

## 5 SUMMARY OF PREFERRED PLAN AND IMPLICATIONS

### 5.1 Plan for Balanced Sustainability

As discussed in Section 3, the SMP is attempting to deliver a balanced plan for the management of defences which will still support the values for each area of coast in terms of its human need, the natural environment and the heritage value, without commitment to ever increasing expenditure on defence.

The objectives against which this is judged are set out in Appendix E and an assessment of how effective the plan has been in achieving this is provided in Appendix G. This assessment is summarised in Figures 5.1 (for the epoch to 2025), 5.2 (for the epoch to 2055) and 5.2 (for the epoch to 2105). Care is needed in considering these figures as the information is presented as percentages and does not fully reveal the actual detail associated with each theme (these being described in the tables in Appendix G). A brief discussion by theme is given below. However, it is useful to consider the overall information and to set this in the context of different sections of the coast as a whole.

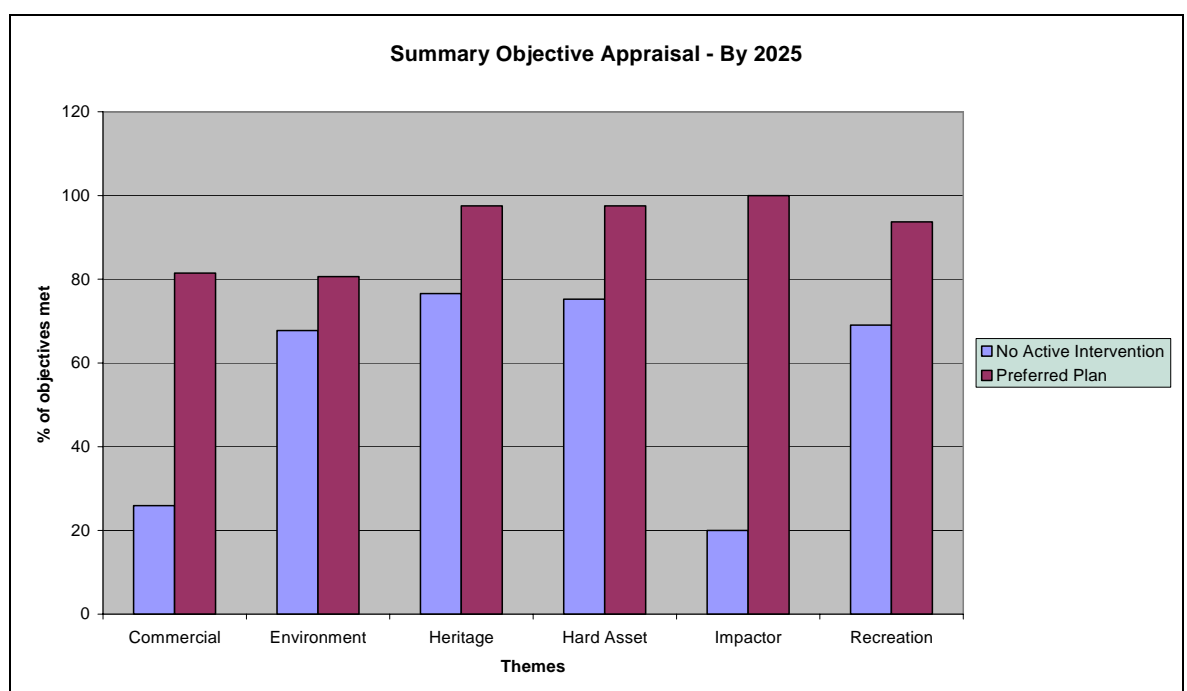


Figure 5.1: Summary Objective Appraisal for epoch to 2025

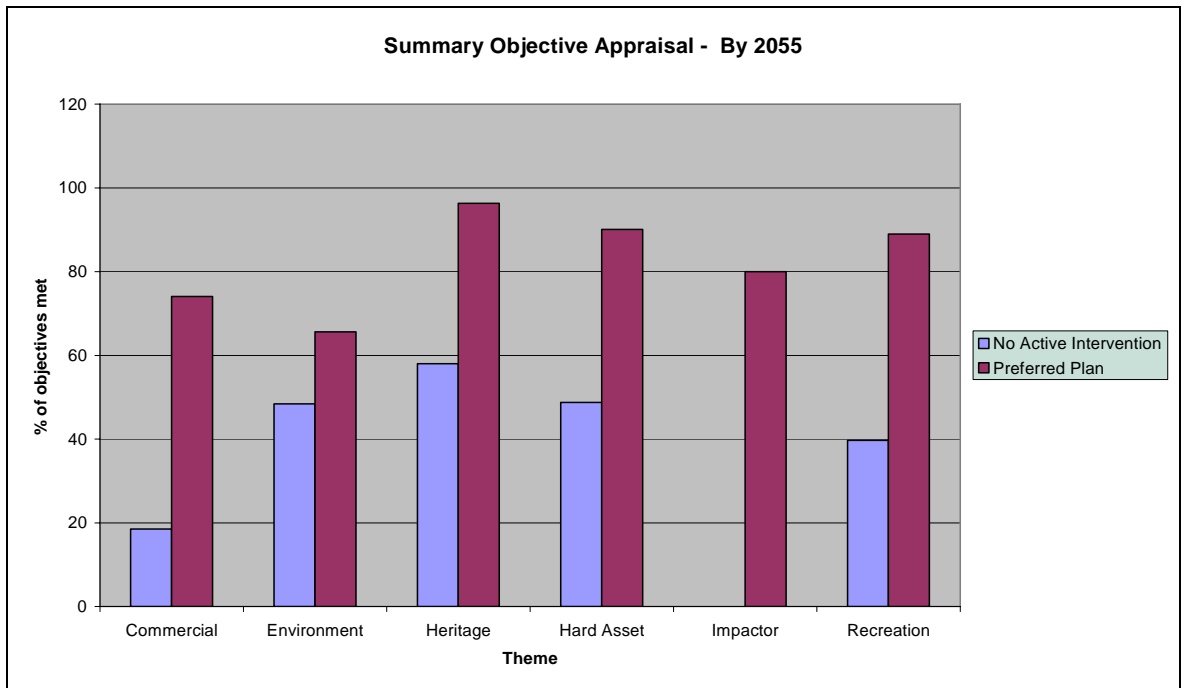


Figure 5.2: Summary Objective Appraisal for epoch to 2055

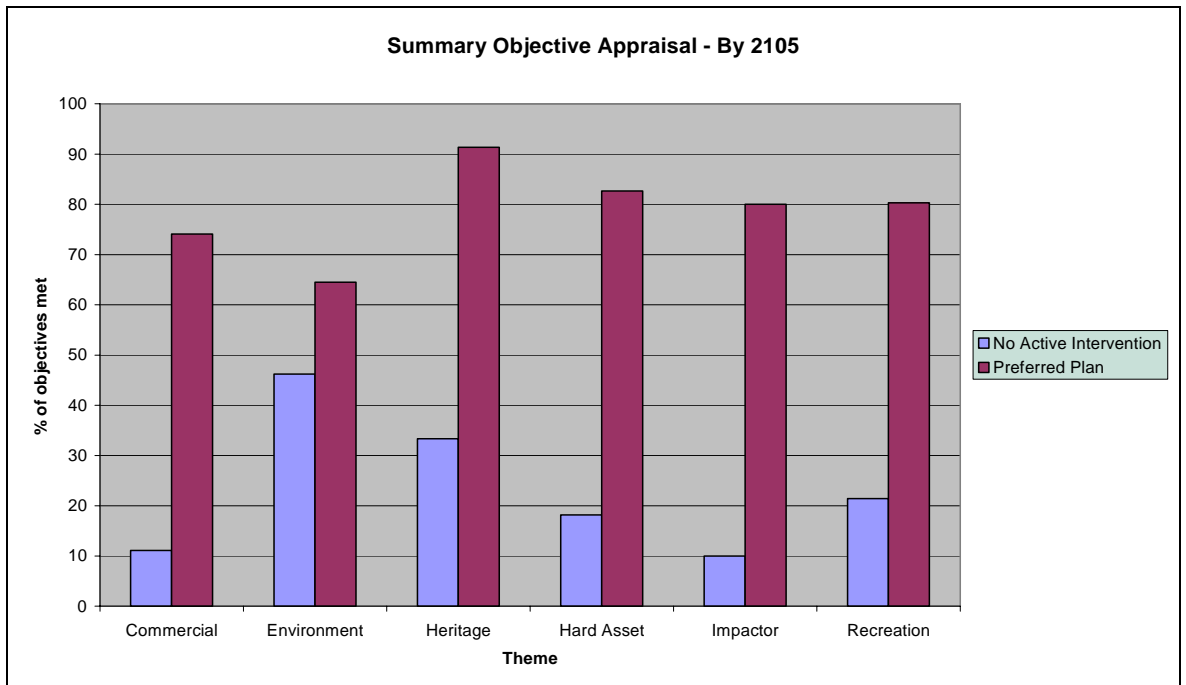


Figure 5.3: Summary Objective Appraisal for epoch to 2105

Considering initially the figures, it may be seen that over the short term, with the specific exceptions of the commercial activities and the 'Impactors' (or risks due to pollution), there is only marginal difference between the preferred plan and that of no active intervention. This reflects the fact that on the whole defences are in reasonable condition and that the coast is functioning relatively well. Over the medium term under no active intervention for all themes there is a general fall off in terms of objectives met. In comparison the preferred plan, while clearly introducing certain changes maintains a relatively high success in balancing objectives. The same may be seen to apply in the third epoch. Of particular note is the relatively low achievement of environmental objectives overall. This is discussed below. However, it may be seen that this is not specifically as a result of conflict in meeting other objectives.

Considering the Preferred plan by area:

