

Appendix B Stakeholder Engagement

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B1 Introduction

This appendix outlines the stakeholder consultation strategy for the development of the SMP and details how stakeholder involvement was achieved at each stage of the plan preparation/dissemination.

Three main groups were involved in the SMP development:

1. The Project Management Group (PMG);
2. Key Stakeholders Forum (KSF);
3. Other Stakeholders.

The members of the PMG are outlined in Appendix A and included representatives from all the local authorities as well as English Nature, National Trust, the Environment Agency and Defra.

Stakeholder consultation played an integral role in the development of the shoreline management policies. The lead authority SBC undertook to organise the stakeholder consultation throughout the SMP development. The stakeholder group comprised representatives from groups with local, regional and national interest in addition to site specific interests. Such a group was selected to try to achieve a 'holistic' consultation approach, taking consideration of all interests in the coast:

Stakeholder representatives included:

- County Councils
- Town Councils
- Parish/Ward Councils
- Residential Interest Groups eg. Filey Against Dredging
- Commercial interests eg. Cleveland Potash Ltd, Northern Electrical Distribution Ltd
- Conservation bodies eg. National Trust, Durham Heritage Coast, RSPB
- Recreational groups
- Cultural and historic interest groups eg. English Heritage

The full membership list is included in Section B2.

A summary of the stakeholder engagement strategy is shown in Table B1.1.

Table B1.1 Summary of the Stakeholder Strategy

Stage of Plan Preparation	Activity	Dates	Purpose of Stakeholder Involvement	Stakeholders Involved	Method of Involvement	Information Sent (refer B3 for documents or samples)
Stage 1: SMP Scope	Initial Stakeholder Contact	December 2004	Inform interested parties that the SMP is being reviewed Request information Collect views relating interests and concerns about the coast	PMG and Stakeholder Group - see list in B2	Letter and questionnaire	Letter and questionnaire
Stage 2: Assessments to Support Policy Development	Draft Issues Table	December 2004 - January 2005	Involve stakeholders early on to explain the SMP review process and stakeholder contribution To determine the issues/concerns that stakeholders had about their coast	PMG and Stakeholder Group - see list in B2	Evening meeting – presentation by RH and open forum discussion. Stakeholders were asked complete Issues Sheets	SMP brochures issued giving summary of what an SMP is and the stakeholder process Issues Sheets
	Draft Issues and Objectives Table	April 2005	To allow stakeholders to review the issues that had been interpreted from the questionnaire responses and the previous stakeholder meetings To allow stakeholders to review the objectives that had been developed from the issues raised. To determine stakeholders views on the actual consultation process to date	PMG and Stakeholder Group - see list in B2	Evening meeting – presentation by RH and one on one discussion with stakeholders as they reviewed the Issues and Objectives Table. Tables then published on website to allow further review time and written comments received. A questionnaire was issues and collected asking how effective SH's thought consultation	Issues and Objectives Table

Stage of Plan Preparation	Activity	Dates	Purpose of Stakeholder Involvement	Stakeholders Involved	Method of Involvement	Information Sent (refer B3 for documents or samples)
					process was.	
Stage 3: Policy Development	Objective Appraisal	June 05	To review proposed approach for objective appraisal.	PMG	Power point presentation. Round table meeting.	See section B5 for briefing note.
	Policy Development	November 05	To discuss and review draft policy development documents.	PMG	Draft policy development document sent via email prior to meeting. Power point presentation. Round table meeting.	
Stage 4: Public Examination	Purpose of this document					
Stage 5: Finalise SMP	To be arranged following consultation on the draft		Review output from public examination Members presented with final plan			
Stage 6: SMP Dissemination	To be agreed	To be confirmed	To make stakeholders aware of the final plan	Wider public	To be confirmed	

B2 Membership lists

B2.1 Stakeholder Group

The stakeholder group comprised representatives from groups with local, regional and national interest in addition to site specific interests. Such a group was selected to try to achieve a 'holistic' consultation approach, taking consideration of all interests in the coast:

The following table indicates the organisation contacted during the Initial Stakeholder Engagement stage. Each organisation listed received the letter and questionnaire explaining that the SMP was being reviewed and requesting data and further information (refer B3 for sample letters and questionnaire).

Organisations	
ADAS	National Power
Archaeological Diving Unit	Natural Environment Research Council
Association of British Insurers	NEDL
Back on the Map	Network Rail
Banks of the Wear	Newby and Scalby Parish Council
Bempton Parish Council	Newcastle City Council
Biodiversity Action Plans (BAPs) Groups	Newholm-cum-Dunsley Parish Council
Bridlington and Flamborough Fishermen's Assoc.	NFFO
British Association for Shooting and Conservation	North Cliff Golf Club, Scarborough
British Canoe Union	North East Water
British Ecological Society	North Eastern Sea Fisheries Committee
British Energy Generation Ltd	North of England Territorial, Auxiliary and Volunteer Reserve Association
British Gas	North Sea Fisheries Committee
British Geological Survey	North Yorks Moors National Park Authority
British Home and Holiday Park Association	North Yorkshire and Cleveland Coastal Forum
British Horse Society	North Yorkshire Council Council
British Hospitality Association	North Yorkshire Forum for Voluntary Organisations
British Microlight Aircraft Association	North Yorkshire Moors Association
British Ornithologists Union	North Yorkshire Police
British Ports Association	Northern Offshore Wind Ltd
British Sub-Aqua Club	Northumberland Sea Fisheries Committee
British Telecom	Northumberland Wildlife Trust
British Tourist Authority	Northumbrian Natural History Society
British Trust for Conservation Volunteers	Northumbrian Tourist Board
British Trust for Ornithology	Northumbrian Water
British Waterski Federation	NTL
British Waterways	Nuclear Electric plc
Byways and Bridleways Trust	Office of the Deputy Prime Minister

