenance would continue over the whole period with refurbishment of groynes and defences (£2.5M) in year 60.	£3,184
Notes:	

RECONCILIATION

The SMP allows for basic management of defences along the frontage in comparison with damages determined from MDSF analysis. The PAR takes in broader benefits and allows additional costs. It is identified in the SMP that there are broader benefits for maintaining defences and that there may be requirement for collaborative funding.

Economic Assessment
Policy development Zone (PDZ)1
Location: Pakefield (CH. 8 TO 10)

Management Area (MA): 04
Policy Units (PU):4.1, 4.2, 4.3, 4.4.

DAMAGES

Scenario: **No ACTIVE INTERVENTION**
MDSF Assessment

Annual average damages (AAD):			AAD (£k)	PVd 2025 (£k)	PVd 2055 (£k)	PVd 2105 (£k)	Total Present Value (£k)	
Flooding damages			0	0	0	0	0	
Continuing erosion of agricultural land			0	0	0	0	0	
Present value of erosion								
0-20 yrs			20 to 50 yrs			50 to 100 yrs		
No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)
0	0	0	0	0	0	22	1743	374.3
							Total Damages	374.3

Other information

Source: no assessment available	PV value (£k)
	0
Notes:	Total NAI Damages (£k)
	374.3

Scenario: **WITH PRESENT MANAGEMENT**
MDSF Assessment

Annual average damages (AAD):			AAD (£k)	PVd 2025 (£k)	PVd 2055 (£k)	PVd 2105 (£k)	Total Present Value (£k)	
Flooding damages			0	0	0	0	0	
Continuing erosion of agricultural land			0	0	0	0	0	
Present value of erosion								
0-20 yrs			20 to 50 yrs			50 to 100 yrs		
No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)
0	0	0	0	0	0	3	250	84.1
							Total Damages	84.1

Other information

Source: no assessment available	PV value (£k)
.	0
Notes: :	Total WPM Damages (£k)
	84.1

Economic Assessment

Policy development Zone (PDZ)1

Location: Pakefield (CH. 8 TO 10)

Management Area (MA): 04

Policy Units (PU): 4.1, 4.2, 4.3, 4.4.

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Scenario: **PREFERRED POLICY**
MDSF Assessment

Annual average damages (AAD):			AAD (£k)	PVd 2025 (£k)	PVd 2055 (£k)	PVd 2105 (£k)	Total Present Value (£k)	
Flooding damages			0	0	0	0	0	
Continuing erosion of agricultural land			0	0	0	0	0	
Present value of erosion								
0-20 yrs			20 to 50 yrs			50 to 100 yrs		
No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)
0	0	0	0	0	0	3	250	84.1
Additional damages:								
							Total Damages	84.1

COSTS

Present management assessment

Source: no assessment available	PV value (£k)
	0
Notes:	

Preferred Policy

Description	PV value (£k)
The preferred plan allows for continued maintenance during the first epoch (£50k) with more major support to the Pakefield road cliff in year 40 (£600k) with continued low level maintenance during the third epoch (£10k).	£270k
Notes:	

RECONCILIATION

The work in the area is primarily maintenance and support to existing defences. There would be a need to re-assess both damages and costs as the cliff line to the south retreats based on monitoring. The intent would be to maintain the width of beach in front of the church. A policy for managed realignment in the final epoch would require detailed consideration based on monitoring of the performance of the beach.

Economic Assessment

Policy development Zone (PDZ)1

Location: Kessingland (CH. 10 TO 13.5)

Management Area (MA): 05

Policy Units (PU):5.1, 5.2, 5.3, 5.4.

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Scenario: **PREFERRED POLICY**
MDSF Assessment

Annual average damages (AAD):			AAD (£k)	PVd 2025 (£k)	PVd 2055 (£k)	PVd 2105 (£k)	Total Present Value (£k)	
Flooding damages			0	0	0	0	0	
Continuing erosion of agricultural land			0	0	0	0	0	
Present value of erosion								
0-20 yrs			20 to 50 yrs			50 to 100 yrs		
No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)
0	0	0	0	0	0	0	0	0
Additional damages: The policy is to maintain protection to Kessingland village								
Total Damages							0	

COSTS

Present management assessment

Source: no assessment available	PV value (£k)
Notes:	

Preferred Policy

Description	PV value (£k)
The principle protection is provided by Benacre Ness. Costs are allowed for management of the beach to support the existing wall in the third epoch. Typically minor works might be required in years 50, 60 and 75 with costs of £150k, £200k and £250k respectively. Management to the area to the south would act to stabilise the beach. Management proposed for MA06 acknowledges the need for collaborative funding; if the default position of withdrawing maintenance were adopted this would impose additional cost in management of MA05.	£109
Notes:	

RECONCILIATION

The frontage is protected by Benacre Ness as this moves north there may be requirement for minor works to retain the existing defence. This approach is considered sustainable maintaining important elements of Kessingland Village.

Economic Assessment

Policy development Zone (PDZ)2

Location: Kessingland Levels (CH. 13.5 TO 15.5)

Management Area (MA): 06

Policy Units (PU):6.1, 6.2, 6.3.

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DAMAGES

Scenario: **No ACTIVE INTERVENTION**

MDSF Assessment

Annual average damages (AAD):			AAD (£k)	PVd 2025 (£k)	PVd 2055 (£k)	PVd 2105 (£k)	Total Present Value (£k)
Flooding damages			92.27	1259.67	1030.24	702.81	2992.7
Continuing erosion of agricultural land			0	0	0	0	0
Present value of erosion							
0-20 yrs			20 to 50 yrs			50 to 100 yrs	
No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)
0	0	0	0	0	0	32	2078
							1072.3
Total Damages							0

Other information

Source: Kessingland to Benacre Denes Coastal Management study 2004	PV value (£k)
Damages taken from the strategy identifies damages of £8842k, this is over and above the erosion damages determined by the MDSF analysis	8,8420
Notes: Assumes all flooding from floodzone D originates from MA06.	Total NAI Damages (£k) 9,914

Scenario: **WITH PRESENT MANAGEMENT**

MDSF Assessment

Annual average damages (AAD):			AAD (£k)	PVd 2025 (£k)	PVd 2055 (£k)	PVd 2105 (£k)	Total Present Value (£k)
Flooding damages			2.16	29.44	1030.24	702.81	1762.5
Continuing erosion of agricultural land			0	0	0	0	0
Present value of erosion							
0-20 yrs			20 to 50 yrs			50 to 100 yrs	
No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)
0	0	0	0	0	0	32	2028
							1062.7
Total Damages							0

Other information

Source: Kessingland to Benacre Denes Coastal Management study 2004	PV value (£k)
.Flood damages under a policy for withdrawing defence in year 20 would amount to £5,255. This excludes damages due to erosion	5,255
Notes: Assumes flooding from floodzone D originates from MA06.	Total WPM Damages (£k) 6,317

Economic Assessment

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Policy development Zone (PDZ)2

Management Area (MA): 06

Location: Kessingland Levels (CH. 13.5 TO 15.5)

Policy Units (PU):6.1, 6.2, 6.3.

