

## **Appendix G**

### **Economic Appraisal**



## Appendix G Economic Appraisal

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## G1 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.

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). 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 G2 and G3.

The results of the review are reported in summary tables provided in Annex H1 and the development of these tables is discussed in section G4.

A discussion of sensitivity is provided in section G5 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 G4.

## **G2 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 some 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 covering the full 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 a document to include detailed information of concurrent studies not completed at the time of completing this document (September 2008). 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.

## **G3 Generation of new data**

### **Determination of Damages**

In all areas of the SMP2 the MDSF 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 in to a present value of loss over a 100 year period appropriate to the SMP2 assessment.

### **Determination of Costs**

For much of the coast, where defences are in place, information exists from strategies of appraisal 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.

## **G4 Economic appraisal summary table**

Annex G1 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.



## **G5 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 with 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 G1 allow comparison of the economics associated with this change. This highlights, purely from an economic perspective, the sensitivity of decisions being made.



## **Annex G1 Supporting Economic Appraisal Data – Damages/Benefits and Costs**



**Economic Assessment**  
**Policy development Zone (PDZ)1**  
**Location: North of Berwick**

**Management Area (MA): 01**  
**Policy Units (PU):1.1, 1.2, 1.3**

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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                         |                      |                   | No damages identified. |                      |                   |                |                          |                   |  |
| Continuing flooding of agricultural land |                      |                   |                        |                      |                   |                | 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                            |                      |                   |                        |                      |                   |                |                          |                   |  |

*Other information*

|   |                               |
|---|-------------------------------|
| <b>Source:</b> no more detailed studies   | <b>PV value (£k)</b>          |
|   | 0                             |
| Notes: Potential loss to areas of Holiday park during final epoch.<br>No allowance made for potential amenity loss. | <b>Total NAI Damages (£k)</b> |
|   | 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                         |                      |                   | No damages     |                      |                   |                |                      |                          | 0 |
| Continuing flooding of agricultural land |                      |                   |                |                      |                   |                |                      | No damages               | 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                            |                      |                   |                |                      |                   |                |                      |                          |   |

*Other information*

|   |                               |
|---|-------------------------------|
| <b>Source:</b> no more detailed studies   | <b>PV value (£k)</b>          |
|   | 0                             |
| Notes: Potential loss to areas of Holiday park during final epoch.<br>No allowance made for potential amenity loss. | <b>Total WPM Damages (£k)</b> |
|   | 0                             |

**Economic Assessment**  
**Policy development Zone (PDZ)1**  
**Location: North of Berwick**

**Management Area (MA): 01**  
**Policy Units (PU):1.1, 1.2, 1.3**

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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  |                      |                   | No flood damages identified |                      |                   |                |                      |                   |                          |
| Continuing flooding of agricultural land  |                      |                   |                             |                      |                   |                | No damages           |                   |                          |
| 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:<br>Potential loss of some areas of the Holiday park in epoch 3. Possible amenity loss |                      |                   |                             |                      |                   |                |                      |                   |                          |
|   |                      |                   |                             |                      |                   |                |                      | Total Damages     |                          |

## COSTS

Present management assessment

| Source:             | PV value (£k) |
|---------------------|---------------|
| No costs identified |               |
| Notes:              |               |

Preferred Policy

| Description  | PV value (£k) |
|--|---------------|
| No active intervention along much of the coastline with holding the line at Fisherman's Haven that will become managed retreat during the 2 <sup>nd</sup> epoch. This will allow the coast to respond naturally. The breakwater would e maintained and action taken to address safety issues | 27            |
| Notes:   |               |

## RECONCILIATION

The area is considered an important asset in terms of recreational and. While there is little direct economic benefit, to maintain access and use of the Fisherman's Haven beach will require works to manage safe use.

**Economic Assessment**  
**Policy development Zone (PDZ)1**  
**Location: Tweed Estuary**

**Management Area (MA): 02**  
**Policy Units (PU):2.1. 2.2, 2.3. 2.4. 2.5**

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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                         |                      |                   | 106            | 1,444                | 1,181             | 805            | 3432                     |                   |
| Continuing flooding of agricultural land |                      |                   | 0.02           | 0.2                  | 0.2               | 0.1            | 0.5                      |                   |
| 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  | 487                  | 377               | 59             | 5,576                | 1793              | 106            | 10,642                   | 1691              |
|  |                      |                   |                |                      |                   |                | Total Damages            | 7293.5            |

*Other information*

|  |                               |
|--|-------------------------------|
| <b>Source:</b> Till and Beamish CFMP Scoping Report  | <b>PV value (£k)</b>          |
| Expected ~£3m damages to both residential and non-residential properties from Catchment flood issues, not specifically from coastal flooding and erosion.                              | 3,000                         |
| Notes: Potential for significant increase in damages based on worst case erosion to Spital frontage.<br>No account is taken for overtopping damages. Damages are based existing assets | <b>Total NAI Damages (£k)</b> |
|  | £7293.5                       |

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                         |                      |                   |                |                      |                   |                |                      |                   | Assumes flood defence maintained. No damages |               |               |               |                          | 0 |
| Continuing flooding of agricultural land |                      |                   |                |                      |                   |                |                      |                   | No damages                                   |               |               |               |                          | 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                                |               |               |               |                          |   |

*Other information*

|  |                               |
|--|-------------------------------|
| <b>Source:</b> : no more detailed studies        | <b>PV value (£k)</b>          |
| .  | 0                             |
| Notes: Assumes existing defences are maintained. | <b>Total WPM Damages (£k)</b> |
|  | 0                             |

**Economic Assessment**  
**Policy development Zone (PDZ)1**  
**Location: Tweed Estuary**

**Management Area (MA): 02**  
**Policy Units (PU):2.1, 2.2, 2.3. 2.4. 2.5.**

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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                         |                      |                   | Assumes flood defence maintained. |                      |                   |                |                      |                   |               |               |                          |
| Continuing flooding of agricultural land |                      |                   |                                   |                      |                   |                |                      |                   | No damages    |               |                          |
| 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:                      |                      |                   |                                   |                      |                   |                |                      |                   |               |               |                          |
|  |                      |                   |                                   |                      |                   |                |                      |                   |               | Total Damages |                          |

## COSTS

Present management assessment

| Source:             | PV value (£k) |
|---------------------|---------------|
| No detailed studies |               |
| Notes:              |               |

Preferred Policy

| Description   | PV value (£k) |
|---|---------------|
| Need to maintain North breakwater   | 655           |
| Management of Spital Point in years 20 and 40 and beach management in year 70 | 1074          |
| General maintenance   | 535           |
| Notes:  | 2264          |

## RECONCILIATION

Maintaining the north breakwater maintains the essential support to management of areas within the estuary. Estimated costs are included for defence of Spital point, although this requires detailed study associated with potential development. Future works would be required to maintain the beach in front of Spital. Potential costs are justified in comparison with damages.



**Economic Assessment**  
**Policy development Zone (PDZ)1**  
**Location: Scremerston Cliffs**

**Management Area (MA): 03**  
**Policy Units (PU):3.1.**

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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                         |                      |                   | No damages identified |                      |                   |                |                      |                   |               |  |                          | 4 |
| Continuing flooding of agricultural land |                      |                   | No damages identified |                      |                   |                |                      |                   |               |  |                          |   |
| 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                 | 0             |  |                          |   |
| Total Damages                            |                      |                   |                       |                      |                   |                |                      |                   |               |  |                          |   |

Other information

|                                 |  |  |  |  |  |                        |               |
|---------------------------------|--|--|--|--|--|------------------------|---------------|
| Source: no assessment available |  |  |  |  |  |                        | 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                         |                      |                   | Defences are maintained |                      |                   |                |                      |                   |               |  |                          | 0 |
| Continuing flooding of agricultural land |                      |                   |                         |                      |                   |                |                      |                   | No damages    |  | 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 |  |                          |   |

Other information

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

**Economic Assessment**  
**Policy development Zone (PDZ)1**  
**Location: Scremerston Cliffs**

**Management Area (MA): 03**  
**Policy Units (PU): 3.1.**

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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 flooding of agricultural land |                      |                   | 0              |                      | 0                 |                | 00                   |                   | 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              | 0                    | 0                        | 0 |  |  |
| Additional damages:                      |                      |                   |                |                      |                   |                |                      |                   |                |                      |                          |   |  |  |
|  |                      |                   |                |                      |                   |                |                      |                   |                |                      | Total Damages            |   |  |  |

## COSTS

Present management assessment

| Source:  | PV value (£k) |
|--|---------------|
| There would be costs associated with management of amenity car parks |               |
| Notes:   |               |

Preferred Policy

| Description   | PV value (£k) |
|---|---------------|
| Natural development of the frontage is allowed with managed realignment in places to retain the recreational and amenity value of the frontage. | 0             |
| Notes:  |               |

## RECONCILIATION

The need for management is associated with the high ecological and recreational values of the area. .

## Economic Assessment

Policy development Zone (PDZ)1

Location: Holy Island Hinterland

Management Area (MA): 04

Policy Units (PU):4.1. 4.2. 4.3. 4.4. 4.5. 4.6. 4.7. 4.8.