Organisations	
C J C Chemicals	Osgodby Parish Council
Camping and Caravanning Club	P D Teesport
Care for the Wild	Port of Seaham
Castle Ward Tenants and Residents Association	Port of Sunderland
Cayton Parish Council	Port of Tyne Authority
CBI	Port State Control
CEFAS	Property Owners
CERCI	R Snowdon & Son
Chambers of Commerce	Ramblers Association
Chartered Institute of Environmental Health	Ramblers Association East Yorkshire and Derwent Area
Chemical Industries Association	Redcar and Cleveland Borough Councillors
Church Commissioners	Redcar Business Association
CIRIA	Redcar Fishermen's Association
City of Sunderland Councillors	Regional Assembly for Yorkshire and Humberside
CIWEM	Regional Development Service (Defra)
Cleveland Archaeologists	Reighton Parish Council
Cleveland Countryside Unit	Respondents to public adverts in the media
Cleveland Emergency planning	RNLI
Cleveland Industrial Archeological Society	Roker Amusements and Café
Cleveland Ironstone Mining Museum	Royal Commission on Environmental Pollution
Cleveland Local Council's Association	Royal Commission on the Historical Monuments of England
Cleveland Potash Ltd	Royal Institution of Chartered Surveyors
Cleveland Search and Rescue Team	Royal Society for the Protection of Birds
Cleveland Way and Wolds Way Officer	Royal Town Planning Institute
Cleveland Way Project	Royal Yachting Association
Cleveland Wildlife Trust	Runswick Bay Fishermen's Institute
Cloughton Parish Council	Rural and Marine Environment Division (DEFRA)
Coastal Geology Group	Rural Development Commission
Coastal Projects Unit, North Yorkshire and Cleveland	Rural Development Service-Yorkshire and the Humber-Defra
Coastwatch Redcar (DFS) Lifeboat	Ryhope Development Trust
Community Spirit	Salmon and Trout Fisheries Association
Confederation of British Industry	Saltburn, Marske & New Marske Parish Council
CORUS	Sand & Gravel Association
Council for British Archaeology	Scalby Parish Council
Council for the Protection of Rural England	Scarborough & Pickering Branch CPRE
Country Land and Business Association	Scarborough Archaeological Society
Country Landowners Association	Scarborough Borough Councillors
Countryside Agency	Scarborough Chamber of Trade and Commerce
Countryside Commission	Scarborough Civic Society
Countryside Management Association (CMA)	Scarborough CVS
County Archaeologists	Scarborough Harbour Committee
CPRE	Scarborough Harbour Users' Association
Crown Estates Commissioners	Scarborough Hospitality Association

Organisations	
David Milliband MP - South Shields Constituency	Scarborough Inshore Fishermen's Association
Defence Estates Organisation	Scarborough Search & Rescue Team
Defence Land Agent	Scarborough Sub Aqua Club
Department for Transport, Local Government and the Regions (DTLR)	Scarborough Urban Renaissance Town Team
Department of National Heritage	School of Computing and Technology
Department of Trade and Industry Energy Policy Directorate	Sea Fisheries Committees
Derwenthaugh Watersports Association	Seafish Industry Authority
Development Department	Seaham Enviornmental Associates
Dinosaur Coast Project Officer	Seaham Harbour Dock Company
District Archaeological Officer (Scarborough Archaeological & Historical Society)	Seaham Sub Aqua Club
District Inspector of Fisheries	Seaham Town Council
Duchy of Lancaster	Seaton Carew Golf Course
Durham Bat Group	SembCorp Utilities (uk) Ltd
Durham Bird Club	Shellfish Association of Great Britain
Durham City Council	Shoreline Sun Cruisers
Durham County Badger Group	Skelton & Brotton Parish Council
Durham County Council	Skinningrove Linkup
Durham Heritage Coast	Skinningrove Fishermans Assoc
Durham Wildlife Trust	SM and NM Parish
Easington Village Parish Council	Small Craft Association
East Coast Offshore Minerals Forum	Smiths Gore
East Coast Rail	Sons of Neptune
East End and Hendon Fishing Club	South Bay Traders' Association
East Redcar Residents Association	South Cliff Golf Club, Scarborough
East Riding of Yorkshire Councillors	South Hylton Rowing Club
English Nature	South Shields and District Sea Angling Club
ETSU for the Department of Trade and Industry	South Shields Volunteer Lifeguard Club
European Marine Site	South Tyneside Metropolitan Borough Council
F8 Colour Consultants	South Tyneside Metropolitan Borough Councillors
Farm and Rural Conservation Agency	Sport England
Filey Against Dredging	St Andrews Sea Scout Group
Filey Cobble Preservation Society	Staintondale Parish Council
Flamborough and North Landing Harbour Commission	Staithe - Harbour Commission
Flamborough Head Sensitive Marine Area	Staithe & Cowbar Residents Association
Flamborough Ornithological Group	Staithe Fishermen's Association
Flamborough Parish Council	Staithe Harbour Commissioner
Forestry Authority	Sunderland ARC
Forestry Commission	Sunderland Canoe Club
Friends of Sunderland Museum	Sunderland Maritime Heritage
Friends of the Earth	Sunderland North Constituency
Fylingdales Parish Council	Sunderland Oil Storage Ltd
Gap Road Property Owners Association	Sunderland Sea Anglers Association

Organisations	
Geological Teaching Institution	Sunderland Yacht Club
Government Office for the North East	Sustrans
Government Office for Yorkshire and the Humber	Tees and Hartlepool Ports Authority
Great North Forest	Tees and Hartlepool Yacht Club
Green Party	Tees Archaeology
Greenpeace	Tees CVS
Gristhorpe and Leberston Parish Councils Group	Tees Dock
Groundwork East Durham	Tees Estuary Management Plan
Guisborough Town Council	Tees Valley Joint Strategy unit
Hamlet of Flat Cliffs Preservation Society	Tees Valley Rural Community Council
Hart Parish Council	Tees Valley Wildlife Trust
Hartlepool and Redcar Fisherman	Teeside Archeological Society
Hartlepool Boats Owners Association	Teesmouth Bird Club
Hartlepool Borough Councillors	Tenant Farmers Association
Hartlepool Coastwatch	The Caravan Club
Hartlepool Fish Co op	The Countryside Agency
Hartlepool Golf Club	The Flat Cliffs Association
Hartlepool Golf Course	The Mandale group
Hartlepool Marina	The National Trust
Hartlepool Nature History Society	The Tees Forest
Hartlepool Sea Angling club	Transco
Hartlepool Small Boats Ltd	Trinity House Lighthouse Service
Hartlepool Water Company	Turning the Tide
Hawsker-cum-Stainsacre Parish Council	Tyne and Wear Development Corporation
Heritage Coast Forum Officers	UK Offshore Operators Association Ltd
Heugh Gun Battery Trust	UK Onshore Operators Group
Highways Authorities	University of Durham
Hinderwell Parish Council	University of Hull - Institute of Estuarine and Coastal Studies
Historic Buildings and Monuments Commission	University of Newcastle
HM Coastguard	University of Sunderland
Horden Parish Council	Water and Maritime Directorate (DEFRA) Environment Agency
INCA	Water Service Association
Inshore Fish and Frozen Foods	Wear Cruises
Institute of Terrestrial Technology	Wear Estuary Management Officer
International Maritime Organisation	Wear Estuary Water Sports Forum
J Davidson	WeBS
Joint Nature Conservation Committee	Whitby Coblemen's Association
Jomast Contruction Ltd	Whitby CVS
Kafiga Landings Association	Whitby Golf Club
Labour MP	Whitby Harbour Committee
Lamb and Edge	Whitby Hotel and Catering Association
Local Government Association	Whitby Natualists Club
Local Producers' Association	Whitby Regatta Committee