Scenario: **PREFERRED POLICY**

MDSF Assessment

Annual average damages (AAD):			AAD (£k)	PVd 2025 (£k)	PVd 2055 (£k)	PVd 2105 (£k)	Total Present Value (£k)	
Flooding damages			0	0	0	0	232*	
Continuing erosion of agricultural land			0	0	0	0	0	
Present value of erosion								
0-20 yrs			20 to 50 yrs			50 to 100 yrs		
No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	
0	0	0	0	0	0	0	0	
Additional damages:								
Notes: *Flood damages taken from <i>Kessingland to Benacre Denes Coastal Management study 2004</i>							Total Damages	232

COSTS

Present management assessment

Source: <i>Kessingland to Benacre Denes Coastal Management study 2004</i>	PV value (£k)
Costs for maintaining the pump station and defence for 20 years	1378
Notes: these cost do no allow for defence of the southern coast of Kessingland.	

Preferred Policy

Description	PV value (£k)
The preferred plan is to manage the pump station for the next 20 years. Defences would then be set back but structures would be constructed at Beach Farm in year 30 and at Kessingland in year 50. The respective costs are estimated at £2.5M and £1M. Flood defence costs are taken from the strategy as being £1328 in epoch 1 and £2831 in epoch 2.	5279
Notes:	

RECONCILIATION

The current strategy does not take account of the potential long term management of Kessingland village. It fails to deliver against the SMP objectives. The assessment carried out in the SMP defines an approach which provides for sustainable management of the area but recognises that that may be a need for collaborative funding. This is highlighted in the main SMP2 document.

Economic Assessment

Page 1 of 2

Policy development Zone (PDZ)2

Management Area (MA): 07

Location: Benacre Broad to Easton Broad (CH. 15.5 TO 21)

Policy Units (PU):7.1, 7.2.

DAMAGES

Scenario: **No ACTIVE INTERVENTION**

MDSF Assessment

Annual average damages (AAD):			AAD (£k)	PVd 2025 (£k)	PVd 2055 (£k)	PVd 2105 (£k)	Total Present Value (£k)
Flooding damages			18.62	262.89	215.00	146.67	624.6
Continuing erosion of agricultural land				60	49	33	132
Present value of erosion							
0-20 yrs			20 to 50 yrs			50 to 100 yrs	
No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)
0	0	0	0	0	0	8	561
							212.1
Total Damages							993.2

Other information

Source:	PV value (£k)
Notes: damages associated with flooding at Potters bridge road not included There would significant impact on the historic environment due to the loss of Covehithe.	Total NAI Damages (£k) 993

Scenario: **WITH PRESENT MANAGEMENT**

MDSF Assessment

Annual average damages (AAD):			AAD (£k)	PVd 2025 (£k)	PVd 2055 (£k)	PVd 2105 (£k)	Total Present Value (£k)
Flooding damages			18.62	262.89	215.00	146.67	624.6
Continuing erosion of agricultural land				60	49	33	132
Present value of erosion							
0-20 yrs			20 to 50 yrs			50 to 100 yrs	
No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)
0	0	0	0	0	0	8	562
							196.9
Total Damages							993.2

Other information

Source:	PV value (£k)
Notes: : damages associated with flooding at Potters bridge road not included There would significant impact on the historic environment due to the loss of Covehithe.	Total WPM Damages (£k) 993

Economic Assessment

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Policy development Zone (PDZ)2

Management Area (MA): 07

Location: Benacre Broad to Easton Broad (CH. 15.5 TO 21)

Policy Units (PU):7.1, 7.2.

Scenario: **PREFERRED POLICY**

MDSF Assessment

Annual average damages (AAD):			AAD (£k)	PVd 2025 (£k)	PVd 2055 (£k)	PVd 2105 (£k)	Total Present Value (£k)
Flooding damages			18.62	262.89	215.00	146.67	624.6
Continuing erosion of agricultural land				60	49	33	132
Present value of erosion							
0-20 yrs			20 to 50 yrs			50 to 100 yrs	
No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)
0	0	0	0	0	0	8	562
							196.9
Additional damages: Disruption due to flooding at Potters Bridge is not included within MDSF analysis. There would significant impact on the historic environment due to the loss of Covehithe.							
Total Damages							993.3

COSTS

Present management assessment

Source:	PV value (£k)
No assessment specific to the MA available There would be a continued need for management of fluvial flow through the Easton Broad shingle bank. There would be significant cost implications associated with mitigation for loss of historic environment. Notes:	0

Preferred Policy

Description	PV value (£k)
No costs associated with NAI Notes:.	0

RECONCILIATION

The plan aims to maintain the natural function of the coast, avoiding future unsustainable defence. This also ensures continued supply of sediment to the coast to the south. There would be costs associated with managed realignment at Easton Broad while compensatory habitat issues are resolved. There would also need to be compensatory measures undertaken with respect to loss to the historic environment. This would incur considerable cost and current figures would give at best an indication of the likely minimum costs. At present there is a lack of agreement of funding responsibilities in this respect and although recognised to be a fundamental issue that needs to be resolved, costs associated with this have not been identified in the above assessment.

Economic Assessment

Policy development Zone (PDZ)3

Management Area (MA): 08

Location: Southwold and Southwold North (CH. 21 TO 24)

Policy Units (PU):8.1, 8.2, 8.3.