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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                         |                      |                   | 12             | 173                  | 141               | 96             | 411                      |
| Continuing flooding of agricultural land |                      |                   | 42             | 575                  | 470               | 320            | 1366                     |
| 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)     |
| 8  | 731                  | 446               | 0              | 0                    | 0                 | 7              | 633                      |
|  |                      |                   |                |                      |                   | Total Damages  |                          |
|  |                      |                   |                |                      |                   |                |                          |
|  |                      |                   |                |                      |                   |                |                          |
|  |                      |                   |                |                      |                   |                |                          |
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**Economic Assessment**  
**Policy development Zone (PDZ)1**  
**Location: Holy Island Hinterland**

**Page 2 of 2**

**Management Area (MA): 04**

**Policy Units (PU): 4.1. 4.2. 4.3. 4.4. 4.5. 4.6. 4.7. 4.8.**

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 flooding of agricultural land |                      |                   | 19.63          |                      | 268               |                | 219                  |                   | 149           |  |                          |
| 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                            |                      |                   |                |                      |                   |                |                      |                   | 637           |  |                          |

## COSTS

Present management assessment

|  |                      |
|--|----------------------|
| <b>Source:</b> no assessment available | <b>PV value (£k)</b> |
|  | 0                    |
| Notes:                                 |                      |

Preferred Policy

|  |                      |
|--|----------------------|
| <b>Description</b>                           | <b>PV value (£k)</b> |
| Defence to hinterland at north and south low | 680                  |
| Maintain defence and improve along Ross low  | 374                  |
| Maintain defence at Warren Mill              | 176                  |
| Notes:                                       | 1229                 |

## RECONCILIATION

Good potential to re-create habitat at North and South Low, providing a more robust defence to dunes. Significant benefit in defence at Warren Mill and along road. There is justification to maintain Ross low but this relies on maintaining good dune adjustment Ross Back Sands. This may require some readjustment of the defence line as the dunes roll back.

## Economic Assessment

Policy development Zone (PDZ)1

Location: Holy Island North and East

Management Area (MA): 05

Policy Units (PU):5.1. 5.2.

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                         |                      |                   | No damages     |                      |                   |                |                      |                   |               |  |                          |
| Continuing flooding of agricultural land |                      |                   | No damages     |                      |                   |                |                      |                   |               |  |                          |
| 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                            |                      |                   |                |                      |                   |                |                      |                   |               |  |                          |

Other information

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

Scenario: **WITH PRESENT MANAGEMENT**

MDSF Assessment

| Annual average damages (AAD):            |                      |                   | AAD            | 2025                 | 2055              | 2105           | Total AAD (£)        | Total Present Value (£k) |
|--|----------------------|-------------------|----------------|----------------------|-------------------|----------------|----------------------|--------------------------|
| Flooding damages                         |                      |                   | . No damages   |                      |                   |                |                      | 0                        |
| Continuing flooding of agricultural land |                      |                   |                |                      |                   |                | No damages           | 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        | 0                        |

Other information

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

## Economic Assessment

Policy development Zone (PDZ)1

Location: Holy Island North and East

Management Area (MA): 05

Policy Units (PU):5.1, 5.2.

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 flooding 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:   |                      |                   |                |                      |                   |                | -                        |
| Natural development of the coastline allowed in line with nature conservation interests |                      |                   |                |                      |                   |                | -                        |
| Total Damages   |                      |                   |                |                      |                   |                | 0                        |

## COSTS

Present management assessment

|  |                      |
|--|----------------------|
| <b>Source:</b> no assessment available | <b>PV value (£k)</b> |
| Notes:                                 |                      |

Preferred Policy

|  |                      |
|--|----------------------|
| <b>Description</b>   | <b>PV value (£k)</b> |
| To allow the coastline to develop naturally through No Active Intervention | 0                    |
| Notes:   |                      |

## RECONCILIATION

Supports natural development of the coast with no significant losses identified.

## Economic Assessment

Policy development Zone (PDZ)2

Location: Budle Bay to Seahouses

Management Area (MA): 06

Policy Units (PU):6.1. 6.2, 6.3, 6.4.

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                         |                      |                   | 0              | 0                    | 0                 | 0              |                      |                   | 0                        |
| Continuing flooding of agricultural land |                      |                   |                | 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) |                          |
| 24                                       | 1,618                | 1,044             | 55             | 3,241                | 1,225             | 60             | 5,704                | 750               | 3,019                    |
| Total Damages                            |                      |                   |                |                      |                   |                |                      |                   | 3,019                    |

Other information

|   |                                     |
|---|-------------------------------------|
| <b>Source:</b> Seahouses Strategy Study: Posford Haskoning 2004 | <b>PV value (£k)</b>                |
| Damages to the B1340  | 1,770                               |
| Damages to Seahouses  | 8,024                               |
| Notes: Strategy values provide a more detailed value of damages | <b>Total NAI Damages (£k)</b> 9,794 |

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                         |                      |                   | . No damages   |                      |                   |                | 0                        |                   |
| Continuing flooding of agricultural land |                      |                   |                |                      |                   |                | No damages               |                   |
| 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                 | 5              | 524                      | 84                |
|  |                      |                   |                |                      |                   |                | Total Damages            |                   |
|  |                      |                   |                |                      |                   |                | 84                       |                   |

Other information

|                |                                 |
|----------------|---------------------------------|
| <b>Source:</b> | <b>PV value (£k)</b>            |
| .              | 0                               |
| Notes: :       | <b>Total WPM Damages (£k)</b> 0 |

## Economic Assessment

**Policy development Zone (PDZ)2**  
**Location: Budle Bay to Seahouses**

**Management Area (MA): 06**

**Policy Units (PU): 6.1. 6.2, 6.3, 6.4.**

**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              |                      |                   |                          |
| Continuing flooding of agricultural land  |                      |                   |                |                      |                   |                | No damages           |                   |                          |
| 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                 | 0                        |
| Additional damages:   |                      |                   |                |                      |                   |                |                      |                   |                          |
| Realignment of road in the 3 <sup>rd</sup> epoch would result in disruption damages. This could be mitigated by planning. |                      |                   |                |                      |                   |                |                      |                   | 663                      |
| Total Damages   |                      |                   |                |                      |                   |                |                      |                   | 663                      |

## COSTS

Present management assessment

|   |                      |
|---|----------------------|
| <b>Source:</b> Seahouses PAR: Royal Haskoning 2008                              | <b>PV value (£k)</b> |
| Seahouses protection about to be instated. Construction costs                   | 750                  |
| On going maintenance will require investment in harbour and defence structures. |                      |
| Notes:  |                      |

Preferred Policy

|   |                      |
|---|----------------------|
| <b>Description</b>  | <b>PV value (£k)</b> |
| Allowance made for future works in year 20, 50 and 70; based on individual repairs. | 428                  |
| Notes:  |                      |

## RECONCILIATION

Damages taken from PAR. Significant benefit in sustaining village.



**Economic Assessment**  
**Policy development Zone (PDZ)2**  
**Location: Seahouses to Beadnell**

**Management Area (MA): 07**  
**Policy Units (PU):7.1. 7.2.**

**Page 1 of 2**

**DAMAGES**

Scenario: **No ACTIVE INTERVENTION**  
MDSF Assessment

| Annual average damages (AAD):            |                      |                   |                |                      |                   |                |                      |                   | Total Present Value (£k) |  |            |
|--|----------------------|-------------------|----------------|----------------------|-------------------|----------------|----------------------|-------------------|--------------------------|--|------------|
| Flooding damages                         |                      |                   | 0.06           |                      | 0.9               |                | 0.7                  |                   | 0.5                      |  | 2.1<br>6.5 |
| Continuing flooding of agricultural land |                      |                   | 0.2            |                      | 2.7               |                | 2.2                  |                   | 1.52                     |  |            |
| 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                 | 8              | 0                    | 0                 | 0              | 0                    | 0                 | 0                        |  |            |
| Total Damages                            |                      |                   |                |                      |                   |                |                      |                   |                          |  |            |

Other information

|   |  |  |  |  |  |  |  |                               |  |
|---|--|--|--|--|--|--|--|-------------------------------|--|
| <b>Source:</b> No source specific to the MA |  |  |  |  |  |  |  | <b>PV value (£k)</b>          |  |
| Notes:                                      |  |  |  |  |  |  |  | <b>Total NAI Damages (£k)</b> |  |
|   |  |  |  |  |  |  |  | 9                             |  |

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                         |                      |                   | . No damages   |                      |                   |                | 0                        |                   |   |
| Continuing flooding of agricultural land |                      |                   |                |                      |                   |                | No damages               |                   | 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                 | 0 |
| Total Damages                            |                      |                   |                |                      |                   |                |                          |                   |   |

Other information

|                |  |  |  |  |  |  |  |                               |  |
|----------------|--|--|--|--|--|--|--|-------------------------------|--|
| <b>Source:</b> |  |  |  |  |  |  |  | <b>PV value (£k)</b>          |  |
| .              |  |  |  |  |  |  |  | 0                             |  |
| Notes: :       |  |  |  |  |  |  |  | <b>Total WPM Damages (£k)</b> |  |
|                |  |  |  |  |  |  |  | 0                             |  |

## Economic Assessment

Policy development Zone (PDZ)2

Location: Seahouses to Beadnell

Management Area (MA): 07

Policy Units (PU): 7.1. 7.2.