Organisations	
Lockwood Parish Council	Whitby Town Council
Loftus Development Trust	Wildfowl and Wetlands Trust
Loftus Town Council	Womens Institute, North Yorkshire East Federation
Lythe Parish Council	Woodland Trust
Marine Conservation Society	World Wildlife Fund
Marine Safety Agency	Worldwide Fund for Nature
Maritime and Coastguard Agency	WRC plc
MCGA - Counter Pollution and Response	Yorkshire and Humber Association of Civic Societies
MCS	Yorkshire and Humberside Federation of Sport and Recreation
Member RSPB	Yorkshire and Humberside Tourist Board
Members of European Parliament	Yorkshire Archaeological Society
Mickleby Parish Council Group	Yorkshire Coast Homes
Ministry of Defence	Yorkshire Forward
Muston and Yedingham Internal Drainage Board	Yorkshire Geological Society
National Centre for Ornithology	Yorkshire Local Councils Association
National Coastal Estuarine Advisory Group	Yorkshire Naturalists' Union
National Farmers Union	Yorkshire Region Sports Council
National Federation of Anglers	Yorkshire Rural Community Council
National Federation of Fishermens Organisations	Yorkshire Tourist Board
National Grid Company	Yorkshire Water
National Monuments Record Centre	Yorkshire Wildlife Trust

B3 Stakeholder Engagement Materials

The initial Stakeholder Engagement materials posted out are listed below and samples are provided in the following sections:

- A questionnaire and background text (refer B3.1)
- The invitation letter to the first round of consultation (refer B3.2). Five variations were prepared to cater for the following different types of stakeholders including :
 - Large organisations that are familiar with the SMP process and were probably involved in the first generation SMP
 - Other organisations or businesses who may not be familiar with SMP's but to whom a more formal approach should be made
 - The general public, individual land owners and small businesses that need to have the SMP process explained to them
 - Parish Councils to explain the SMP process and their opportunity to become involved in the development of the SMP
 - Elected Members of Council
- A leaflet explaining what the SMP is and stakeholder involvement (refer B3.3)
- An typical agenda for the stakeholder consultation meeting (refer B3.4)

Following this initial stakeholder consultation, the issues table and the objectives were developed. The second round of stakeholder consultation was then held to confirm the issues and objectives. An example of the invitation letter to the second round of consultation is given in B3.5.

B3.1 Initial Questionnaire

Questionnaire to Stakeholders

River Tyne to Flamborough Head Shoreline Management Plan

The aim of this questionnaire is to allow you or your organisation to express your interests or concerns about the coast. While the questionnaire has been set up to help trigger comments and will help us to correctly collate responses, we do not wish to constrain your views. If there are other issues that do not fit within these questions, please feel free to write them separately. The initial questions establish your contact details. These are followed by questions which allow you to identify any information you may have which may help us understand our coast better. The final section allows you to record your interests, concerns or use of the coast.

While the Shoreline Management Plan focuses on the management of coastal defences; the threat and consequence of coastal flooding and erosion, we need to gain as broad a perspective as possible as to how such issues may impact upon and influence your interests. It will not be possible to solve all concerns through the Shoreline Management Plan, it is however, important the defence management is undertaken with a sound knowledge of all interests, so that where possible we work with not just natural processes but also the interests of our communities.

Please answer the following questions and return by 31st January 2005.

I would appreciate your return of the questionnaire even if you do not wish to comment on the Shoreline Management Plan. Please use the enclosed pre-paid SAE.

CONTACT DETAILS

1. Your name or name of your organisation or business	
2. Address	
3. Name of contact	
4. Position in organisation	
5. Address if different from 2	
6. Telephone No.	
7. Fax No.	
8. Email address	
9. Referring to the attached list of consultees – are there any other Stakeholders that you would recommend we contact?	

INFORMATION				
Please let me know if you hold any of the following information, if so, in what format is it held and if you are willing to make it available to the Project Team.				
Description (Please give brief details	Format		Availability	
	Hard copy	Digital	Yes	No
10. A map of your premises, site (s) or your area(s) of interest				
11. Any information or data about local coastal processes including photographs				
12. Study reports about coastal processes				
13. Flooding and erosion events.				
14. Design and construction of existing coastal defences				
15. Reports relating to the natural environment and ecology				
16. Reports relating to the built environment				
17. Land use mapping				
18. Coastal Industries				
19. Ports and harbours				
20. Agriculture				
21. Tourism and Amenity Usage of the coast				
22. Inshore Fisheries				

(Continue on reverse if necessary)

COMMENT

23. Is your organisation or business affected or potentially affected by the risk of coastal flooding or erosion? If so, please give brief details including any significant historic events.

24. What are the main issues relating to the way in which the coastline is managed and which you want to see being dealt with in the plan?

25. What objectives do you recommend for the future management of the coastline?

26. Do you have any views on the way in which the existing coastal defences have had an impact on the way in which the coastline has developed?

27. Do you have any views on changes that should be made to the existing coastal defences? What effect do you think this would have?

Thank you for your time in completing this questionnaire.

Yours Faithfully,

B3.2 Invitation to Initial Stakeholder meeting

Name
Address
Etc

Dear XXXX

27 October 2004

**Initial Stakeholder meeting for the North Eastern Coastal Authorities Group
Shoreline Management Plan 2.**

I am writing to formally invite you to the above event, which will be held at the Council Chambers, Scarborough Borough Council, Town Hall, St Nicholas Street, Scarborough, on the 14th of December 2004. The meeting is scheduled to start 7.00pm.

Please find enclosed:

1. An agenda
2. A map showing the extent of the coastline relevant to the Shoreline Management Plan 2 (SMP2).
3. A leaflet describing the Shoreline Management Plan

I hope that the meeting will be a useful consultation exercise for both the Project Management Group of the SMP2 and for all stakeholders attending, the output of which it is envisaged, will provide a positive contribution towards the development of the SMP2.

We hope you will be able to attend this event.