DAMAGES

Scenario: **No ACTIVE INTERVENTION**

MDSF Assessment

Annual average damages (AAD):			AAD (£k)			PVd 2025 (£k)			PVd 2055 (£k)			PVd 2105 (£k)			Total Present Value (£k)		
Flooding damages			914.89			12489.45			10214.73			6968.23			29672.4		
Continuing erosion of agricultural land			0			0			0			0			0		
Present value of erosion																	
0-20 yrs			20 to 50 yrs			50 to 100 yrs											
No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)						
2	23	280.3	73	3014	3152.1	360	26710	7611.3				11043.7					
												Total Damages			40,715.0		

Other information

Source: Southwold PAR	PV value (£k)
Damages include for loss of amenity of £15 M and loss of property and flooding of £45M	£70,000
Notes: Includes only Floodzone H.	Total NAI Damages (£k)
	40,715

Scenario: **WITH PRESENT MANAGEMENT**

MDSF Assessment

Annual average damages (AAD):			AAD (£k)			PVd 2025 (£k)			PVd 2055 (£k)			PVd 2105 (£k)			Total Present Value (£k)		
Flooding damages			28.78			392.94			321.37			219.22			933.5		
Continuing erosion of agricultural land			0			0			0			0			0		
Present value of erosion																	
0-20 yrs			20 to 50 yrs			50 to 100 yrs											
No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)						
3	47	333.3	4	125	223.3	0	0	0				566.6					
												Total Damages			£1,500		

Other information

Source: Southwold PAR	PV value (£k)
.Enhancement amenity is valued as £36M	0
Notes: Includes only floodzone H.	Total WPM Damages (£k)
	1500

Economic Assessment

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Policy development Zone (PDZ)3

Management Area (MA): 08

Location: Southwold and Southwold North (CH. 21 TO 24)

Policy Units (PU):8.1, 8.2, 8.3.

Scenario: **PREFERRED POLICY**
MDSF Assessment

Annual average damages (AAD):			AAD (£k)	PVd 2025 (£k)	PVd 2055 (£k)	PVd 2105 (£k)	Total Present Value (£k)	
Flooding damages			0	0	0	0	0	
Continuing erosion of agricultural land			0	0	0	0	0	
Present value of erosion								
0-20 yrs			20 to 50 yrs			50 to 100 yrs		
No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)
3	47	333.3	4	125	223.3	0	0	0
Additional damages: Potential residual flood risk							219	
Total Damages							775	

COSTS

Present management assessment

Source:	PV value (£k)
Southwold PAR	
Total cost estimate for scheme was £9.6M. Sunk costs in scheme to date amount to £5M. Net cost of future management	£4,600
	0

Notes: This assumes continued defence of Easton Marshes

Preferred Policy

Description	PV value (£k)
Planned expenditure from strategy to maintain defence to the town amounts to £1443k (epoch 1), £1436 (epoch 2), £1000k (epoch 3). Additional costs allow for retired defence to Easton Marshes (epoch 2 at £1350k, and epoch 3 raising defences £900K). Removal of existing flood defence in epoch 2 (£2.5K/m), construction of control at Southwold Pier and to the north of the frontage (£1480k) and subsequent expenditure of £2000k in epoch 3.	£8500
Notes:.	

RECONCILIATION

The SMP concurs with the view taken by the strategy that holding the front line of Easton Marshes is unlikely to be sustainable in the long term. It is anticipated that to maintain the high amenity value and provide beneficial sediment supply to Southwold there would need to be a change in approach. This, although potentially more costly, would still be justified against the NAI damages.

Economic Assessment

Policy development Zone (PDZ)3

Management Area (MA): 09

Location: The Denes to Walberswick Including the Mouth of the Estuary
(CH. 24 TO 25.5)

Policy Units (PU):9.1, 9.2, 9.3, 9.4, 9.5.

DAMAGES

Scenario: **No ACTIVE INTERVENTION**

MDSF Assessment

Annual average damages (AAD):			AAD (£k)	PVd 2025 (£k)	PVd 2055 (£k)	PVd 2105 (£k)	Total Present Value (£k)	
Flooding damages			535.55	7311.02	5979.46	4079.04	17369.5	
Continuing erosion of agricultural land			0	0	0	0	0	
Present value of erosion								
0-20 yrs			20 to 50 yrs			50 to 100 yrs		
No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)
0	0	0	204	8468	8560.8	0	0	0
							Total Damages	25,929

Other information

Source:	PV value (£k)
Blyth Estuary Strategy Estimated damages taken with the strategy for the whole estuary amount to £95M These damages do not take account of the potential loss due to subsequent erosion at Walberswick due to failure of the harbour entrance.	0
Notes: For the purpose of the SMP flood damages are taken from the strategy with additional erosion damages associated with the coast.	Total NAI Damages (£k) 104,377

Scenario: **WITH PRESENT MANAGEMENT**

MDSF Assessment

Annual average damages (AAD):			AAD (£k)	PVd 2025 (£k)	PVd 2055 (£k)	PVd 2105 (£k)	Total Present Value (£k)	
Flooding damages			279.67	3817.91	5979.46	4079.04	13876.4	
Continuing erosion of agricultural land			0	0	0	0	0	
Present value of erosion								
0-20 yrs			20 to 50 yrs			50 to 100 yrs		
No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)
0	0	0	0	0	0	189	11502	4477.2
							Total Damages	18,353

Other information

Source:	PV value (£k)
: Blyth Estuary Strategy Damages identified in strategy for withdrawal of defences.	47000
Notes: Total damages include for erosion at the coast	Total WPM Damages (£k) 55,500

Economic Assessment

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Policy development Zone (PDZ)3

Management Area (MA): 09

**Location: The Denes to Walberswick Including the Mouth of the Estuary
(CH. 24 TO 25.5)**

Policy Units (PU): 9.1, 9.2, 9.3, 9.4, 9.5.

Scenario: **PREFERRED POLICY**
MDSF Assessment

Annual average damages (AAD):			AAD (£k)	PVd 2025 (£k)	PVd 2055 (£k)	PVd 2105 (£k)	Total Present Value (£k)
Flooding damages			0	0	0	0	0
Continuing erosion of agricultural land			0	0	0	0	0
Present value of erosion							
0-20 yrs			20 to 50 yrs			50 to 100 yrs	
No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)
0	0	0	0	0	0	0	0
Additional damages: Damages are taken for option 8 of the strategy which allows for defence to the northern side of the estuary. Damages are indicative.							28,926
Total Damages							28,926

COSTS

Present management assessment

Source: Blyth Estuary strategy Costs based on existing proposals for withdrawal of maintenance.	PV value (£k) 18,771
Notes:	

Preferred Policy

Description Costs include for maintaining defences to the northern reach of the harbour, repair of the south pier and costs otherwise assigned under the estuary strategy Cost include for £25,823 for management within the estuary. Costs of £200k in year 3, £1M in year 10 and £6,25M in year 17 (epoch 1). Subsequent maintenance costs in epoch two are taken as a sum of £1.5M	PV value (£k) 30,698
Notes:	

RECONCILIATION

There continue to be discussions with respect to collaborative funding initiatives within the Blyth. The intent of the SMP plan is for the use of the harbour to be retained and for the harbour mouth to be managed to maintain benefit to coastal defence and to maintain use of the harbour. The preferred plan is economically justifiable but would under present rules not be funded fully by Flood and coastal erosion risk funding.