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                                |                      |                   |                |                      |                   |                |                      |                          |
| Continuing flooding of agricultural land        |                      |                   | 0.2            | 2.7                  | 2.2               | 1.52           |                      | 6.5                      |
| 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:<br>Maintains Port operation |                      |                   |                |                      |                   |                |                      |                          |
| Total Damages                                   |                      |                   |                |                      |                   |                |                      | 6.5                      |

## Economic Assessment

Policy development Zone (PDZ)2

Location: Beadnell and Beadnell Bay

Management Area (MA): 08

Policy Units (PU):8.1, 8.2, 8.3, 8.4, 8.5.

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                         |                      |                   | .34            | 4.6                  | 3.8               | 2.6            |                      |                   |                          |
| Continuing flooding of agricultural land |                      |                   | 1.             | 14                   | 12                | 8              |                      |                   |                          |
| 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) |                          |
| 11                                       | 1,656                | 1,048             | 18             | 2,003                | 598               | 50             | 7,683                | 1,234             | 2,880                    |
|  |                      |                   |                |                      |                   |                | Total Damages        |                   | 2924                     |

Other information

| Source:   | PV value (£k) |
|---|---------------|
| Beadnell Harbour strategy identified potential do nothing damages of 3.5M in 1999. (prior to harbour works  | 3,500         |
| The Seahouses strategy identified damages of 1.4m in relation to the north of Beadnell  | 1,400         |
| Notes: MDSF provides an update of damages for the area and the NAI damages are taken from the SMP2 assessment.<br>Damages do not include for loss of access or due to overtopping |               |
| <b>Total NAI Damages (£k)</b>   | <b>2,924</b>  |

Scenario: **WITH PRESENT MANAGEMENT**

MDSF Assessment

| Annual average damages (AAD):            |                      |                   |                |                      |                   |                |                      |                   | AAD           | 2025 | 2055 | 2105 | Total AAD (£) | Total Present Value (£k) |   |
|--|----------------------|-------------------|----------------|----------------------|-------------------|----------------|----------------------|-------------------|---------------|------|------|------|---------------|--------------------------|---|
| Flooding damages                         |                      |                   |                |                      |                   |                |                      |                   | . No damages  |      |      |      |               |                          | 0 |
| Continuing flooding of agricultural land |                      |                   |                |                      |                   |                |                      |                   |               |      |      |      |               | No damages               | 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 |      |      |      |               |                          |   |

Other information

| Source:  | PV value (£k) |
|--|---------------|
| .  | 0             |
| Notes: : Continued overtopping damages not taken for |               |
| <b>Total WPM Damages (£k)</b>                        | <b>0</b>      |

## Economic Assessment

Policy development Zone (PDZ)2

Location: Beadnell and Beadnell Bay

Management Area (MA): 08

Policy Units (PU): 8.1, 8.2, 8.3, 8.4, 8.5.

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                         |                      |                   |                |                      |                   |                | 33.3                     |                   |    |
| Continuing flooding of agricultural land |                      |                   | 1.             | 14                   | 12                | 8              |                          |                   |    |
| 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) |    |
|  |                      |                   |                |                      |                   |                |                          |                   |    |
| Total Damages                            |                      |                   |                |                      |                   |                |                          |                   | 33 |

## COSTS

Present management assessment

| Source:  | PV value (£k) |
|--|---------------|
| Beadnell Harbour Strategy  |               |
| Repairs to harbour were undertaken in 2000. Strategy recommended further works to harbour in 20 years of 50k. In addition general maintenance of 3k per annum. | 97.3          |
| Seahouses strategy identified costs of £250k present value for maintenance and refurbishment of road walls.  | 250           |
| Notes: An additional cost for future works to road walls has been allowed (300k in year 50)  |               |

Preferred Policy

| Description  | PV value (£k) |
|--|---------------|
| Cost taken from strategy but allowing additional works to south of harbour and continuing maintenance over the 100 year period. Further detailed study would be required based on results of monitoring. | 112           |
| Costs allowed for improvement to road defences   | 285           |
| Notes:   | 396           |

## RECONCILIATION

The strategy took into more accurate details for the economic appraisal than the MDSF. The proposed works maintain the integrity of the village. There would be damages associated with potential flooding of agricultural land.

**Economic Assessment**  
**Policy development Zone (PDZ)2**  
**Location: Embleton Bay**

**Management Area (MA): 09**  
**Policy Units (PU): 9.1, 9.2, 9.3, 9.4.**

**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                         |                      |                   | 0              | 0                    | 0                 | 0              | 0                        |                   |
| Continuing flooding of agricultural land |                      |                   |                |                      |                   |                | 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                 | 5              | 639                  | 227               | 4              | 392                      | 62                |
|  |                      |                   |                |                      |                   |                | Total Damages            | 289               |

Other information

|  |                               |
|--|-------------------------------|
| <b>Source:</b> no assessment available | <b>PV value (£k)</b>          |
|  | 0                             |
| Notes:                                 | <b>Total NAI Damages (£k)</b> |
|  | 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                         |                      |                   | . No damages   |                      |                   |                | 0                        |                   |
| Continuing flooding of agricultural land |                      |                   |                |                      |                   |                | 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                 | 2              | 199                      | 34                |
|  |                      |                   |                |                      |                   |                | Total Damages            |                   |

Other information

|  |                               |
|--|-------------------------------|
| <b>Source:</b> no assessment available | <b>PV value (£k)</b>          |
| .                                      |                               |
| Notes:                                 | <b>Total WPM Damages (£k)</b> |
|  | 0                             |

**Economic Assessment**  
**Policy development Zone (PDZ)2**  
**Location: Embleton Bay**

**Management Area (MA): 09**  
**Policy Units (PU): 9.1, 9.2, 9.3, 9.4.**

**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                         |                      |                   | Assumes flood defence maintained. |                      |                   |                | 0                        |                   |   |
| Continuing flooding of agricultural land |                      |                   |                                   |                      |                   |                | 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                 | 0 |
| Additional damages:                      |                      |                   |                                   |                      |                   |                |                          |                   |   |
|  |                      |                   |                                   |                      |                   |                |                          | Total Damages     |   |

## COSTS

Present management assessment

|  |                      |
|--|----------------------|
| <b>Source:</b> no assessment available | <b>PV value (£k)</b> |
|  | 0                    |
| Notes:                                 |                      |

Preferred Policy

|   |                      |
|---|----------------------|
| <b>Description</b>  | <b>PV value (£k)</b> |
| Defend the village of Low Newton whilst allowing the coastline elsewhere to develop naturally. Works to village would aim to retain a sand beach. | 46                   |
| Notes:  |                      |

## RECONCILIATION

Maintains defence of village

**Economic Assessment**  
**Policy development Zone (PDZ)2**  
**Location: Castle Rock to Boulmer**

**Management Area (MA): 10**  
**Policy Units (PU): 10.1, 10.2, 10.3.**

**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                         |                      |                   | 0              | 0                    | 0                 | 0              | 0                        |                   |  |
| Continuing flooding of agricultural land |                      |                   |                |                      |                   |                | 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) |  |
| 1  | 147                  | 104               | 8              | 975                  | 326               | 5              | 739                      | 87                |  |
|  |                      |                   |                |                      |                   |                | Total Damages            | 517               |  |

*Other information*

|  |  |  |  |  |  |                               |                      |   |
|--|--|--|--|--|--|-------------------------------|----------------------|---|
| <b>Source:</b> no assessment available |  |  |  |  |  |                               | <b>PV value (£k)</b> |   |
|  |  |  |  |  |  |                               | 0                    |   |
| <b>Notes:</b>                          |  |  |  |  |  | <b>Total NAI Damages (£k)</b> |                      | 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                         |                      |                   | . No damages   |                      |                   |                | 0                        |                   |
| Continuing flooding of agricultural land |                      |                   |                |                      |                   |                | 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                 | 1              | 147                      | 18                |
|  |                      |                   |                |                      |                   |                | Total Damages            |                   |

*Other information*

|  |  |  |  |  |  |                               |                      |   |
|--|--|--|--|--|--|-------------------------------|----------------------|---|
| <b>Source:</b> no assessment available |  |  |  |  |  |                               | <b>PV value (£k)</b> |   |
|  |  |  |  |  |  |                               | 0                    |   |
| <b>Notes:</b>                          |  |  |  |  |  | <b>Total WPM Damages (£k)</b> |                      | 0 |

## Economic Assessment

**Policy development Zone (PDZ)2**  
**Location: Castle Rock to Boulmer**

**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                         |                      |                   | Assumes flood defence maintained. |                      |                   |                |                          |                   |
| Continuing flooding of agricultural land |                      |                   |                                   |                      |                   |                | 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                 | 1              | 147                      | 18                |
| Additional damages:                      |                      |                   |                                   |                      |                   |                |                          |                   |
|  |                      |                   |                                   |                      |                   |                |                          | Total Damages     |

## COSTS

Present management assessment

|  |                      |
|--|----------------------|
| <b>Source:</b> no assessment available | <b>PV value (£k)</b> |
|  | 0                    |
| Notes:                                 |                      |

Preferred Policy

|  |                      |
|--|----------------------|
| <b>Description</b>   | <b>PV value (£k)</b> |
| Coast protection works only to be put in at Craster for the village and to maintain harbour use. | 127                  |
| Notes:   |                      |

## RECONCILIATION

Maintains defence to village.