### **South Tyneside to Sunderland**

There is increasing pressure on defences, with the potential threat of the low water moving landward and causing steepening of beaches, increased pressure on defences and loss of amenity. The plan recommends the need to build greater width into the defence systems to take account of this; either, in the case of South Tyneside and areas of Sunderland, by allowing width for retreat of defences or, in the case of north Sunderland, by attempting to manage the beaches to greater effect. Where feasible the plan has recommended no further construction of defences allowing the cliffs to erode naturally, but this requires full involvement with the planning authorities in controlling land use. Only really to the south of Sunderland is a significant change made to policy, where there is both coastal squeeze against the cliffs but also squeeze of the open cliff top land against well established development. Here it is vital that early decisions are made once a better understanding of erosion rates are established, allowing a balanced approach to management which will neither result in major economic loss nor extensive damage to the natural environment.

There is opportunity in all areas for coastal defence policy to be integrated better into regeneration plans, currently being considered. This again relies on a coordination between planning authorities and managers of coastal defence.

### **Seaham to Hartlepool**

For much of this coast the policy is self evident supporting the effort put in to restoring the coast by the Heritage Coastal Management, allowing width for natural development while balancing local use of the area. At Seaham, in many respects the policy is also evident. Despite increasing pressure, the seafront is important to the regeneration of the area and the policy of holding the line is proposed. To the south again the policy for hold the line at the Headland at Hartlepool is important in maintaining vital assets, although here there needs to be further discussion with respect to the impacts on the designated areas. Just north of the headland, there is an area where the issues move beyond the strict scope of the SMP. There is opportunity to draw upon the natural physical character of the coast to allow both potential environmental enhancement and new development.