Economic Assessment

Policy development Zone (PDZ)3

Location: Blyth Inner Estuary (CH. N/A)

Management Area (MA): 10

Policy Units (PU):10.1, 10.2, 10.3.

DAMAGES

Scenario: **No ACTIVE INTERVENTION**

MDSF Assessment

Annual average damages (AAD):			AAD (£k)			PVd 2025 (£k)			PVd 2055 (£k)			PVd 2105 (£k)			Total Present Value (£k)		
Flooding damages			236.37			3227.13			2639.04			1800.29			7666.5		
Continuing erosion of agricultural land			0			0			0			0			0		
Present value of erosion																	
0-20 yrs			20 to 50 yrs						50 to 100 yrs								
No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)			
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Total Damages														7666			

Other information

Source: no assessment available														PV value (£k)	
														0	
Notes: Includes nine tenths of floodzone Z												Total NAI Damages (£k)		0	

Scenario: **WITH PRESENT MANAGEMENT**

MDSF Assessment

Annual average damages (AAD):			AAD (£k)			PVd 2025 (£k)			PVd 2055 (£k)			PVd 2105 (£k)			Total Present Value (£k)		
Flooding damages			236.37			3227.13			2639.04			1800.29			7666.5		
Continuing erosion of agricultural land			0			0			0			0			0		
Present value of erosion																	
0-20 yrs			20 to 50 yrs						50 to 100 yrs								
No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)			
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Total Damages														7666			

Other information

Source: no assessment available														PV value (£k)	
														0	
Notes: Includes nine tenths of floodzone Z												Total WPM Damages (£k)		0	

Economic Assessment

Policy development Zone (PDZ)3

Location: Blyth Inner Estuary (CH. N/A)

Management Area (MA): 10

Policy Units (PU): 10.1, 10.2, 10.3.

Page 2 of 2

Scenario: **PREFERRED POLICY**
MDSF Assessment

Annual average damages (AAD):			AAD (£k)	PVd 2025 (£k)	PVd 2055 (£k)	PVd 2105 (£k)	Total Present Value (£k)	
Flooding damages			0	0	0	0	0	
Continuing erosion of agricultural land			0	0	0	0	0	
Present value of erosion								
0-20 yrs			20 to 50 yrs			50 to 100 yrs		
No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)
0	0	0	0	0	0	0	0	0
Additional damages:								0
							Total Damages	0

COSTS

Present management assessment

Source: no assessment available	PV value (£k)
	0
Notes:	

Preferred Policy

Description	PV value (£k)
	0
Notes:	

RECONCILIATION

Damages and costs for this area are included within the economic assessment for MA9.

Economic Assessment

Policy development Zone (PDZ)3

Management Area (MA): 11

Location: Walberswick Marshes and Dunwich (CH. 25.5 to 30)

Policy Units (PU):11.1, 11.2,11.3, 11.4.

DAMAGES

Scenario: **No ACTIVE INTERVENTION**

MDSF Assessment

Annual average damages (AAD):			AAD (£k)	PVd 2025 (£k)	PVd 2055 (£k)	PVd 2105 (£k)	Total Present Value (£k)
Flooding damages			375.51	5126.29	4192.63	2860.11	12179.0
Continuing erosion of agricultural land			0	0	0	0	0
Present value of erosion							
0-20 yrs			20 to 50 yrs			50 to 100 yrs	
No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)
1	15	147.2	5	187	238.8	0	0
							386.0
Total Damages							12565

Other information

Source:	PV value (£k)
	0
Notes: Residential damages include half of floodzone Z and floodzone J, Agricultural damages include floodzone J only. These damages are principally associated with NAI intervention within MA 9 and 10 assuming failure of the harbour mouth structures.	Total NAI Damages (£k)

Scenario: **WITH PRESENT MANAGEMENT**

MDSF Assessment

Annual average damages (AAD):			AAD (£k)	PVd 2025 (£k)	PVd 2055 (£k)	PVd 2105 (£k)	Total Present Value (£k)
Flooding damages			10.4	142	116	80	339
Continuing erosion of agricultural land			0	0	0	0	0
Present value of erosion							
0-20 yrs			20 to 50 yrs			50 to 100 yrs	
No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)
0	0	0	5	145	271.2	0	0
							271.2
Total Damages							610

Other information

Source:	PV value (£k)
	0
Notes: Residential damages include half of floodzone Z and floodzone J, Agricultural damages include floodzone J only. Only damages due to flooding and erosion at Dunwich have been included	Total WPM Damages (£k)

Economic Assessment

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Policy development Zone (PDZ)3

Management Area (MA): 11

Location: Walberswick Marshes and Dunwich (CH. 25.5 TO 30)

Policy Units (PU): 11.1, 11.2, 11.3, 11.4

Scenario: **PREFERRED POLICY**

MDSF Assessment

Annual average damages (AAD):			AAD (£k)	PVd 2025 (£k)	PVd 2055 (£k)	PVd 2105 (£k)	Total Present Value (£k)
Flooding damages				0	0	0	0
Continuing erosion of agricultural land			0	0	0	0	0
Present value of erosion							
0-20 yrs			20 to 50 yrs			50 to 100 yrs	
No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)
0	0	0	5	145	271.2	0	0
Additional damages:							271.2
Notes: Only flood risk damages to the property at Dunwich has been included. There would be significant longer term damages associated with mitigating the loss of the historic environment associated with Dunwich.							Total Damages
							271

COSTS

Present management assessment

Source:	PV value (£k)
	0
Notes:	

Preferred Policy

Description	PV value (£k)
Local defence in epoch 2	53
Notes:	

RECONCILIATION

Minor works to sustain defence to village. Costs associated with management to the northern end of the area are considered in MA9.

The plan aims to maintain the natural function of the coast, avoiding future unsustainable defence. There would be costs associated with managed realignment of Walberswick Marshes. There would also need to be compensatory measures undertaken with respect to loss to the historic environment. This would incur considerable cost. At present there is a lack of agreement of funding responsibilities in this respect and although recognised to be a fundamental issue that needs to be resolved, costs associated with this have not been identified in the above assessment.

Economic Assessment

Policy development Zone (PDZ)4

Location: Dunwich to Minsmere (CH. 30 TO 36)

Management Area (MA): 12

Policy Units (PU):12.1, 12.2, 12.3, 12.4.