If you require any additional information prior to the meeting, please contact XXX directly. Otherwise I hope to see you in December.

Yours sincerely,

XXXX

B3.3 SMP Leaflet

(see over)

WHY WE NEED YOUR RESPONSE

If we do not correctly identify your issues/concerns we cannot develop policy to address them.

Please complete enclosed questionnaire and return to the address below:

CONTACT DETAILS

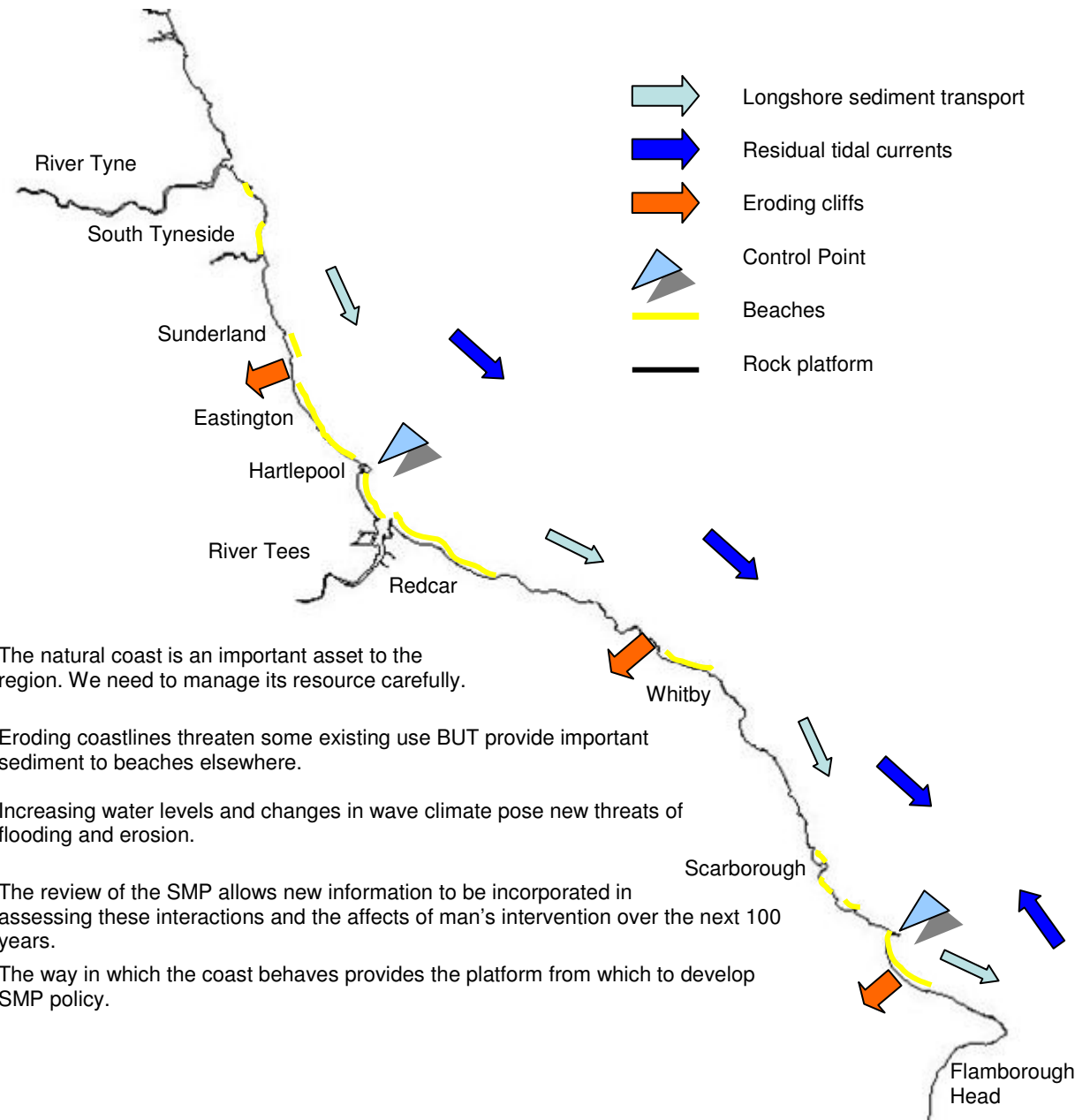
For further information please contact:-

Chris Matthews
 Project Manager
 Scarborough Borough Council
 Town Hall
 St Nicholas Street
 Scarborough YO11 2HG
 Ph: 01723 232 461
 Fax: 01723 503 826
 Email: chris.matthews@scarborough.gov.uk
 or visit www.northeastsm2.org.uk

The SMP is supported by a partnership of the following authorities:

- City of Sunderland
- Defra
- Easington District Council
- East Riding of Yorkshire Council
- English Nature
- Environment Agency
- Hartlepool Borough Council
- National Trust
- North York Moors National Park
- Posford Haskoning
- Redcar & Cleveland Borough Council
- Scarborough Borough Council (Lead Authority)
- South Tyneside Municipal Borough Council

HOW THE COAST WORKS



B3.4 Meeting Agenda

SMP 2 Sub-cells 1b, 1c and 1d Consultation Strategy

Stakeholders Meetings

Typical Agenda

1	5.00pm	Public Exhibition	
2	7.00pm	Welcome/Introduction	Chairman (PMG)
3	7.05pm	Objectives for the Meeting	PMG
4	7.15pm	Presentation	Consultant
5	7.45pm	Workshop/Questions	PMG/Consultant
6	8.45pm	The Next Stages	PMG
7	9.00pm	Public Exhibition	
8	9.30pm	Meeting/Exhibition Closes	

B3.5 Invitation letter to Second round of Stakeholder Consultation

Name
Address
Etc

Dear XXXX

16th February 2005

**Second Stakeholder meeting for the North Eastern Coastal Authorities Group
Shoreline Management Plan 2.**

I am writing to formally invite you to the above event, which will be held at the Council chambers, Scarborough Borough Council, Town Hall, St Nicholas Street, Scarborough, on the XXXXXX. The meeting is scheduled to start 6.00pm.

The initial round of Shoreline Management Plan 2 (SMP2) Stakeholder consultation meetings were held during December 2004 and January 2005 and were a very successful opportunity for Stakeholders to put forward their issues and concerns regarding coastal defence management. Thank you to all who attended these meetings and to all who returned questionnaires. Your input into this process is fundamental to ensuring all interests are heard and considered in the development of the SMP2. A review has since conducted a review of the initial consultation to identify the key features and issues.