### **Hartlepool to Saltburn**

The overall shape of the coast within this area is held by the natural physical features to either end of the frontage and by the breakwaters at the mouth of the Tees. Within this context sustaining the sea front of Hartlepool is appropriate in meeting the aims of the town. However, while it would still be feasible to maintain the sea front at Seaton

Carew, there is opportunity as the existing defences deteriorate for some set back of the defence line. This, as in other areas, has to be achieved through overall planned development of the frontage. The important issue is to be thinking in advance so that this opportunity is not lost by inappropriate development.

Because of the control imposed at the mouth of the Tees by the Gares, the semi-natural dune frontages can be allowed to retreat in a manageable manner. This creates opportunity for habitat development in an area quite unique to this section of the coastline.

At Redcar there are concerns that there will be a loss of beach which will be to the detriment of the towns' values. While the present review of the strategy for the area needs to examine this, it is important to learn from the situation that exists there, when considering how to accommodate the new proposed development to the west of the town. To avoid the same inherent problems, the SMP makes recommendations such that without undue constraint on the development, allowance is made now in considering how management of this area provides suitable transition to the natural development of the coast to the west.

There seems little overall pressure on the frontage to the east of Redcar, although it will continue to erode. Within this context the defence of Marske and Saltburn would appear sustainable given their local importance.

### **North Yorkshire**

The dominant feature of this area is its superb coastal cliffs. Within this are the towns and villages of Skinningrove, Staithes, Runswick Bay, Sandsend, Whitby and Robin Hoods Bay. In each of these locations the underlying policy is to maintain the communities. In some areas, in particular at Staithes (or in fact Cowbar) and at Robin Hoods Bay, there will be loss of properties under the preferred policy. To take action to defend would be difficult to justify economically and would tend to result in a creeping destruction of the natural environment. Even at Sandsend the SMP recommends consideration of alternative routes for the coastal road rather than unnecessarily allowing ever more hard defence of the shoreline. At Whitby the policy remains to hold the line.