## Economic Assessment

Policy development Zone (PDZ)2

Location: Boulmer to Seaton Point

Management Area (MA): 11

Policy Units (PU): 11.1, 11.2.

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                         |                      |                   | 3.9            | 53                   | 44                | 30             |                      |                   |       | 127                      |
| Continuing flooding of agricultural land |                      |                   | 0.45           | 6                    | 5                 | 3              |                      |                   |       | 14                       |
| 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) |       |                          |
| 14                                       | 1,629                | 1,196             | 0              | 0                    | 0                 | 1              | 125                  | 18                | 1,214 |                          |
| Total Damages                            |                      |                   |                |                      |                   |                |                      |                   | 1,355 |                          |

#### Other information

|   |  |                               |
|---|--|-------------------------------|
| <b>Source:</b> Boulmer Feasibility Report: Royal Haskoning 2007 |  | <b>PV value (£k)</b>          |
| Damages calculated over a 50 year appraisal period              |  | 824                           |
| Notes: MDSF taken due to the appraisal period covered           |  | <b>Total NAI Damages (£k)</b> |
|   |  | 1,355                         |

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                         |                      |                   | 3.9            | 53                   | 44                | 30             | 127                      |                   |  |
| Continuing flooding of agricultural land |                      |                   | 0.45           | 6                    | 5                 | 3              | 14                       |                   |  |
| 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                 | 4              | 445                  | 138               | 13             | 1,461                    | 223               |  |
|  |                      |                   |                |                      |                   |                | Total Damages            |                   |  |
|  |                      |                   |                |                      |                   |                | 502                      |                   |  |

#### Other information

|   |  |                               |
|---|--|-------------------------------|
| <b>Source:</b> Boulmer Feasibility Report: Royal Haskoning 2007 |  | <b>PV value (£k)</b>          |
| Damages delayed by proposed works                               |  | 0                             |
| Notes:  |  | <b>Total WPM Damages (£k)</b> |
|   |  | 502                           |

## Economic Assessment

Policy development Zone (PDZ)2

Location: Boulmer

Management Area (MA): 11

Policy Units (PU): 11.1, 11.2.

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                         |                      |                   | 3.9            | 53                   | 44                | 30             |                      | 127                      |
| Continuing flooding of agricultural land |                      |                   | 0.45           | 6                    | 5                 | 3              |                      | 14                       |
| 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                 | 4              | 445                  | 138               | 13             | 1,461                | 223                      |
|  |                      |                   |                |                      |                   | Total Damages  |                      |                          |
|  |                      |                   |                |                      |                   | 502            |                      |                          |

## COSTS

Present management assessment

|  |                      |
|--|----------------------|
| <b>Source:</b> Boulmer Feasibility Report: Royal Haskoning 2007  | <b>PV value (£k)</b> |
| The feasibility suggests backshore management with beach nourishment to Hold the Line at Boulmer Village | 166                  |
| Notes:   |                      |

Preferred Policy

|   |                      |
|---|----------------------|
| <b>Description</b>  | <b>PV value (£k)</b> |
| Derived from the Feasibility Study with retaining and improving the sand beach at Boulmer and allowing NAI in all other areas | 166                  |
| Notes: as the Preferred Policy has been derived from the Feasibility options, costs can be carried across                     |                      |

## RECONCILIATION

Protection of Boulmer village is sustained over the first and second epochs. Further management of defence to village would depend on response to sea level rise.

**Economic Assessment**  
**Policy development Zone (PDZ)3**  
**Location: Foxhole Bay**

**Management Area (MA): 12**  
**Policy Units (PU): 12.1, 12.2, 12.3.**

**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                         |                      |                   | 0              | 0                    | 0                 | 0              | 0                        |                   |    |
| Continuing flooding of agricultural land |                      |                   |                |                      |                   |                | 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              | 100                  | 38                | 2              | 199                      | 32                | 70 |
| Total Damages                            |                      |                   |                |                      |                   |                |                          |                   | 70 |

*Other information*

|   |                                  |
|---|----------------------------------|
| <b>Source:</b> Alnmouth Bay Strategy: Babbie  | <b>PV value (£k)</b>             |
| Immense failure of defences recorded with particular attention to the golf course. Value not applied. | 0                                |
| Notes:  | <b>Total NAI Damages (£k)</b> 70 |

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                         |                      |                   | . No damages   |                      |                   |                | 0                        |                   |    |
| Continuing flooding of agricultural land |                      |                   |                |                      |                   |                | 0                        |                   | 42 |
| 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              | 299                      | 42                |    |
| Total Damages                            |                      |                   |                |                      |                   |                |                          |                   | 42 |

*Other information*

|  |                                  |
|--|----------------------------------|
| <b>Source:</b> Alnmouth Bay Strategy: Babbie   | <b>PV value (£k)</b>             |
| . Present management is adequate but needs improving. No values given for this section | 0                                |
| Notes:   | <b>Total WPM Damages (£k)</b> 42 |

**Economic Assessment**  
**Policy development Zone (PDZ)3**  
**Location: Foxhole Bay**

**Management Area (MA): 12**  
**Policy Units (PU): 12.1, 12.2, 12.3.**

**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                                |                      |                   | Assumes flood defence maintained. |                      |                   |                | 0                        |                   |   |
| Continuing flooding of agricultural land        |                      |                   |                                   |                      |                   |                |                          |                   |   |
| 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                        | 0                 |   |
| Additional damages:                             |                      |                   |                                   |                      |                   |                |                          |                   | 0 |
| No allowance is taken for damage to golf course |                      |                   |                                   |                      |                   |                |                          |                   |   |
| Total Damages                                   |                      |                   |                                   |                      |                   |                |                          |                   | 0 |

## COSTS

Present management assessment

|                |                      |
|----------------|----------------------|
| <b>Source:</b> | <b>PV value (£k)</b> |
| Notes:         |                      |

Preferred Policy

|  |                      |
|--|----------------------|
| <b>Description</b>   | <b>PV value (£k)</b> |
| Natural development of the bay is intended with managed realignment ensuring that sediment transport is not interfered. Works are allowed for to defend Golf course in longer term | 51                   |
| Notes:   |                      |

## RECONCILIATION

Maintains principal structures, important to amenity and cultural value of area.

## Economic Assessment

Policy development Zone (PDZ)3

Location: Alnmouth Bay

Management Area (MA): 13

Policy Units (PU): 13.1, 13.2, 13.3, 13.4, 13.5, 13.6, 13.7, 13.8, 13.9

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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                         |                      | 1.2               | 16             | 13                   | 9                 | 38                       |                      |                   |
| Continuing flooding of agricultural land |                      | 2                 | 28             | 23                   | 16                |                          |                      |                   |
| Present value of erosion                 |                      |                   |                |                      |                   | 67                       |                      |                   |
| 0-20 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                            |                      |                   |                |                      |                   | 105                      |                      |                   |

Other information

|   |                               |
|---|-------------------------------|
| <b>Source:</b> Alnmouth Bay Strategy: Babbie 2003   | <b>PV value (£k)</b>          |
| Defences failing would lead to coastal erosion and upstream flooding  | 0                             |
| Notes: Based on higher erosion rates part of the town would suffer erosion. Significantly greater long term damages | <b>Total NAI Damages (£k)</b> |
|   | 105                           |

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                        |                      |                   |
| Continuing flooding of agricultural land |                      | 2                 | 28             | 23                   | 16                |                          |                      |                   |
| Present value of erosion                 |                      |                   |                |                      |                   | 67                       |                      |                   |
| 0-20 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                            |                      |                   |                |                      |                   | 0                        |                      |                   |

Other information

|   |                               |
|---|-------------------------------|
| <b>Source:</b> Foreshores project 2006        | <b>PV value (£k)</b>          |
| . intention to restore flood plain in estuary | 67                            |
| Notes:  | <b>Total WPM Damages (£k)</b> |
|   | 67                            |

## Economic Assessment

Policy development Zone (PDZ)3

Location: Alnmouth Bay

Management Area (MA): 13

Policy Units (PU): 13.1, 13.2, 13.3, 13.4, 13.5, 13.6, 13.7, 13.8, 13.9.