The next stage in the process is the second round of Stakeholder consultation meetings. The purpose of this consultation is for stakeholders to review the features and issues interpreted from the consultation to date. Once the features and issues are agreed, Royal Haskoning will proceed with setting objectives from the issues. These objectives will then form the framework for policy development for coastal defence management.

The second Stakeholder Consultation meeting will have an "open house" format with a short presentation (15mins) by Royal Haskoning at 6pm and 7pm. Between these presentations there will be time for stakeholders to review the list of features and issues and have one-to-one discussion with the consultant to provide feed back and comments or ask any questions that might arise.

Please find enclosed an agenda.

We hope you will be able to attend this event.

If you require any additional information prior to the meeting, please contact XXX

Yours sincerely,

B5 Project Management Group Review Materials

The Project Management Group Meetings were often used to review and discuss proposed methodologies and findings throughout the SMP development process. The Project Management Group provided feedback on a number of documents as summarised below:

Date of Meeting	Document reviewed/ discussed	Purpose	Document location
February 2005	Issues Table	To review issues for correct factual information and interpretation	Appendix E
	Briefing Note regarding Setting Objectives and Characterisation of the coast	To review and discuss Characterisation of the coast and the concept of overarching principles for setting objectives	B5.1
June 2005	Briefing Note regarding Objective Evaluation/ Assessment	To review and discuss proposed method of assessing and evaluating objectives without mathematical ranking system	B5.2
November 2005	Draft Policy Development Document	To review and discuss proposed policy development methodology and format.	
March 2006	Draft SMP	To review and discuss draft SMP document.	

B5.1 Briefing Note for February 2005 Meeting regarding Setting Objectives/ Characterisation

Setting Objectives

A fundamental aim of the SMP process is to identify sustainable management of the coast, with choice of policy for management of defence risk underpinning this aim. An acknowledged difficulty in this is in understanding what is meant by sustainability.

As an overall principal it is adequate to take the definition provided by the original 1987 statement of sustainable development: *“development which meets the needs of the present without compromising the ability of future generations to meet their own needs”*, subsequently amended and adopted in the Defra SMP guidance, in relation to defence management policy as avoiding: *“tying future generations into inflexible and expensive options for defence.”*

While this provided an initial intent, encapsulating the long term view being taken by the SMP2, it has to be realised that such a definition lacks (quite correctly, given its context) specific guidance as to the day to day, area by area management of individual sections of the coast or defence risk.

It is essential, therefore, to interpret this in relation to the actual situations that exist and the future that is envisaged.

The weakness in all high level discussion of sustainability is the inherent lack of focus on what it is that is to be sustained: the natural processes, the ecological systems and interests, the investment in the built environment and future economic generation or, more specifically still, a type of habitat, residential properties or a listed historical structure.

The SMP2 sets out to identify the key issues determining the need for management. These issues are identified:

- from earlier studies; such as SMP1, strategies or scheme appraisals,
- from the first round of stakeholder meetings and consultation and
- from a review of the various policy documents, structure or local plans.

The manner in which these issues are then incorporated within the SMP2 development process is in terms of objectives, against which appropriate defence policy may be tested; the objectives relating to specific features of the coast. However, these have to be assessed at a local level in the context of a broader vision of what is required of the coast, or how the coast should be allowed to behave.

Taken solely from a perspective of sustainability of management effort or input, allowing the coast to behave in an unconfined manner (naturally) will always be the most sustainable approach. Where there are no issues, there is no need for management; the policy of no intervention is inherently sustainable. This “no issue, no management” provides the prime tenet for the development of coastal defence policy. This also aligns well with the intent of the Water Framework Directive, in its effort to restore a natural integrity of water bodies unless very good reason for intervention.

In other areas, where there are issues, the appropriate policy may still be for no active intervention, in that intervention, even when working generally with natural processes, will impose a degree of pressure or tension within the natural process system, which will require future effort to manage. The pressure and hence the management effort may increase in the future, either as the coast continues to evolve and becomes less coherent or as potential climate change imposes new response in the coast. In such areas it may be appropriate to abandon the issue/feature or to create opportunity for such a feature to change with change in the shoreline shape; rather than a feature forcing change in the shape of the coast to sustain the feature.

There are, however, other issues or features relating to the coast, which cannot adapt or be adapted and which would, through their loss, have a detrimental impact from a perspective of sustainability of other aspects of importance to the coastal environment (natural, cultural and built).

Sustainability has, therefore, two aspects, that in terms of the effort¹ or input required to deliver an outcome and that in terms of the detriment or benefit in delivering that outcome². The first is a function of the degree of anticipated coastal change (the pressure resulting from changing the coastal form), the second a function of what it is about the coast that is valued, and, in the longer term, the vision of what is wanted of the coast.

Both aspects vary along the NECAG coastline and an initial characterisation is given below, discussing briefly these two aspects of response and value. From this can be derived underlying principles, individual to differing sections of the coast, guiding the development of objectives from specific issues. The division of the coast in this manner is not necessarily intended to define policy units. Neither is the division intended to be rigorous, in that there is inevitable leakage of vision between areas of the coast.

Characterisation

The characterisation is set out in the following tables for each area considered. In addition to a general description and derivation of key values for an area, the key environmental designations are being identified, together with an initial identification of features at risk based on a policy of no further intervention. A brief synopsis is also provided of the degree to which the coast wishes to change; the inherent pressure any intervention on the coast would bring about.

¹ This effort is distinct or is distinguished from mere cost. It may impose little effort in terms of moulding the coast processes or morphology to retain a slumping cliff on a generally slowly eroding shoreline, although the cost of doing so may be considerable. As such it may not impose any significant pressure within the coastal system and be a relatively sustainable approach to erosion risk management (subject of course to down drift impacts). The value then of doing so becomes a local issue relative to the value of assets at risk.

² The assessment of detriment or benefit in undertaking the works above would be assessed against how defence of the cliff complimented (through protection of a feature) or detracted from the values placed upon the coastline.