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DAMAGES

Scenario: **No ACTIVE INTERVENTION**

MDSF Assessment

Annual average damages (AAD):			AAD (£k)		PVd 2025 (£k)		PVd 2055 (£k)		PVd 2105 (£k)		Total Present Value (£k)	
Flooding damages			180.59		2465.35		2016.32		1375.49		5857.2	
Continuing erosion of agricultural land			0		0		0		0		0	
Present value of erosion												
0-20 yrs			20 to 50 yrs			50 to 100 yrs						
No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)				
0	0	0	1	39	48.9	0	0	0	48.9			
										Total Damages		5906

Other information

Source:	PV value (£k)
	0
Notes: Assumed floodzone K originates entirely from MA12	Total NAI Damages (£k) 5906

Scenario: **WITH PRESENT MANAGEMENT**

MDSF Assessment

Annual average damages (AAD):			AAD (£k)		PVd 2025 (£k)		PVd 2055 (£k)		PVd 2105 (£k)		Total Present Value (£k)	
Flooding damages			16.50		225.07		184.08		125.57		534.72	
Continuing erosion of agricultural land			0		0		0		0		0	
Present value of erosion												
0-20 yrs			20 to 50 yrs			50 to 100 yrs						
No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)				
0	0	0	1	36	15	0	0	0	36			
										Total Damages		573

Other information

Source:	PV value (£k)
	0
Notes: Assumed floodzone K originates entirely from MA12	Total WPM Damages (£k) 588

Economic Assessment

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Policy development Zone (PDZ)4

Management Area (MA): 12

Location: Dunwich to Minsmere (CH. 30 TO 36)

Policy Units (PU):12.1, 12.2, 12.3, 12.4.

Scenario: **PREFERRED POLICY**

MDSF Assessment

Annual average damages (AAD):			AAD (£k)	PVd 2025 (£k)	PVd 2055 (£k)	PVd 2105 (£k)	Total Present Value (£k)		
Flooding damages			16.50	225.07	184.08	125.57	534.72		
Continuing erosion of agricultural land			0	0	0	0	0		
Present value of erosion									
0-20 yrs			20 to 50 yrs			50 to 100 yrs			15
No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	
0	0	0	1	36	15	0	0	0	
Additional damages:									
Notes: Increased flood risk may impact on the historic environment specifically in association with the area around Leiston Abbey							Total Damages		573

COSTS

Present management assessment

Source:	PV value (£k)
Notes:	

Preferred Policy

Description	PV value (£k)
Costs allow for maintenance works to sluice in years 5 and 18 (epochs 1 and 2) and general repairs and management of 100k every 10 years. Further costs are allowed for rear defences over some 1.5km at 1£k/m. This work is taken in year 55	749
Notes:	

RECONCILIATION

Despite the large NAI potential damages the overall intent in this area is for MR. Works are envisaged for protecting properties to the rear of the valley and to Sizewell village and power station.

Costs and damages have been combine with those for MA 13 given below.

There may be costs associated with mitigation of loss to the historic environment in the area of Leiston Abbey, due to increased flood risk. The need for such work would need to be reassessed as the impacts of climate change are better defined. At present there is a lack of agreement of funding responsibilities in this respect and although recognised to be a fundamental issue that needs to be resolved, costs associated with this have not been identified in the above assessment.

Economic Assessment

Policy development Zone (PDZ)4

Location: Sizewell to Thorpeness (CH. 36 TO 41)

Management Area (MA): 13

Policy Units (PU):13.1, 13.2, 13.3.

DAMAGES

Scenario: **No ACTIVE INTERVENTION**

MDSF Assessment

Annual average damages (AAD):			AAD (£k)	PVd 2025 (£k)	PVd 2055 (£k)	PVd 2105 (£k)	Total Present Value (£k)
Flooding damages			0	0	0	0	0
Continuing erosion of agricultural land			0	0	0	0	0
Present value of erosion							
0-20 yrs			20 to 50 yrs			50 to 100 yrs	
No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)
0	0	0	1	32	96.9	7	446
							205.5
							302.4
Total Damages							302

Other information

Source:	PV value (£k)
	0
Notes: Assuming flooding around Sizewell originates from MA12	Total NAI Damages (£k)
	0

Scenario: **WITH PRESENT MANAGEMENT**

MDSF Assessment

Annual average damages (AAD):			AAD (£k)	PVd 2025 (£k)	PVd 2055 (£k)	PVd 2105 (£k)	Total Present Value (£k)
Flooding damages			0	0	0	0	0
Continuing erosion of agricultural land			0	0	0	0	0
Present value of erosion							
0-20 yrs			20 to 50 yrs			50 to 100 yrs	
No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)
0	0	0	0	0	0	7	593
							146.7
Total Damages							147

Other information

Source:	PV value (£k)
	0
Notes: Assuming flooding around Sizewell originates from MA12	Total WPM Damages (£k)
	0

Economic Assessment

Page 2 of 2

Policy development Zone (PDZ)4

Management Area (MA): 13

Location: Sizewell to Thorpeness (CH. 36 TO 41)

Policy Units (PU): 13.1, 13.2, 13.3.

Scenario: **PREFERRED POLICY**

MDSF Assessment

Annual average damages (AAD):			AAD (£k)	PVd 2025 (£k)	PVd 2055 (£k)	PVd 2105 (£k)	Total Present Value (£k)
Flooding damages			0	0	0	0	0
Continuing erosion of agricultural land			0	0	0	0	0
Present value of erosion							
0-20 yrs			20 to 50 yrs			50 to 100 yrs	
No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)
0	0	0	1	32	96.9	7	446
							205.5
Additional damages:							
Total Damages							302

COSTS

Present management assessment

Source:	PV value (£k)
	0
Notes:	

Preferred Policy

Description	PV value (£k)
The policy over this area is to HLT in front of the power station (with no envisaged costs over the medium term, but for NAI for the section further south. In this area there is longer term risk to property.	0
Notes:	

RECONCILIATION

No major intervention is considered for this frontage. Costs and damages for MA12 and 13 are combined in the main report.

Economic Assessment

Policy development Zone (PDZ)5

Management Area (MA): 14

Location: Thorpeness Haven to Aldeburgh (CH. 41 TO 46)

Policy Units (PU):14.1, 14.2, 14.3, 14.4.