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                        |
| Continuing flooding of agricultural land |                      |                   | 2              | 28                   | 23                | 16             |                      | 67                       |
| 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                            |                      |                   |                |                      |                   |                |                      | 67                       |

## COSTS

Present management assessment

|   |                             |
|---|-----------------------------|
| <b>Source:</b> Alnmouth Bay Strategy: Babbie 2003<br>Rock armour with maintenance held at £1.5k per year. | <b>PV value (£k)</b><br>476 |
| Notes:  |                             |

Preferred Policy

|  |                             |
|--|-----------------------------|
| <b>Description</b><br>The longer term risk to the town would be addressed. Low intervention management of Alnmouth Beach area, defences to the Town would be maintained. | <b>PV value (£k)</b><br>136 |
| Notes:   |                             |

## RECONCILIATION

Maintenance works to frontage would ensure against longer term loss.

**Economic Assessment**  
**Policy development Zone (PDZ)3**  
**Location: Birling Links**

**Management Area (MA): 14**  
**Policy Units (PU): 14.1, 14.2.**

**Page 1 of 2**

**DAMAGES**

Scenario: **No ACTIVE INTERVENTION**  
MDSF Assessment

| Annual average damages (AAD):            |                      |                   |                |                      |                   |                |                      |                   | Total Present Value (£k) |
|--|----------------------|-------------------|----------------|----------------------|-------------------|----------------|----------------------|-------------------|--------------------------|
| Flooding damages                         |                      |                   | 0              | 0                    | 0                 | 0              |                      |                   |                          |
| Continuing flooding of agricultural land |                      |                   | 1              | 13                   | 10                | 7              |                      |                   |                          |
| 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                            |                      |                   |                |                      |                   |                |                      |                   |                          |

Other information

|         |                        |
|---------|------------------------|
| Source: | PV value (£k)          |
|         | 0                      |
| Notes:  | Total NAI Damages (£k) |
|         | 14                     |

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                         |                      |                   | . No damages   |                      |                   |                |                      | 0                        |
| Continuing flooding of agricultural land |                      |                   | 1              | 13                   | 10                | 7              |                      | 14                       |
| 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                            |                      |                   |                |                      |                   |                |                      | 14                       |

Other information

|         |                        |
|---------|------------------------|
| Source: | PV value (£k)          |
|         |                        |
| Notes:  | Total WPM Damages (£k) |
|         | 14                     |

## Economic Assessment

Policy development Zone (PDZ)3

Location: Birling Links

Management Area (MA): 14

Policy Units (PU): 14.1, 14.2.

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                         |                      |                   | . No damages   |                      |                   |                |                      |                   |                |                      | 0                        |    |
| Continuing flooding of agricultural land |                      |                   | 1              |                      | 13                |                | 10                   |                   | 7              |                      | 14                       |    |
| 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              | 0                    | 0                        | 0  |
| Total Damages                            |                      |                   |                |                      |                   |                |                      |                   |                |                      |                          | 14 |

## COSTS

Present management assessment

|   |                      |
|---|----------------------|
| <b>Source:</b> Alnmouth Bay Strategy: Babbie 2003 | <b>PV value (£k)</b> |
| Warkworth Bay dune strengthening                  | 76                   |
| Notes:  |                      |

Preferred Policy

|   |                      |
|---|----------------------|
| <b>Description</b>  | <b>PV value (£k)</b> |
| Natural alignment will prevail here with the potential for some intervention at the southern end approaching the breakwater | 36                   |
| Notes:  |                      |

## RECONCILIATION

Maintains integrity of breakwater while allowing natural development of dunes.



**Economic Assessment**  
**Policy development Zone (PDZ)3**  
**Location: Amble**

**Management Area (MA): 15**  
**Policy Units (PU): 15.1.**

**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                         |                      |                   | 10             |                      | 138               |                | 113                  |                   | 77            |     | 328                      |  |
| Continuing flooding of agricultural land |                      |                   | 2.3            |                      | 31                |                | 25                   |                   | 17            |     | 73                       |  |
| 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                 | 4              | 366                  | 123               | 0              | 0                    | 0                 |               |     |                          |  |
|  |                      |                   |                |                      |                   |                |                      | Total Damages     |               | 524 |                          |  |

*Other information*

|  |                               |
|--|-------------------------------|
| <b>Source:</b> no assessment available   | <b>PV value (£k)</b>          |
| Notes: Damages do not include for loss of harbour. Higher erosion rates give significantly greater values with long term higher risk to town | <b>Total NAI Damages (£k)</b> |
|  | 524                           |

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                         |                      |                   | . No damages   |                      |                   |                |                      | 0                        |
| Continuing flooding of agricultural land |                      |                   |                |                      |                   |                | 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                            |                      |                   |                |                      |                   |                |                      |                          |

*Other information*

|  |                               |
|--|-------------------------------|
| <b>Source:</b> no assessment available | <b>PV value (£k)</b>          |
| Notes:                                 | <b>Total WPM Damages (£k)</b> |
|  | 0                             |

## Economic Assessment

Policy development Zone (PDZ)3

Location: Amble

Management Area (MA): 15

Policy Units (PU): 15.1.

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                         |                      |                   |                |                      |                   |                | 56                       |                   |    |
| Continuing flooding of agricultural land |                      |                   | 1.73           | 23.6                 | 19.3              | 13             |                          |                   |    |
| 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                            |                      |                   |                |                      |                   |                |                          |                   | 56 |

## COSTS

Present management assessment

|  |                      |
|--|----------------------|
| <b>Source:</b> no assessment available | <b>PV value (£k)</b> |
|  | 0                    |
| Notes:                                 |                      |

Preferred Policy

|  |                      |
|--|----------------------|
| <b>Description</b>   | <b>PV value (£k)</b> |
| Maintain defences to coast and harbour. Provide for defence to rear of town. Assume £2M in year 50 and on –going maintenance | 483                  |
| Notes:   |                      |

## RECONCILIATION

Maintains defence of town and harbour.

**Economic Assessment**  
**Policy development Zone (PDZ)3**  
**Location: South Amble**

**Management Area (MA): 16**  
**Policy Units (PU): 16.1, 16.2, 16.3.**

**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                         |                      |                   | 0              |                      | 0                 |                | 0                    |                   | 0             |  | 0                        |    |
| Continuing flooding of agricultural land |                      |                   | 0              |                      | 0                 |                | 0                    |                   | 0             |  | 0                        |    |
| Present value of erosion                 |                      |                   |                |                      |                   |                |                      |                   |               |  |                          |    |
| 0-20 yrs                                 |                      |                   | 20 to 50 yrs   |                      |                   |                |                      | 50 to 100 yrs     |               |  |                          | 75 |
| 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                 | 2              | 199                  | 62                | 1              | 100                  | 12                |               |  |                          |    |
|  |                      |                   |                |                      |                   |                |                      |                   | Total Damages |  |                          |    |
|  |                      |                   |                |                      |                   |                |                      |                   | 75            |  |                          |    |

*Other information*

|   |                               |
|---|-------------------------------|
| <b>Source:</b> .Island View PAR: 2002             | <b>PV value (£k)</b>          |
| .Do Nothing damages estimated. Works now in place | 390                           |
| Notes: Potential exposure of contaminated land    | <b>Total NAI Damages (£k)</b> |
|   | 75                            |

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                         |                      |                   | . No damages   |                      |                   |                | 0                        |                   |   |
| Continuing flooding of agricultural land |                      |                   |                |                      |                   |                | 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                 | 0 |
| Total Damages                            |                      |                   |                |                      |                   |                |                          |                   | 0 |

*Other information*

|                |                               |
|----------------|-------------------------------|
| <b>Source:</b> | <b>PV value (£k)</b>          |
| .              | 0                             |
| Notes:         | <b>Total WPM Damages (£k)</b> |
|                | 0                             |

**Economic Assessment**  
**Policy development Zone (PDZ)3**  
**Location: South Amble**

**Management Area (MA): 16**  
**Policy Units (PU): 16.1, 16.2, 16.3.**

**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             |  |                          |
| Continuing flooding of agricultural land |                      |                   | 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:                      |                      |                   |                |                      |                   |                |                      |                   |               |  |                          |
| Total Damages                            |                      |                   |                |                      |                   |                |                      |                   |               |  |                          |

## Economic Assessment

Policy development Zone (PDZ)4

Location: Beacon Hill to Creswell

Management Area (MA): 17

Policy Units (PU): 17.1.