Area:	South Shields to Whitburn
<i>General Description</i>	
<p>The northern section of the coast, while obviously strongly linked to the metropolitan area of South Shields is of a distinct character. The coastal strip is largely undeveloped, despite the close proximity of principally residential properties. As such there is only limited defence works on the shore. Even at the northern end of the frontage, at the mouth of the Tyne, the shoreline provides an immediate change in character to that to the bank of the river itself.</p> <p>There are sandy beaches both within the shelter of the main South Pier and to the southern side of the Pier; the man made structure providing a major control to the coastal processes. While there is some commercial and recreational development associated with these areas, this is linked to the value of the coast as an amenity and recreational area. This value extends to the cliffed coast to the south, changing, in that there is a move away from active recreational beach use and water sports to one of walking, fishing and more static use of the foreshore, with a greater separation between the cliff top use and that of the actual beach. Further south, this separation becomes more distinct still, with the focus of activity associated with the open cliff top, merely providing access to the foreshore. Matching this change is the seasonal use of the coastal strip, the more northerly section being highly seasonal. Within this general progression in use the southern section of the frontage is most remote, with limited access either to the cliff top or foreshore and is backed by farmland and private properties.</p> <p>There is significant ecological value along the frontage including designations identified below. This is generally compatible with the low impact recreational use of the central and southern sections of the coast. The Tyne and Wear Conservation Strategy reinforces an integrated policy to management of specific designated sites through the introduction of Wildlife Corridors. The coast from Tyne to Roker Pier (Sunderland) Is identified as such a corridor.</p> <p>While there are local fixed assets at the shoreline, such as the Lighthouse, the Marsden cliff lift and café and the leisure facilities to the northern section, these again are compatible with the general use of the frontage. The main coastal road runs the full length of the frontage and in areas relatively close to the cliff line. There are, in addition, two quarries subsequently used for waste; at Trow and to the south of the Light House. Both are being investigated in relation to potential contamination and, certainly at Trow, excessive loss of waste material would have a serious detrimental impact over this frontage and potentially further afield. The various harbour structures are essential to the maintenance of the Port of Newcastle.</p>	
<i>Coastal Process Links and Pressure</i>	
<p>The main process interaction is to the north, potentially allowing movement of sediment into the Tyne. Further south the sediment drift is substantially constrained by the indented nature of the coast, formed by natural headlands. The eroding cliffs provide only limited sediment to the coastal system. The frontage system is slowly eroding with little existing pressure apart from local areas to the north of Trow Quarry and again in the centre of the bay within the shelter of the South Pier. There is a suggestion that the foreshore is generally steepening and clearly increased water levels would result in some increased pressure for erosion or retreat (in the soft beach areas).</p>	

Key Values

While generally perceived within an urban context and recognised as providing important amenity and recreational value, the coast is valued for its distinct natural appearance, in particular for its high landscape and important ecological status. The overarching management principle is, therefore, to allow natural evolution of the coast. Within this, however, is a recognised need to maintain recreational and amenity facilities, particularly over the northern section of the frontage, but still maintaining as far as possible the relatively soft defence line.

Area:	Whitburn to Sunderland Harbour
<p><i>General Description</i></p> <p>There is a transition along this frontage from the principally natural coast of the area to the north through to the strongly industrial character in the area south of Sunderland harbour. The frontage comprises a relatively low natural dune backed by properties at the Bents, changing to a more formal promenade along the South Bents area through to Seaburn. The hinterland rises above Parson's Rocks with the main development being at the top of the cliff and amenity and recreational facilities along a lower promenade at the toe of the cliff. The Roker Pier defines the northern limit of the Harbour, but development within this northern area of the harbour is now predominantly residential, with tourism and marina development. Considerable recent investment has been made in adapting this northern section of the Harbour. The main traditional harbour area is predominantly to the South of the Wear. Future development of this area is under consideration. The main dock and harbour area extends south to the Oil Depot at Hendon.</p> <p>While there is considerable variation in specific land use, the entire frontage has to be considered dominated by the built environment and man's intervention, modifying the coast to provide not merely coast and flood protection but using structures to work within this overall built environment. The area is important for tourism and as a recreational and amenity area for the city. Specific aspects of this are:</p> <ul style="list-style-type: none"> • the amusement and sports facilities at Seaburn and the hotels along the South Bents area, Seaburn and Roker, • the Seaburn promenade and open areas such as Seaburn Park and the Roker Cliff Park as well as the Marine Walk Promenade, • the beaches within Whitburn Bay and fronting Roker. • residential areas <p>These features are distinct in what they provide to the area but have to be also considered as providing, to a degree, a complete package of coastal use. The Sea front Strategy (2000) states the intent to manage the foreshore for the benefit of all. To this end the strategy suggests zoning of recreational and conservation uses. The frontage does provide an important transport corridor and significant industrial and commercial areas associated primarily with the Port.</p> <p>Though dominated by the built environment an essential character, certainly to the north of the Wear, is the area's landscape quality and the interaction with the natural maritime environment. Important to this is the designated habitats identified below. The frontage continuous with the area to the north identified as a Wildlife Corridor.</p>	
<p><i>Coastal Process Links and Pressure</i></p> <p>There is little shoreline drift from the north and limited movement past Roker Pier. (Potentially there is greater net drift further offshore.) The recent strategy does suggest a steepening of the foreshore, though based on limited map data. There is some local interaction over the frontage affecting beach levels. At the northern end of the area and at Roker Pier there are beaches above normal high water. To the north of the Wear, therefore, there is only the central section under significant pressure; although without the various defences, there would be substantial erosion as a natural shoreline develops. Sea level rise would increase this pressure and extend its extent. The Harbour and south of the Harbour evidently extend beyond the natural coastline. However, their advanced position is not at present under pressure from any major wish for the coastline to the north to retreat. There is greater pressure to the south, where possibly the harbour does restrict longshore sediment supply.</p>	

Key Values

The existing value of the frontage is for amenity, recreation, tourism and economic generation and is built around intervention on the coast. This has not led to significant pressure although in the future there may be an increased loss of beaches due to possible beach steepening as sea levels rise. The current values are not inherently unsustainable. Given this, the overall principle for management is to maintain these current values based on economic evaluation. Within this, opportunity has to be sought to maintain or improve the integrity of the natural ecology and to maintain the quality of the coastal amenity, which remains fundamental to the overall values of the area.

Area: Sunderland to Hartlepool (the Durham Coast)

General Description

This area covers various distinct sections but is either covered by the Durham Coast Management Plan or falls within the general concept defined by the plan. Therefore, while in individual sections the management of the coast may differ in a practical sense; it is felt that there is an overall context for the long term management of the frontage.