DAMAGES

Scenario: **No ACTIVE INTERVENTION**

MDSF Assessment

Annual average damages (AAD):			AAD (£k)			PVd 2025 (£k)			PVd 2055 (£k)			PVd 2105 (£k)			Total Present Value (£k)		
Flooding damages			374.65			5114.55			4183.03			2853.55			12151.1		
Continuing erosion of agricultural land			0			0			0			0			0		
Present value of erosion																	
0-20 yrs			20 to 50 yrs			50 to 100 yrs											
No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)						
0	0	0	16.0	649.0	615.2	59.0	4183.0	1108.8				1724.0					
												Total Damages			13,875		

Other information

Source:												PV value (£k)					
												0					
Notes:												Total NAI Damages (£k)			13,875		

Scenario: **WITH PRESENT MANAGEMENT**

MDSF Assessment

Annual average damages (AAD):			AAD (£k)			PVd 2025 (£k)			PVd 2055 (£k)			PVd 2105 (£k)			Total Present Value (£k)		
Flooding damages			75.71			1033.67			845.41			576.71			2455.8		
Continuing erosion of agricultural land			0			0			0			0			0		
Present value of erosion																	
0-20 yrs			20 to 50 yrs			50 to 100 yrs											
No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)						
0	0	0	0	0	0	0	0	0				0					
												Total Damages			2455.8		

Other information

Source:												PV value (£k)					
Notes: It is assumed that flooding would occur to Thorpeness and the back of Aldeburgh but that erosion would be managed												Total WPM Damages (£k)			2456		

Economic Assessment

Page 2 of 2

Policy development Zone (PDZ)5

Management Area (MA): 14

Location: Thorpeness Haven to Aldeburgh (CH. 41 TO 46)

Policy Units (PU):14.1, 14.2, 14.3, 14.4.

Scenario: **PREFERRED POLICY**

MDSF Assessment

Annual average damages (AAD):			AAD (£k)	PVd 2025 (£k)	PVd 2055 (£k)	PVd 2105 (£k)	Total Present Value (£k)
Flooding damages			9.6	123	107	68	311
Continuing erosion of agricultural land			0	0	0	0	0
Present value of erosion							
0-20 yrs			20 to 50 yrs			50 to 100 yrs	
No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)
0	0	0	0	0	0	0	0
Additional damages:							
Total Damages							311

COSTS

Present management assessment

Source:	PV value (£k)
Estimated cost of maintaining protection against breach south of the Martello tower. Cost of raising defence to Aldeburgh and to rear of area to north.	16,500
Notes:	

Preferred Policy

Description	PV value (£k)
Cost allow for £4 M in year 20 to manage breach south of Martello tower. Further costs allowed in years 35, 50 and 75 to manage flood risk and raise wall along the Aldeburgh town frontage. Maintenance allowed at a sum of £250k every 20 years.	3,050
Notes:	0

RECONCILIATION

The cost and impact of protecting against a breach at Slaughden is significant. Even so there are important interests that would need to be considered with respect to the broader economic values of the area. For these reasons a policy of HTL has been given for MA 14.4 but NAI for MA 15. The cost for combining these two areas to (provide continued protection against a breach) is identified in the WPM costs above.

Economic Assessment

Policy development Zone (PDZ)5

Management Area (MA): 15

Location: Martello Tower to Orfordness (CH. 46 TO 53)

Policy Units (PU):15.1, 15.2.

Page 1 of 2

DAMAGES

Scenario: **No ACTIVE INTERVENTION**

MDSF Assessment

Annual average damages (AAD):			AAD (£k)			PVd 2025 (£k)			PVd 2055 (£k)			PVd 2105 (£k)			Total Present Value (£k)		
Flooding damages			24.00			327.37			267.76			182.65			777.78		
Continuing erosion of agricultural land			0			0			0			0			0		
Present value of erosion																	
0-20 yrs					20 to 50 yrs					50 to 100 yrs							
No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)			
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Total Damages														778			

Other information

Source: MDSF estuary damages - £67821.4k (includes floodzones O1, O2, O3, N1, N2)	PV value (£k)
Notes:	Total NAI Damages (£k) 0

Scenario: **WITH PRESENT MANAGEMENT**

MDSF Assessment

Annual average damages (AAD):			AAD (£k)			PVd 2025 (£k)			PVd 2055 (£k)			PVd 2105 (£k)			Total Present Value (£k)		
Flooding damages			24.00			327.37			267.76			182.65			777.78		
Continuing erosion of agricultural land			0			0			0			0			0		
Present value of erosion																	
0-20 yrs					20 to 50 yrs					50 to 100 yrs							
No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)			
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Total Damages														778			

Other information

Source: no assessment available	PV value (£k)
Notes: MDSF estuary damages - £14399.1k (includes floodzones O1, O2, O3, N1, N2)	Total WPM Damages (£k) 0

Economic Assessment

Policy development Zone (PDZ)5

Management Area (MA): 15

Location: Martello Tower to Orfordness (CH. 46 TO 53)

Policy Units (PU): 15.1, 15.2.

Scenario: **PREFERRED POLICY**

MDSF Assessment

Annual average damages (AAD):			AAD (£k)	PVd 2025 (£k)	PVd 2055 (£k)	PVd 2105 (£k)	Total Present Value (£k)		
Flooding damages			24.00	327.37	267.76	182.65	777.78		
Continuing erosion of agricultural land			0	0	0	0	0		
Present value of erosion									
0-20 yrs			20 to 50 yrs			50 to 100 yrs			0
No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	
0	0	0	0	0	0	0	0	0	
Additional damages:									
Total Damages							778		

COSTS

Present management assessment

Source: no assessment available	PV value (£k)
	0
Notes:	

Preferred Policy

Description	PV value (£k)
No costs associated with this MA	0
Notes:	

RECONCILIATION

Refer to note for MA14.

Economic Assessment

Page 1 of 2

Policy development Zone (PDZ)6

Management Area (MA): 16

Location: Orford Ness to Bawdsey Hill (CH. 53 TO 66.5)

Policy Units (PU):16.1, 16.2, 16.3, 16.4, 16.5, 16.6.

DAMAGES

Scenario: **No ACTIVE INTERVENTION**

MDSF Assessment

Annual average damages (AAD):			AAD (£k)	PVd 2025 (£k)	PVd 2055 (£k)	PVd 2105 (£k)	Total Present Value (£k)
Flooding damages			68.81	939.34	768.26	524.08	2231.7
Continuing erosion of agricultural land			0	0	0	0	0
Present value of erosion							
0-20 yrs			20 to 50 yrs			50 to 100 yrs	
No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)
0	0	0	3	85	212.4	17	1464
							372.7
							585.1
							Total Damages
							3,562

Other information

Source: East Lane PAR	PV value (£k)
The PAR includes for damages associated with loss of Martello Towers	12,366
Notes: Includes floodzones O4, P and Q	
	Total NAI Damages (£k)
	12,366

Scenario: **WITH PRESENT MANAGEMENT**

MDSF Assessment

Annual average damages (AAD):			AAD (£k)	PVd 2025 (£k)	PVd 2055 (£k)	PVd 2105 (£k)	Total Present Value (£k)
Flooding damages			4.94	67.36	55.09	37.58	160.0
Continuing erosion of agricultural land			0	0	0	0	0
Present value of erosion							
0-20 yrs			20 to 50 yrs			50 to 100 yrs	
No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)
0	0	0	3	85	212.4	17	1464
							372.7
							585.1
							Total Damages
							745

Other information

Source: East Lane PAR	PV value (£k)
.WPM only assumes protection over the next 25 years	0
Notes: Includes floodzones O4, P and Q	
	Total WPM Damages (£k)
	0

Economic Assessment

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Policy development Zone (PDZ)6

Management Area (MA): 16

Location: Orford Ness to Bawdsey Hill (CH. 53 TO 66.5)

Policy Units (PU): 16.1, 16.2, 16.3, 16.4, 16.5, 16.6.