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### DAMAGES

Scenario: **No ACTIVE INTERVENTION**

MDSF Assessment

|  |                      |                   |                     |                      |                   |                      |                      |                          |      |
|--|----------------------|-------------------|---------------------|----------------------|-------------------|----------------------|----------------------|--------------------------|------|
| <b>Annual average damages (AAD):</b>     |                      |                   | AAD (£k)            | PVd 2025 (£k)        | PVd 2055 (£k)     | PVd 2105 (£k)        |                      | Total Present Value (£k) |      |
| Flooding damages                         |                      |                   | 2.5                 | 33.8                 | 27.7              | 18.9                 |                      | 80.4                     |      |
| Continuing flooding of agricultural land |                      |                   | 8.83                | 120                  | 98                | 67                   |                      | 286                      |      |
| <b>Present value of erosion</b>          |                      |                   |                     |                      |                   |                      |                      |                          |      |
| <b>0-20 yrs</b>                          |                      |                   | <b>20 to 50 yrs</b> |                      |                   | <b>50 to 100 yrs</b> |                      |                          |      |
| 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)        |      |
| 14                                       | 1536                 | 1027              | 8                   | 2108                 | 786               | 23                   | 2808                 | 421                      | 2234 |
|  |                      |                   |                     |                      |                   |                      |                      | Total Damages            | 2600 |

#### Other information

|   |                               |
|---|-------------------------------|
| <b>Source:</b> Low Hauxley Feasibility Study: Royal Haskoning 2006                          | <b>PV value (£k)</b>          |
| Do Nothing damages associated with the study for present values not accumulated over 100yrs | 210                           |
| Notes: the feasibility study does not consider the whole frontage. Low Hauxley damages 1.6M | <b>Total NAI Damages (£k)</b> |
|   | 2600                          |

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                         |                      |                   | . No damages   |                      |                   |                |                      | 0                        |
| Continuing flooding of agricultural land |                      |                   | 8.83           | 120                  | 98                | 67             |                      | 286                      |
| 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                            |                      |                   |                |                      |                   |                |                      | 286                      |

#### Other information

|   |                               |
|---|-------------------------------|
| <b>Source:</b>  | <b>PV value (£k)</b>          |
| .   | 0                             |
| Notes: damages do not include potential damage to use of country park | <b>Total WPM Damages (£k)</b> |
|   | 286                           |

## Economic Assessment

Policy development Zone (PDZ)4

Location: Beacon Hill to Creswell

Management Area (MA): 17

Policy Units (PU): 17.1.

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                         |                      |                   | . No damages   |                      |                   |  |                |                      |                   |  | 0                        |  |
| Continuing flooding of agricultural land |                      |                   | 8.67           |                      | 118               |  | 97             |                      | 66                |  | 281                      |  |
| 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                            |                      |                   |                |                      |                   |  |                |                      |                   |  | 281                      |  |

## COSTS

Present management assessment

|  |                      |
|--|----------------------|
| <b>Source:</b> Low Hauxley Feasibility Study: Royal Haskoning 2006<br>To protect Low Hauxley and the properties in situ at £127k | <b>PV value (£k)</b> |
|  | 135                  |
| Notes:   |                      |

Preferred Policy

|  |                      |
|--|----------------------|
| <b>Description</b>   | <b>PV value (£k)</b> |
| Costs based on feasibility study taken together with need for improving defences to main Low Hauxley Village | 256                  |
| Management scheme for Country park together with long term defence to property                               | 423                  |
| Maintenance of defence at Creswell   | 34                   |
| Notes:   | 712                  |

## RECONCILIATION

Good justification to maintain defence at Low Hauxley. Management at Country Park may require additional funding.

## Economic Assessment

Policy development Zone (PDZ)4

Location: Otter's Stone to Broad Skeer

Management Area (MA): 18

Policy Units (PU): 18.1, 18.2.

Page 1 of 2

### DAMAGES

Scenario: **No ACTIVE INTERVENTION**

MDSF Assessment

|  |                      |                   |                     |                      |                   |                      |                      |                          |
|--|----------------------|-------------------|---------------------|----------------------|-------------------|----------------------|----------------------|--------------------------|
| <b>Annual average damages (AAD):</b>     |                      |                   | AAD (£k)            | PVd 2025 (£k)        | PVd 2055 (£k)     | PVd 2105 (£k)        |                      | Total Present Value (£k) |
| Flooding damages                         |                      |                   | 0                   | 0                    | 0                 | 0                    |                      | 0                        |
| Continuing flooding of agricultural land |                      |                   |                     |                      |                   |                      | 0                    |                          |
| <b>Present value of erosion</b>          |                      |                   |                     |                      |                   |                      |                      |                          |
| <b>0-20 yrs</b>                          |                      |                   | <b>20 to 50 yrs</b> |                      |                   | <b>50 to 100 yrs</b> |                      |                          |
| 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)        |
| 1  | 100                  | 62                | 2                   | 410                  | 133               | 0                    | 0                    | 0                        |
| Total Damages                            |                      |                   |                     |                      |                   |                      |                      | 195                      |

Other information

|   |                        |
|---|------------------------|
| Source: no assessment available             | PV value (£k)          |
|   | 0                      |
| Notes: Disruption to transport not included | Total NAI Damages (£k) |
|   | 195                    |

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                         |                      |                   | . No damages   |                      |                   |                |                      |                   |                          | 0 |
| Continuing flooding of agricultural land |                      |                   |                |                      |                   |                | 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                 | 1              | 147                  | 15                | 15                       |   |
| Total Damages                            |                      |                   |                |                      |                   |                |                      |                   | 15                       |   |

Other information

|                                 |                        |
|---------------------------------|------------------------|
| Source: no assessment available | PV value (£k)          |
| .                               | 0                      |
| Notes:                          | Total WPM Damages (£k) |
|                                 | 15                     |

## Economic Assessment

Policy development Zone (PDZ)4

Location: Otter's Stone to Broad Skeer

Management Area (MA): 18

Policy Units (PU): 18.1, 18.2

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  |                      |                   | No damages     |                      |                   |                |                          |                   |
| Continuing flooding of agricultural land  |                      |                   |                |                      |                   |                | 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                 | 1              | 147                      | 15                |
| Additional damages:<br>There would be a need to relocate road. This is not included |                      |                   |                |                      |                   |                |                          |                   |
|   |                      |                   |                |                      |                   |                | Total Damages            | 15                |

## COSTS

Present management assessment

| Source: | PV value (£k) |
|---------|---------------|
|         | 0             |
| Notes:  |               |

Preferred Policy

| Description  | PV value (£k) |
|--|---------------|
| Managing erosion allowing natural development but will require the realignment of the road in the final two epochs. Short term management costs included | 84            |
| Notes:   |               |

## RECONCILIATION

Limited assets at risk in the short-term but the road will be vulnerable if the cliffs are left to erode so realignment is necessary. Management in the short term would allow management of realignment



## Economic Assessment

Policy development Zone (PDZ)4

Location: Lynemouth

Management Area (MA): 19

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

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                         |                      |                   | 0              | 0                    | 0                 | 0              | 6                        |                   |   |
| Continuing flooding of agricultural land |                      |                   | 0.1            | 2                    | 2                 | 2              |                          |                   |   |
| 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                            |                      |                   |                |                      |                   |                |                          |                   | 6 |

Other information

|   |  |                               |
|---|--|-------------------------------|
| <b>Source:</b> Lynmouth Power Station Coastal Monitoring: Posford Haskoning 2001        |  | <b>PV value (£k)</b>          |
| Damages associated with power station not identified by MDSF given new works undertaken |  | 0                             |
| Notes:  |  | <b>Total NAI Damages (£k)</b> |
|   |  | 6                             |

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                         |                      |                   | No damage      |                      |                   |                | 4                        |                   |   |
| Continuing flooding of agricultural land |                      |                   | 0.1            | 2                    | 2                 | 2              |                          |                   |   |
| 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                            |                      |                   |                |                      |                   |                |                          |                   | 4 |

Other information

|  |  |                               |
|--|--|-------------------------------|
| <b>Source:</b> Lynmouth Power Station Coastal Monitoring: Posford Haskoning 2001 |  | <b>PV value (£k)</b>          |
| Rock revetment built in 1993 with a design life of 20 years. No value given      |  | 0                             |
| Notes:   |  | <b>Total WPM Damages (£k)</b> |
|  |  | 0                             |

**Economic Assessment**  
**Policy development Zone (PDZ)4**  
**Location: Lynemouth**

**Management Area (MA): 19**  
**Policy Units (PU): 19.1, 19.2, 19.3.**

**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                 |
| Continuing flooding of agricultural land |                      |                   | 0.1            | 2                    | 2                 | 2              |                          | 4                 |
| 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                 |
| .  |                      |                   |                |                      |                   |                |                          | 0                 |
| Total Damages                            |                      |                   |                |                      |                   |                |                          | 4                 |

## COSTS

Present management assessment

|  |                      |
|--|----------------------|
| <b>Source:</b> Lynmouth Power Station Coastal Monitoring: Posford Haskoning 2001 | <b>PV value (£k)</b> |
| Works have been undertaken to defend power station                               | 0                    |
| Notes:   |                      |

Preferred Policy

|  |                      |
|--|----------------------|
| <b>Description</b>   | <b>PV value (£k)</b> |
| Policy identifies need for planned approach to frontage. Costs obviously depend on plan. | Not determined       |
| Notes:   |                      |

## RECONCILIATION

The recent study demonstrated the value of defence to power station. Future costs would depend on land use plan for the area.