The Hendon frontage, south of Sunderland Harbour, while clearly having a strong industrial history is now a derelict open area between the sea and the dock railway line. The promenade is valued for promenading and fishing, being one of the few readily accessible points on the coast immediately south of Sunderland, providing an important resource south of the river and an opportunity to regenerate this old industrial area; this being very much aligned with the concept of the coast further south. Further south the crest of the cliff is open farmland to relatively soft eroding till slopes above the magnesium limestone cliffs. The railway line continues to the rear of the open ground with the villages of Grangetown and Ryhope, landward of the railway. The railway cuts inland south of Ryhope but is in effect replaced by the coastal road running through to Seaham Hall. Over this section of the frontage there is very limited access to the shore, principally via one of the three Denes cutting the coast. Maintaining access is a key issue. The route of the proposed Sunderland Southern Relief Road will run to the seaward side of the railway between Ryhope and Hendon. There is also concern over exposure of waste material tipped to the sand and gravel quarry at Ryhope.

From Seaham Hall south, the coastal road closes to the cliff top and, reflecting the change to the urban environment of Seaham, continuous protection has been provided to the toe of the cliff through to Seaham Harbour. Over this section the coast, the promenade and cliff top road are seen as important to the regeneration of the area. The Harbour itself, provides a core to the commercial and industrial use encouraged to the south of the town, with the new south ring-road linking this area with the more residential and amenity area north of the harbour. Seaham, at present acts as the northern way point to the Durham Coastal Path, although under initiatives, such as The Great North Forest Plan, the intent is identified to link the whole coast from Hartlepool through to the Tyne. Seaham would provide an important focus in this.

The coast to the south of Seaham has been heavily modified by the substantial quantities of coal waste deposited during the last century. Turning the Tide set out to reverse this process, successfully restoring much of the natural coastline. Planning initiatives have been put in place to reduce development of the coast, creating a buffer zone against future erosion of the cliffs. This area is effectively bounded by the coastal railway line. The Durham Coastal path runs the whole length from Seaham to Crimdon, with transverse access points at each of the principal Denes. Access both along the high cliff line and through the coastal strip to the shore is a critical issue in delivering the overall concept of inclusive management. Beach use over this area tends to focus on the access points extending further either side for walking and angling.

The lower lying valley of Crimdon Beck, in filled with sand dunes and marsh, is an area of more static beach use and supported, as it is, by the car park and caravan parks to the north and the Golf course to the south, is the principal southern way point of the Coastal Path. Access continues south linking to the area of the Hartlepool Headland. There is intent to reinforce this link but currently access is constrained by industrial development and the Cemetery. The Hartlepool Headland provides a more formal promenade at the southern end of this frontage, with important open space, recreation, cultural and amenity value, as well as beach use to the northern section. Behind the promenade is significant urban development extending down to the docks, to southern side of the headland. There are both important heritage features on the headland itself and designated habitat on including the rocky

foreshore. The headland is protected over its full length by a sea wall.

Coastal Process Links and Pressure

There is a weak shoreline drift from north to south over most of the frontage with greater more consistent movement in the nearshore zone. Shoreline drift is, however, interrupted by key headlands; particularly to the south of Seaham, and a net drift reversal south of Crimdon resulting in the Crimdon Beck area developing as a partial sediment sink. The eroding cliffs north of Seaham do provide some sediment to the foreshore system and it is over this area where greatest natural erosion rates are experienced. Once all coal waste deposits have eroded from the southern section, erosion rates of the natural cliffs is expected to recommence but at a slow rate.

The natural headlands and to a degree the structures of Seaham Harbour act, or will act once they are fully re-established, as coal waste deposits erode, to limit foreshore drift; tending to create relatively stable bays and pocket beaches. The main nearshore drift system is less affected.

There is little sediment feed to the frontage immediately south of Sunderland (Hendon) and this is reflected in the continued need to enhance the defence provide by the promenade seawall. This point is under pressure, managed at present by a significant effort in terms of defence. Other key pressure points are effectively the various headlands, holding the basic embayed structure of the coast. Most significant of these is possibly Salterfen, where the headland is believed to be eroding at higher rates than the coast to the north, potentially exposing the Ryhope Nook to erode even more rapidly.

Seaham Harbour, is in a similar situation to that of Sunderland but with less impact to the south, in that it is well advanced from the natural coastline but works relatively comfortably with the likely future response of the adjacent coast. To the north, the harbour structures link through to the Featherbed Headland and this artificially protected feature is supported by the promenade wall further north. Therefore, ultimately the pressure point in this system would be to the northern end of the promenade wall, as the slow erosion of the cliffs through to Pincushion move back. Seaham in effect becomes an extended headland.

At the southern end of the frontage the Hartlepool Headland anchors the coast. There is local pressure at points along the wall but underlying this is a natural control feature.

Key Values

The vision of the Heritage Coast is *“To conserve and enhance the Durham Heritage Coast in perpetuity for the enjoyment and benefit of this and future generations, allowing local people and visitors to enjoy the peace and natural beauty of the Durham Coast”*. Implicit within this is the vision to recreate a more natural coastline from the industrial heritage of the area but, equally, to develop this with, and to use the coast to support, the regeneration of the built environment. This inclusive approach inevitably results in some zoning from the natural to built environment, but the transition between areas aims to be soft and works within an overall context of improving the environment. Common principles for management can, therefore, be derived: to reduce intervention, and the need for intervention, along the shoreline as a whole through land use planning, but in such a manner as to allow commercial and economic re-generation of hinterland through creating opportunity for development, tourism and enhancing recreational and amenity value.