Scenario: **PREFERRED POLICY**

MDSF Assessment

Annual average damages (AAD):			AAD (£k)	PVd 2025 (£k)	PVd 2055 (£k)	PVd 2105 (£k)	Total Present Value (£k)
Flooding damages			0	0	0	0	0
Continuing erosion of agricultural land			0	0	0	0	0
Present value of erosion							
0-20 yrs			20 to 50 yrs			50 to 100 yrs	
No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)
0	0	0	0	0	0	3	162
							116.3
Additional damages: East Lane PAR identifies residual damages not identified by MDFS analysis (£1,627k PV)							
Notes:							Total Damages
							1,627

COSTS

Present management assessment

Source:	PV value (£k)
	0
Notes:	

Preferred Policy

Description	PV value (£k)
Main cost associated with maintenance at East Lane addressing periodic erosion.	3,334
Notes:	

RECONCILIATION

There is uncertainty as to when sediment may be released from the North Weir Point. This significantly impacts on East Lane. Despite this, and recognising that private investment has now been made in defence of East Lane, the policy is for HTL. This recognises that potential need for further private investment in the longer term. This has been highlighted in the main document.

Economic Assessment

Policy development Zone (PDZ)6

Management Area (MA): 17

Location: Bawdsey Hill to Mouth of Deben (CH. 66.5 TO 71)

Policy Units (PU):17.1, 17.2, 17.3, 17.4.

DAMAGES

Scenario: **No ACTIVE INTERVENTION**

MDSF Assessment

Annual average damages (AAD):			AAD (£k)			PVd 2025 (£k)			PVd 2055 (£k)			PVd 2105 (£k)			Total Present Value (£k)		
Flooding damages			650.47			8879.89			7262.59			4954.34			21096.8		
Continuing erosion of agricultural land			0			0			0			0			0		
Present value of erosion																	
0-20 yrs			20 to 50 yrs						50 to 100 yrs								
No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)			
0	0	0	42	1175	2557.5	1	63	38.8									
												Total Damages			23,693		

Other information

Source:	PV value (£k)
	0
Notes: Includes all of floodzones R, S1 and S2	Total NAI Damages (£k)
	23,693

Scenario: **WITH PRESENT MANAGEMENT**

MDSF Assessment

Annual average damages (AAD):			AAD (£k)			PVd 2025 (£k)			PVd 2055 (£k)			PVd 2105 (£k)			Total Present Value (£k)		
Flooding damages			59.11			807.18			660.17			450.34			1917.7		
Continuing erosion of agricultural land			0			0			0			0			0		
Present value of erosion																	
0-20 yrs			20 to 50 yrs						50 to 100 yrs								
No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)			
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
												Total Damages			0		

Other information

Source:	PV value (£k)
	0
Notes: Includes all of floodzones R, S1 and S2 Based on existing flood defence standard	Total WPM Damages (£k)
	1917

Economic Assessment

Policy development Zone (PDZ)6

Management Area (MA): 17

Location: Bawdsey Hill to Mouth of Deben (CH. 66.5 TO 71)

Policy Units (PU):17.1, 17.2, 17.3, 17.4.

Scenario: **PREFERRED POLICY**

MDSF Assessment

Annual average damages (AAD):			AAD (£k)	PVd 2025 (£k)	PVd 2055 (£k)	PVd 2105 (£k)	Total Present Value (£k)
Flooding damages			59.11	807.18	660.17	450.34	1917.7
Continuing erosion of agricultural land			0	0	0	0	0
Present value of erosion							
0-20 yrs			20 to 50 yrs			50 to 100 yrs	
No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)
0	0	0	0	0	0	0	0
Additional damages:							
Total Damages							0

COSTS

Present management assessment

Source:	PV value (£k)
No information yet available from Estuary strategy	0
Notes:	

Preferred Policy

Description	PV value (£k)
Continue to maintain defence at the entrance. No information is available on cost of defence within the estuary	0
Notes:	

RECONCILIATION

The intent is to maintain the entrance configuration of the estuary mouth. Costs associated with this depend on completion of the estuary strategy.

Economic Assessment

Policy development Zone (PDZ)6

Location: North Felixstowe (CH. 71 TO 73)

Management Area (MA): 18

Policy Units (PU):18.1, 18.2.

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DAMAGES

Scenario: **No ACTIVE INTERVENTION**

MDSF Assessment

Annual average damages (AAD):			AAD (£k)	PVd 2025 (£k)	PVd 2055 (£k)	PVd 2105 (£k)	Total Present Value (£k)
Flooding damages			0	0	0	0	0
Continuing erosion of agricultural land			0	0	0	0	0
Present value of erosion							
0-20 yrs			20 to 50 yrs			50 to 100 yrs	
No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)
0	0	0	25	1117	1164.8	25	1654
							747.1
							1911.9
							Total Damages
							0

Other information

Source:	PV value (£k)
	0
Notes:	Total NAI Damages (£k)
	0

Scenario: **WITH PRESENT MANAGEMENT**

MDSF Assessment

Annual average damages (AAD):			AAD (£k)	PVd 2025 (£k)	PVd 2055 (£k)	PVd 2105 (£k)	Total Present Value (£k)
Flooding damages			0	0	0	0	0
Continuing erosion of agricultural land			0	0	0	0	0
Present value of erosion							
0-20 yrs			20 to 50 yrs			50 to 100 yrs	
No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)
0	0	0	0	0	0	0	0
							0
							Total Damages
							0

Other information

Source: no assessment available	PV value (£k)
	0
Notes:	Total WPM Damages (£k)
	0

Economic Assessment

Policy development Zone (PDZ)6

Management Area (MA): 18

Location: North Felixstowe (CH. 71 TO 73)

Policy Units (PU):18.1, 18.2.