### **Scarborough to Flamborough**

Within North Beach there is the situation that the Victorian builders created both a much valued coastal infrastructure and sea front but at the expense of a defence line that becomes increasingly difficult to maintain. While the policy remains to hold the line, this needs to be managed in such a manner as to maintain the natural beach defences. At South Beach there is evidence at present of an accreting beach, in part because of the shelter and control provided by the Harbour. The policy here is to hold the line. However, particularly in addressing the severe flooding problem of Foreshore Road, care needs to be taken in not disrupting this valuable sediment system.

South from Scarborough the coast returns to effectively its natural shape. This is maintained over much of the area with a policy of no active intervention. Within Filey Bay, the defence of Filey town is to be held, with the typical concerns as to the manner in which this is achieved. This is considered feasible because of the towns position with respect to the shape of the bay and the proximity of Filey Brigg. Further south within the Bay the SMP accepts the need to allow a natural retreat of the cliff line. There is conflict in this with the objectives to sustain communities such as Flat Cliff. The policy

here requires an integrated approach with planning associated with both the community and the major holiday park set further back. While over the short term, over possibly the next twenty years, defence of the area is not likely to cause severe disruption of the coastal system, in the medium to long term such actions would be both more difficult to sustain and have an increasing impact on these processes. In addition, despite the expected loss of property, there is poor justification for public funding of defence. As such, the recommended policy is for No Active Intervention. It is recognised that such a policy requires a plan to manage this.

## **5.2 Predicted Implications of the Preferred Plan**

### **5.2.1 Implications for Property and Land Use**

Overall the main centres of development are maintained. There are recommendations within the detail of the plan for not allowing further extension of defences. This will result in loss of hard assets. In particular as identified above this would include properties around Staithes, Runswick Bay, Robin Hoods Bay, Cayton Bay and to the communities to the south of Filey Bay.

Generally the transport system would equally be maintained although the plan recommends examination of re-alignment to the roads at Marsden, at Sandsend and to the back of Cayton Bay. At Cowbar (to the west of Staithes) there is already a policy for retreating the road, as it is affected by erosion.

A significant area of loss is to some of the more mobile or softer commercial activities of the area; the agriculture generally along much of the frontage, the golf courses at Seaton Carew, at Whitby and Filey and the caravan parks to the north of Hartlepool, at Coatham, south of Whitby and again at Filey. The difficulties with managing defence of these frontages to a large degree is in terms of economic justification but also in the very nature of where such activities are situated; on the open coast deriving benefit from the natural coastline. It is important, therefore, that monitoring is put in place, or continued, so as to work with the owners in providing best advice as to when change is occurring. Equally, where there is a policy for no active intervention the planning authorities should work with these organisations and individuals to examine how the impact on businesses of a retreating coast may be mitigated.

In terms of the more major industries the policies generally work to sustain their activities in meeting the objectives of sustaining employment to the region. In none of these areas is there seen to be any great advantage in terms of the natural development of the coast in recommending change in shoreline management.

There are several areas, particularly to the northern half of the frontage, where there is potential for pollution or contamination. These areas are considered individually in the Plan.

### **5.2.2 Implications for Nature Conservation**

Clearly there is concern when considering Figures 5.1, 5.2 and 5.3, showing failure to meet natural conservation objectives. To a large degree, when considered in detail, this is a function of the eroding coast and the nature of the interest. For example, that many of the designated sites include both the aim to allow erosion of a cliff but also to maintain

the integrity of the habitat at the crest of the cliff. This is reflected in the specific wording of the objectives; to work within the constraints of a dynamic coastal system. Even so, in assessing the success of the plan it has been highlighted that such a natural development will result in loss of area of the site. While, certainly it would be equally damaging to intervene, by highlighting this loss, it highlights the need to maintain integrity in other ways. There is little scope, unfortunately again because of the character of the coastline, to create major areas of new habitat. The Plan attempts to redress the balance to a degree by recommending restricting the extension of defences further into undeveloped areas of the coast and to take advantage of the basic control imposed by natural or manmade structures to maintain areas of open dune habitat and the potential low lying areas behind.