## Economic Assessment

Policy development Zone (PDZ)5

Management Area (MA): 20

Location: Newbiggin Moor Golf to Newbiggin Bay South

Policy Units (PU): 20.1, 20.2, 20.3

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                         |                      |                   | 46.7           | 637                  | 521               | 355            |                      |                   | 1513                     |
| Continuing flooding of agricultural land |                      |                   |                |                      |                   |                | 0                    |                   |                          |
| Present value of erosion                 |                      |                   |                |                      |                   |                |                      |                   |                          |
| 0-20 yrs                                 |                      |                   | 20 to 50 yrs   |                      |                   | 50 to 100 yrs  |                      |                   | 1,158                    |
| 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                 | 4              | 562                  | 179               | 79             | 7,776                | 979               |                          |
| Total Damages                            |                      |                   |                |                      |                   |                |                      |                   | 2,671                    |

## Economic Assessment

Page 2 of 2

Policy development Zone (PDZ)5

Management Area (MA): 20

Location: Newbiggin Moor Golf to Newbiggin Bay South

Policy Units (PU): 20.1, 20.2, 20.3

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                         |                      |                   |                |                      |                   |                |                      |                   |          |               |               |               |                          |   |
| Continuing flooding of agricultural land |                      |                   |                |                      |                   |                |                      |                   | 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

|   |                      |
|---|----------------------|
| <b>Source:</b> Newbiggin Bay Strategy PAR: 2004   | <b>PV value (£k)</b> |
| Beach restoration and Breakwater already completed at a cost of £15,115k. This cost included for maintenance. | 15,115               |
| Notes:  |                      |

Preferred Policy

|   |                      |
|---|----------------------|
| <b>Description</b>  | <b>PV value (£k)</b> |
| Cost include for regular beach management and re-nourishment. | 1,722                |
| Notes:  |                      |

## RECONCILIATION

Maintains defence to town.

## Economic Assessment

Policy development Zone (PDZ)5

Location: Spital Point to Blyth East Pier

Management Area (MA): 21

Policy Units (PU): 21.1, 21.2, 21.3, 21.4, 21.5, 21.6, 21.7

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                         |                      |                   | 1.3            | 18                   | 15                | 10             |                      |                   |                          |
| Continuing flooding of agricultural land |                      |                   | 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                            |                      |                   |                |                      |                   |                |                      |                   | 43                       |

#### Other information

|  |  |
|--|--|
| <b>Source:</b> Cambois Bay Pre-feasibility Study: Posford Haskoning 2002   | <b>PV value (£k)</b>                   |
| A summary value of property and land loss associated with 50-year Do Nothing   | 21,431.2                               |
| Notes: the Cambois Bay assessment looks in more detail of the frontage but over a 50 year period. MDSF under higher erosion rates would give significantly higher damages, indicating potential longer term loss under NAI | <b>Total NAI Damages (£k)</b> 21,431.2 |

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                         |                      |                   |                |                      |                   |                |                      |                   |                          |
| Continuing flooding of agricultural land |                      |                   |                |                      |                   |                | 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                            |                      |                   |                |                      |                   |                |                      |                   |                          |

#### Other information

|                |                                 |
|----------------|---------------------------------|
| <b>Source:</b> | <b>PV value (£k)</b>            |
|                | 0                               |
| Notes:         | <b>Total WPM Damages (£k)</b> 0 |

## Economic Assessment

Policy development Zone (PDZ)5

Location: Spital Point to Blyth East Pier

Management Area (MA): 21

Policy Units (PU): 21.1, 21.2, 21.3, 21.4, 21.5, 21.6, 21.7

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             |  |                          |
| Continuing flooding of agricultural land   |                      |                   | 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: risk of tidal flooding to selective local areas behind Cambois Beach and North Blyth |                      |                   |                |                      |                   |                |                      |                   |               |  |                          |
| .  |                      |                   |                |                      |                   |                |                      |                   |               |  |                          |
| Total Damages  |                      |                   |                |                      |                   |                |                      |                   |               |  |                          |

## COSTS

Present management assessment

|   |                                 |
|---|---------------------------------|
| <b>Source:</b> Cambois Bay Strategy: Posford Haskoning 2002<br>As with the Strategy | <b>PV value (£k)</b><br>8,333.3 |
| Notes:  |                                 |

Preferred Policy

|   |                             |
|---|-----------------------------|
| <b>Description</b><br>Costs include for maintenance of existing defences and nominal control points in second epoch. This cost would be determined by landuse plan for area.<br>Costs do not include for potential removal of the barrier to estuary.<br>Costs do not include for private maintenance of Alcan revetment nor for refurbishment of the East Pier. These works would be closely related to defence within MA20. | <b>PV value (£k)</b><br>449 |
| Notes:  |                             |

## RECONCILIATION

Long term management of the coast prevents erosion loss to essential infrastructure, preventing longer term losses.

## Economic Assessment

Policy development Zone (PDZ)5

Location: Blyth Harbour

Management Area (MA): 22

Policy Units (PU): 22.1.

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                         |  |                      |              |                   |  |                |  |                      | 604           |                   | 8249          |                | 6746          |                      | 4602          |                   | 19,598                   |        |  |  |
| Continuing flooding of agricultural land |  |                      |              |                   |  |                |  |                      |               |                   |               |                |               |                      | 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                 |                          | 19,598 |  |  |
|  |  |                      |              |                   |  |                |  |                      |               |                   |               |                |               |                      |               |                   | Total Damages            |        |  |  |

Other information

|  |                                      |
|--|--------------------------------------|
| <b>Source:</b> Flood risk study currently being undertaken | <b>PV value (£k)</b>                 |
|  | 0                                    |
| Notes:   | <b>Total NAI Damages (£k)</b> 19,598 |

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 |
| Continuing flooding of agricultural land |                      |                   |                |                      |                   |                | 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                 | 0 |
| Total Damages                            |                      |                   |                |                      |                   |                |                          |                   |   |

Other information

|                   |                                 |
|-------------------|---------------------------------|
| <b>Source:</b> .. | <b>PV value (£k)</b>            |
|                   | 0                               |
| Notes:            | <b>Total WPM Damages (£k)</b> 0 |

## Economic Assessment

Policy development Zone (PDZ)5

Location: Blyth Harbour

Management Area (MA): 22

Policy Units (PU): 22.1.

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                        |                   |   |
| Continuing flooding of agricultural land |                      |                   |                |                      |                   |                |                          |                   |   |
| 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: | PV value (£k) |
|---------|---------------|
|         |               |
| Notes:  |               |

Preferred Policy

| Description                                  | PV value (£k) |
|--|---------------|
| Cost will be determined by feasibility study |               |
| Notes:                                       |               |

## RECONCILIATION

Defence provides allows continued operation of harbour and sustains the town.



## Economic Assessment

Policy development Zone (PDZ)5

Location: Blyth West Pier to Seaton Sluice

Management Area (MA): 23

Policy Units (PU): 23.1, 23.2, 23.3, 23.4

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                         |                      |                   |                |                      |                   |                |                          |                   |  |
| Continuing flooding of agricultural land |                      |                   |                |                      |                   | 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                            |                      |                   |                |                      |                   |                |                          |                   |  |

Other information

| Source:   | PV value (£k)                   |
|---|---------------------------------|
| EA Flood zone extends behind South Beach, not recorded in MDSF. Potential flood risk to lower area of harbour (taken for in MA22) | 0                               |
| Notes:  | <b>Total NAI Damages (£k)</b> 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                         |                      |                   | No damages.    |                      |                   |                |                          |                   |  |
| Continuing flooding of agricultural land |                      |                   |                |                      |                   |                | 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            |                   |  |

Other information

| Source:   | PV value (£k)                   |
|---|---------------------------------|
| Potential flood damage to road and area behind south beach not included | 0                               |
| Notes:  | <b>Total WPM Damages (£k)</b> 0 |

## Economic Assessment

Policy development Zone (PDZ)5

Location: Blyth West Pier to Seaton Sluice

Management Area (MA): 23

Policy Units (PU): 23.1, 23.2, 23.3, 23.4

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  |                      |                   | No damages.    |                      |                   |                |                          |                   |  |
| Continuing flooding of agricultural land  |                      |                   |                |                      |                   |                |                          |                   |  |
| 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:<br>Policy is to reduce risk of breaching through the dunes with managed recession |                      |                   |                |                      |                   |                |                          |                   |  |
|   |                      |                   |                |                      |                   |                | Total Damages            |                   |  |

## COSTS

Present management assessment

|         |               |
|---------|---------------|
| Source: | PV value (£k) |
| Notes:  |               |

Preferred Policy

|  |               |
|--|---------------|
| Description  | PV value (£k) |
| Costs include for maintaining integrity of the dunes | 90            |
| Notes:   |               |

## RECONCILIATION

Potential flood risk mitigated by good dune management. Possible need to realign sections of the frontage. Environmental and amenity benefit in management of dunes.