Scenario: **PREFERRED POLICY**

MDSF Assessment

Annual average damages (AAD):			AAD (£k)	PVd 2025 (£k)	PVd 2055 (£k)	PVd 2105 (£k)	Total Present Value (£k)
Flooding damages			0	0	0	0	0
Continuing erosion of agricultural land			0	0	0	0	0
Present value of erosion							
0-20 yrs			20 to 50 yrs			50 to 100 yrs	
No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)
0	0	0	0	0	0	0	0
Additional damages:							
Total Damages							0

COSTS

Present management assessment

Source:	PV value (£k)
	0
Notes:	

Preferred Policy

Description	PV value (£k)
Costs are taken from the north Felixstowe Strategy. The Strategy recommends a responsive approach, recognising the uncertainty of sediment supply from the Knolls.	1.904
Notes:	

RECONCILIATION

The SMP policy confirms that set out by the strategy.

Economic Assessment

Policy development Zone (PDZ)7

Management Area (MA): 19

Location: Cobbold's Point to Landguard Point (CH. 73 TO 78.5)

Policy Units (PU):19.1, 19.2, 19.3, 19.4, 19.5.

DAMAGES

Scenario: **No ACTIVE INTERVENTION**

MDSF Assessment

Annual average damages (AAD):			AAD (£k)	PVd 2025 (£k)	PVd 2055 (£k)	PVd 2105 (£k)	Total Present Value (£k)
Flooding damages			32881.8	448880.04	367125.04	250443.26	1066448.3
Continuing erosion of agricultural land			0	0	0	0	0
Present value of erosion							
0-20 yrs			20 to 50 yrs			50 to 100 yrs	
No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)
0	0	0	36	1331	1642.1	75	5360
							1668.7
							3010.8
Total Damages							1069,458

Other information

Source: South Felixstowe Strategy	PV value (£k)
The strategy identified damages of £750m. there were also significant amenity benefits identified over the whole area	750
Notes: Assumes all of floodzone T originates from MA19	Total NAI Damages (£k)
	1069,458

Scenario: **WITH PRESENT MANAGEMENT**

MDSF Assessment

Annual average damages (AAD):			AAD (£k)	PVd 2025 (£k)	PVd 2055 (£k)	PVd 2105 (£k)	Total Present Value (£k)
Flooding damages			746.75	10193.99	8337.36	5687.53	24218.89
Continuing erosion of agricultural land			0	0	0	0	0
Present value of erosion							
0-20 yrs			20 to 50 yrs			50 to 100 yrs	
No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)
0	0	0	0	0	0	0	0
							0
Total Damages							24218

Other information

Source:	PV value (£k)
	0
Notes: Assumes all of floodzone T originates from MA19	Total WPM Damages (£k)
	24218

Economic Assessment

Policy development Zone (PDZ)7

Management Area (MA): 19

Location: Cobbold's Point to Landguard Point (CH. 73 TO 78.5)

Policy Units (PU):19.1, 19.2, 19.3, 19.4, 19.5.

Scenario: **PREFERRED POLICY**

MDSF Assessment

Annual average damages (AAD):		AAD (£k)	PVd 2025 (£k)	PVd 2055 (£k)	PVd 2105 (£k)	Total Present Value (£k)
Flooding damages		746.75	10193.99	8337.36	5687.53	24218.89
Continuing erosion of agricultural land		0	0	0	0	0
Present value of erosion						
0-20 yrs		20 to 50 yrs			50 to 100 yrs	
No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties
0	0	0	0	0	0	0
Additional damages:						
.						
Total Damages						24218

COSTS

Present management assessment

Source:	PV value (£k)
Notes:	0

Preferred Policy

Description	PV value (£k)
Coast are taken from the South Felixstowe strategy	35,500
Notes:	

RECONCILIATION

In addition to the significant damages associated directly with erosion and flooding, the frontage provides an important recreational and tourism resource to the town. The sea front supports the intent for regeneration of the area.

Economic Assessment

Policy development Zone (PDZ)8

Management Area (MA): 20

Location: Landguard Point to Felixstowe Port (South) (CH. 78.5 TO 79.5)

Policy Units (PU):20.1.

DAMAGES

Scenario: **No ACTIVE INTERVENTION**

MDSF Assessment

Annual average damages (AAD):			AAD (£k)			PVd 2025 (£k)			PVd 2055 (£k)			PVd 2105 (£k)			Total Present Value (£k)		
Flooding damages			0			0			0			0			0		
Continuing erosion of agricultural land			0			0			0			0			0		
Present value of erosion																	
0-20 yrs					20 to 50 yrs					50 to 100 yrs							
No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)			
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Total Damages														0			

Other information

Source:	PV value (£k)
	0
Notes: Damages within this area are included with MA19	Total NAI Damages (£k)
	0

Scenario: **WITH PRESENT MANAGEMENT**

MDSF Assessment

Annual average damages (AAD):			AAD (£k)			PVd 2025 (£k)			PVd 2055 (£k)			PVd 2105 (£k)			Total Present Value (£k)		
Flooding damages			0			0			0			0			0		
Continuing erosion of agricultural land			0			0			0			0			0		
Present value of erosion																	
0-20 yrs					20 to 50 yrs					50 to 100 yrs							
No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)			
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Total Damages														0			

Other information

Source:	PV value (£k)
	0
Notes: : Damages within this area are included with MA19	Total WPM Damages (£k)
	0

Economic Assessment

Page 2 of 2

Policy development Zone (PDZ)8

Management Area (MA): 20

Location: Landguard Point to Felixstowe Port (South) (CH. 78.5 TO 79.5)

Policy Units (PU):20.1.

Scenario: **PREFERRED POLICY**

MDSF Assessment

Annual average damages (AAD):			AAD (£k)	PVd 2025 (£k)	PVd 2055 (£k)	PVd 2105 (£k)	Total Present Value (£k)
Flooding damages			0	0	0	0	0
Continuing erosion of agricultural land			0	0	0	0	0
Present value of erosion							
0-20 yrs			20 to 50 yrs			50 to 100 yrs	
No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)	PV for epoch (£k)	No. properties	Total Valuation (£k)
0	0	0	0	0	0	0	0
Additional damages:							
.							
Total Damages							0

COSTS

Present management assessment

Source:	PV value (£k)
	0
Notes:	

Preferred Policy

Description	PV value (£k)
Cost and damages for this area are included within those for MA19	0
Notes:	

RECONCILIATION

Maintenance of the defence of the frontage is important to reduce risk of flooding to the hinterland generally. The Fort is also an important heritage site and is important for tourism.