The Plan highlights this basic problem associated with the coast and recommends that at detailed examination of sections of the coast every effort is made to create further opportunity for enhancing nature conservation. The corollary of this is that the understanding this document hopes to provide, of how the coast behaves and the interdependencies between sections of the coast, may be used to effect by local managers in identifying realistic opportunities for enhancement. This would build on the very valuable work already undertaken by English Nature in their opportunities report.

### 5.2.3 Implications for Landscape

There are very stark differences in coastal landscape over the length of the SMP shoreline. Principally in the change from areas of outstanding natural coastline to the urban areas. Both can have significant value.

The Plan aims to restrict further encroachment of defence over undefended areas. Even so where defence is in place the plan aims to offer opportunity for less intrusive approaches to defence which helps maintain the important interface between the hinterland and the shoreline. In this the plan highlights the danger of linear defences where there is evidence that the shore may be steepening, indicating the possibilities of a more controlled approach to engineering. It is understood that in some areas councils have a policy to avoid the use of rock armour in amenity beaches. This is understandable in terms of use of massive rock revetments. However, rock is a valuable tool in coastal engineering and where such policies are in force consideration should be given to the specific use of the material in providing strategic control to beaches, for example, through offshore structures.

A key component of landscape value is its enjoyment. Over virtually the entire length of the SMP, a coastal path has been established. In places this is threatened by erosion, in places quite critically, such as in the length to the north of Skinningrove. More typically there is scope for the path to be set back. The SMP should be used to identify where and when negotiations may be required to allow this set back to take place. This is not strictly a role of coast protection.

### 5.2.4 Implications for Historic Environment

There is a board range of historical and heritage features identified over the full length of the coast. Many of the features identified during consultation are found not to be at specific risk of coastal erosion. Even so there are several areas where features will suffer loss. In many situations, as recognised by the objectives, there is little scope for actual defence to protect these areas of interest. The Plan attempts to identify where

there are risks and as suggested by the objectives this will allow prioritisation of recording prior to loss of the feature. Coastal monitoring recommended by the plan will assist in this. There should be increased co-ordination of this information between coastal managers and those with responsibility for heritage features.

## 5.3 Managing the Change

### 5.3.1 Recommendations

The Plan sets out a development of policy over the three epochs from the present forward over 100 years. There are still essential decisions to be made in taking these changes in policy forward.

What has become very evident in developing the plan is the need for better involvement and co-ordination between different departments within authorities and between different authorities and organisations over the coastal zone. The coast cannot be managed by default.

In several areas recommendations have been made for the development of Spatial planning of the coastal zone. Without this, the coastal engineering has to be purely based on risk to existing assets. Even taking the far more forward looking approach engendered by SMPs and strategies, the emphasis for defence or engineering management will tend to be responsive to threat rather than opportunity. This will tend to result in decisions being made at a time when options are already constrained.

This is a coastline where, because of the underlying geology, overall change, even given sea level rise, will tend to be manageable. The impetus for management can, therefore, come from coastal management to deliver benefits, rather than from shoreline management delivering the benefits associated with damage avoidance.

In specific areas where there is a short term policy for hold the line with a longer term policy of retreat or no active intervention, this must be taken as an opportunity to allow adaptation not a policy of delay.

It is recommended that the policies be adopted by all organisations represented on NECAG and that these policies, together with an understanding of their intent, are incorporated as guidance for the development of statutory planning within each area.

The following Section of this document provides an overall summary of policies for the shoreline. This summary should be considered with reference to the detailed development of the plan provided in Section 4.

### 5.3.2 Funding

Each management area contains a number of policy units. For each management area an outline economic assessment has been provided based initially on the high level assessment of damages provided by MDSF. Where strategy studies have been undertaken, and where appropriate further economic data has been incorporated within each policy statement.

Overall, given the level of detail available to the SMP, the policies are shown or are believed to be cost effective in terms of economics; taking into account the additional

information from strategies not specifically evaluated in the SMP. However, it is equally recognised that in many areas direct funding under coast protection may not be available due to the need for prioritisation of this funding at a national level.

The development of policies set out in Section 4, highlights the consequences of alternative approaches. In this the SMP aims to identify the specific beneficiaries of the policy. In many cases this is driven by the specific objectives such as maintaining open coastal land as identified in planning documents or maintaining the commercial interests of an area. In line with the Government's strategy "Making Space for Water" co-funding of projects for the coast should be considered.