## Economic Assessment

Policy development Zone (PDZ)6

Location: Seaton Sluice to Curry's Point

Management Area (MA): 24

Policy Units (PU): 24.1, 24.2

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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 flooding of agricultural land |                      |                   |                |                      |                   |                |                      |                   | 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                 | 4              | 391                  | 106               | 27             | 3,408                | 469               | 575                      |
|  |                      |                   |                |                      |                   |                |                      | Total Damages     | 576                      |

Other information

|  |                                     |
|--|-------------------------------------|
| <b>Source:</b> Hartley Cove to the River Tyne Coastal Strategy: Scott Wilson 2007                      | <b>PV value (£k)</b>                |
| No damage initially but assets at risk over time, damages shared with MA 25. 50% of damages estimated. | 1,500                               |
| Notes: Strategy info preferred to MDSF analysis as more detailed is contained in the study.            | <b>Total NAI Damages (£k)</b> 1,500 |

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                        |                   |  |
| Continuing flooding of agricultural land |                      |                   |                |                      |                   |                | 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            |                   |  |

Other information

|   |                                 |
|---|---------------------------------|
| <b>Source:</b> Hartley Cove to the River Tyne Coastal Strategy: Scott Wilson 2007 | <b>PV value (£k)</b>            |
| No damage incurred  | 0                               |
| Notes:  | <b>Total WPM Damages (£k)</b> 0 |

## Economic Assessment

Policy development Zone (PDZ)6

Location: Seaton Sluice to Curry's Point

Management Area (MA): 24

Policy Units (PU): 24.1, 24.2

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                        |                   |   |   |
| Continuing flooding of agricultural land |                      |                   |                |                      |                   |                |                          |                   |   |   |
| 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                        | 0                 |   |   |
| Additional damages:                      |                      |                   |                |                      |                   |                |                          |                   |   | 0 |
| Total Damages                            |                      |                   |                |                      |                   |                |                          |                   |   |   |

## COSTS

Present management assessment

|   |                      |
|---|----------------------|
| <b>Source:</b> Hartley Cove to the River Tyne Coastal Strategy: Scott Wilson 2007 | <b>PV value (£k)</b> |
| Proportion of costs taken from strategy.  | 1,000                |
| Notes:  | 1,000                |

Preferred Policy

|                            |                      |
|----------------------------|----------------------|
| <b>Description</b>         | <b>PV value (£k)</b> |
| Costs taken from strategy. | 1,000                |
| Notes:                     |                      |

## RECONCILIATION

Maintains property ay Seton Sluice.

## Economic Assessment

Policy development Zone (PDZ)6

Location: Curry's Point to Brown's Point

Management Area (MA): 25

Policy Units (PU): 25.1, 25.2, 25.3, 25.4

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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                         |                      |                   | 3              | 41                   | 33.6              | 23             |                      |                   | 97.6                     |
| Continuing flooding of agricultural land |                      |                   | 0.12           | 1.6                  | 1.32              | 1              |                      |                   | 3.8                      |
| 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) |                          |
| 5  | 306                  | 216               | 12             | 469                  | 199               | 14             | 1,548                | 181               | 596                      |
|  |                      |                   |                |                      |                   |                |                      | Total Damages     | 695.2                    |

## Economic Assessment

Policy development Zone (PDZ)6

Location: Curry's Point to Brown's Point

Management Area (MA): 25

Policy Units (PU): 25.1, 25.2, 25.3, 25.4

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                        |                   |   |
| Continuing flooding of agricultural land |                      |                   |                |                      |                   |                |                          |                   |   |
| 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                 | 0 |
| Additional damages:                      |                      |                   |                |                      |                   |                |                          |                   | 0 |
| Total Damages                            |                      |                   |                |                      |                   |                |                          |                   | 0 |

## COSTS

Present management assessment

| Source:  | PV value (£k) |
|--|---------------|
| Costs taken from strategy proportioned for this area | 2,900         |
| Notes:   |               |

Preferred Policy

| Description               | PV value (£k) |
|---------------------------|---------------|
| Costs taken from strategy | 2,900         |
| Notes:                    |               |

## RECONCILIATION

Maintains integrity of Whitley Bay.

## Economic Assessment

Policy development Zone (PDZ)6

Location: Brown's Point to North Pier

Management Area (MA): 26

Policy Units (PU): 26.1, 26.2, 26.3, 26.4, 26.5, 26.6, 26.7

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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 flooding of agricultural land |                      |                   |                |                      |                   |                | 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                 | 9              | 1,035                    | 143               | 143 |
| Total Damages                            |                      |                   |                |                      |                   |                |                          |                   | 143 |

#### Other information

|   |                                     |
|---|-------------------------------------|
| <b>Source:</b> Hartley Cove to the River Tyne Coastal Strategy: Scott Wilson 2007             | <b>PV value (£k)</b>                |
| The risk would increase to Cullercoats and Tynemouth with the estuary processes posing a risk | 8,070                               |
| Notes: more specific over the 100 year appraisal period                                       | <b>Total NAI Damages (£k)</b> 8,070 |

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                        |                   |   |
| Continuing flooding of agricultural land |                      |                   |                |                      |                   |                | 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                 | 0 |
| Total Damages                            |                      |                   |                |                      |                   |                |                          |                   |   |

#### Other information

|   |                                 |
|---|---------------------------------|
| <b>Source:</b> Hartley Cove to the River Tyne Coastal Strategy: Scott Wilson 2007 | <b>PV value (£k)</b>            |
| To selectively hold the line  | 0                               |
| Notes:  | <b>Total WPM Damages (£k)</b> 0 |

## Economic Assessment

Policy development Zone (PDZ)6

Location: Brown's Point to North Pier

Management Area (MA): 26

Policy Units (PU): 26.1, 26.2, 26.3, 26.4, 26.5, 26.6, 26.7

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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                         |                      |                   |                |                      |                   |                |                          |                   |
| Continuing flooding of agricultural land |                      |                   |                |                      |                   |                |                          |                   |
| 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                 | 9              | 1,035                    | 143               |
| Additional damages:                      |                      |                   |                |                      |                   |                |                          |                   |
|  |                      |                   |                |                      |                   |                | Total Damages            | 143               |



## Economic Assessment

Policy development Zone (PDZ)6

Location: North Pier to Fish Quay

Management Area (MA): 27

Policy Units (PU): 27.1, 27.2

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                         |                      |                   | 196            | 2,680                | 2,192             | 1,495          |                      |                   |                          |
| Continuing flooding of agricultural land |                      |                   |                |                      |                   |                | 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                 | 2              | 202                  | 28                | 28                       |
|  |                      |                   |                |                      |                   |                | Total Damages        |                   | 6,395                    |

Other information

|   |                                     |
|---|-------------------------------------|
| <b>Source:</b> Hartley Cove to the River Tyne Coastal Strategy: Scott Wilson 2007 | <b>PV value (£k)</b>                |
| Failure of existing defences affecting sediment transport in the estuary          | 5,270                               |
| Notes: The values from MDSF are similar to those given by the strategy            | <b>Total NAI Damages (£k)</b> 6,395 |

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                         |                      |                   | No damages     |                      |                   |                | 0                        |                   |   |
| Continuing flooding of agricultural land |                      |                   |                |                      |                   |                | 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                 | 0 |
| Total Damages                            |                      |                   |                |                      |                   |                |                          |                   |   |

Other information Hartley Cove to the River Tyne Coastal Strategy: Scott Wilson 2007

|                |                                 |
|----------------|---------------------------------|
| <b>Source:</b> | <b>PV value (£k)</b>            |
|                | 0                               |
| Notes:         | <b>Total WPM Damages (£k)</b> 0 |

## Economic Assessment

**Policy development Zone (PDZ)6**  
**Location: North Pier to Fish Quay**

**Management Area (MA): 27**  
**Policy Units (PU): 27.1, 27.2**

**Page 2 of 2**

Scenario: **PREFERRED POLICY**  
MDSF Assessment

| WBCF Assessment   |                      |                   |                |                      |                   |                |                      |                   | Total Present Value (£k) |
|---|----------------------|-------------------|----------------|----------------------|-------------------|----------------|----------------------|-------------------|--------------------------|
| Annual average damages (AAD):   |                      |                   | AAD (£k)       | PVd 2025 (£k)        | PVd 2055 (£k)     | PVd 2105 (£k)  |                      |                   |                          |
| Flooding damages  |                      |                   | 0              | 0                    | 0                 | 0              |                      |                   |                          |
| Continuing flooding of agricultural land  |                      |                   |                |                      |                   |                |                      |                   |                          |
| 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                 | 2              | 202                  | 28                |                          |
| Additional damages:   |                      |                   |                |                      |                   |                |                      |                   |                          |
| Tidal flooding at Fish Quay needs to be evaluated, erosion damages are not pursued for the preferred policy |                      |                   |                |                      |                   |                |                      |                   |                          |
| Total Damages   |                      |                   |                |                      |                   |                |                      | 28                |                          |

## COSTS

Present management assessment

|  |                      |
|--|----------------------|
| <b>Source:</b> Hartley Cove to the River Tyne Coastal Strategy: Scott Wilson 2007                          | <b>PV value (£k)</b> |
| To selectively hold the line and continue to present preferred option with erosion protection at Fish Quay | 4,050                |
| Notes:   |                      |

Preferred Policy

|   |                      |
|---|----------------------|
| <b>Description</b>  | <b>PV value (£k)</b> |
| Costs are assumed with the extension of the current policy to selectively hold the line with the exception of the beach at North pier where do nothing is instated. | 4,050                |
| Notes:  |                      |

## RECONCILIATION

Maintains important regeneration opportunity.