Area:	Hartlepool to Saltburn (Tees Bay)
<p><i>General Description</i></p> <p>In terms of values, this area is complex. Arguably, the area could be subdivided in terms of significantly different land use, important ecological value or maritime industrial interests. However, there is felt to be too great an interaction (and physical overlap and interdependency) between each of these sectorial values to properly define the value of the whole area discretely.</p> <p>The character of the bay is dominated by the physical management and industrial development of the Tees Estuary, but of equal importance is the Hartlepool area to the North and transitional zone from the industrial to semi-rural character between Redcar and Saltburn. Within each area, and certainly in the case of Coatham Sands, Seal Sands and Seaton Sands, important natural value and diversity has been created by the presence of the built environment.</p> <p>The inner face of the Hartlepool Headland is primarily residential but closely associated with both the maritime heritage and the current port use of Victory Harbour. There is important heritage value to the area. Moving through the more industrial area of Middleton, the recent development behind the West Harbour, forms the commercial core of Hartlepool, with the commercial and business centre to the south. Further south is the residential and coastal tourism area of Seaton Carew, providing an integral recreational and waters edge value to the whole Hartlepool frontage. This changing coastal value is further complimented by the wider, remoter and ecological important area of Seaton Sands and the internationally designated Teesmouth Flats and Marsh.</p> <p>To the south side of the Tees a similar transition of character exists, from the ecological value of Coatham Dunes, backed by the industrial area of Redcar, to the important hard amenity and tourism core of the town. Continuing to the east, there is open land and a veneer of dunes backed by the main coastal road and residential property. This continues through Marske-by-the Sea to the higher cliffs of Saltburn. In contrast to the relatively static, traditional use of the beach and promenade, together with local fishing boat use and watersports associated with the Redcar and Saltburn frontages, the area between provides space for more active recreational value.</p> <p>The important complex mosaic of habitat of the Teesmouth Flats and Marshes is in effect an allegory of the broader complex interrelationship between different sectorial interest over the whole of the Tees Bay, all very dependant on man's past intervention, and to a large degree reliant upon future intervention.</p>	
<p><i>Coastal Process Links and Pressure</i></p> <p>There is considerable variation in reported sediment drift rates associated with the area. To an extent this may be in comparison of rates determined over the whole nearshore profile and those merely relating to the immediate foreshore. The general consensus is that that is little drift over the northern part of Hartlepool Bay, a southerly drift over the southern Hartlepool frontage towards the Tees, a general easterly drift of the Coatham area across Redcar and towards Saltburn. Along the Redcar frontage this drift can reverse and is very sensitive to wave direction. Overall, the interpretation is that the area in the lee of the Hartlepool Headland is relatively stable, under little pressure but capable of eroding rapidly and significantly due to the low lying nature of the land behind. The undefended areas to either side of the Tees Entrance and the entrance itself are relatively stable; the area acting as a sediment trap. The key control features are the Headland; with the Heugh breakwater clearly have some impact, the Gare breakwaters and the North Yorkshire cliffs to the south. Within this overall structure the pressure points are Carr House sands (controlled by the long scar rocks) and the Redcar frontage controlled by the Coatham Rocks. Evens so, the presence of a good, if volatile beach in these areas suggests that this pressure for change is not great.</p>	

The frontage to the east of Redcar is under some pressure and is eroding; this increasing pressure to both Redcar and Saltburn. As the coast evolves, Marske-by-the Sea is likely to come under increased pressure, the till cliffs acting more as a control point.

There are important local interactions in terms of sediment drift allowing some buffer against the variable drift on adjacent frontages.

Key Values

To a degree more than anywhere else on the coast, there is no one clear coastal theme or vision for the area. Within a largely man made structure the most important principles guiding management is seen as achieve or maintaining a balance of interest and values. This principle applies equally over the whole area as it does within individual sections. Examples of this can be seen in the importance in management of the Teesmouth Flats and Marshes in maintaining the adequate balance of diverse habitats in sustaining the integrity of the ecosystem; rather than one specific habitat. Similarly, both in the impact of any defence policy and in any requirement to defend, the broader consequence of failing to sustain a specific element of the socio-economic or economic structure, the value of the whole co-evolutionary system has to be maintained.

Area:	Saltburn Scar to Sandsend Ness
<p><i>General Description</i></p> <p>The character of the area is dominated by the high coastal cliffs and natural pocket beaches, punctuated by small coastal communities. The spectacular and predominantly natural coastal scenery of the heritage coast directly compliments the important hinterland values of the North Yorkshire Moors National Park . Within this is the importance of the coastal communities and the variety of local character that these communities provide. Essential to this is maintaining these settlements as thriving, living communities, not merely as tourism hot spots, although tourism itself does contribute significantly in delivering this aim.</p> <p>The more northerly section of the area is characterised by high relatively resistant cliffs. The mineral railway runs close to crest of Hunt cliff and serves British Steel at Skinning Grove and the Cleveland Potash mine at Boulby. Both industries are important to sustaining employment in the area.</p> <p>Further south the nature of the cliffs tends to allow increased erosion and slips, potentially threatening both the route of the Cleveland way footpath and more isolated properties associated with agricultural use of the coastal zone. The erosion of the cliffs, however, is of significant geological interest, resulting in exposure of both geological features and fossils; both important in terms of education, tourism and scientific research.</p> <p>Larger settlements include:</p> <ul style="list-style-type: none"> • Skinninggrove, with its industrial character, in addition to supporting a very characteristic small boat fishing community and residential area. • Staithes and Cowbar, also with a valued fishing community and residential area but also including access for water sports, general tourist facilities and a lifeboat station. • Runswick Bay, again with important local fishing use, as well residential property and tourist accommodation. <p>Access to each settlement is restricted but vital. Most obviously critical is that to Cowbar, where the single coastal road runs close to the eroding cliff.</p> <p>There is significant heritage value complimenting, contrasting and providing a cultural heritage context to the existing communities. Several important and scheduled sites are close to the cliffs and less stable coastal slope.</p>	
<p><i>Coastal Process Links and Pressure</i></p> <p>Much of the coast is characterised by a bare rock intertidal platform. The cliffs do provide some sediment to the general coastal system, but much of this is retained as pocket beaches by more resistant headlands. Little overall drift is anticipated (although this is being examined further).</p> <p>There are some areas of sand, most notably in the area of Skinninggrove and Runswick. This tends to be limited to larger bays where there has been potentially greater historic retreat and greater indentation between controlling headlands.</p> <p>Locally there are areas of pressure on the coast, as evidence by the erosion of the cliffs but generally the overall harder structure of the geology limits wholesale retreat.</p>	

Key Values

The National Heritage Coast objectives are:

- to conserve, protect and enhance the natural beauty of the coasts, including their terrestrial, littoral and marine flora and fauna, and their heritage features of architectural, historical and archaeological importance,
 - to facilitate and enhance their enjoyment, understanding and appreciation by the public by improving and extending opportunities for recreational, educational, sporting and tourist activities that draw on and are consistent with the conservation of the natural beauty and the protection of the heritage features,
 - to maintain and improve (where necessary) the environmental health of the inshore waters affecting the Heritage Coast and its beaches through appropriate works and management measures,
 - to take account of the needs of agriculture, forestry and fishing, and of the economic and social needs of the small communities on the coast, by promoting sustainable forms of social and economic development, which in themselves conserve and enhance the natural.
- These objectives are felt to appropriately define the key values and management principles.

Area:	Whitby Bay
<i>General Description</i>	
<p>The sandy bay contains the village of Sandsend at the northern end and the town of Whitby to the south. Between these areas is a section of soft cliff with open areas and the Whitby Golf course at the crest.</p> <p>The wide sandy beaches over the whole frontage are important as a local amenity and as an essential tourist attraction to the region. The setting, or landscape value, of the beaches is an equally important aspect of the beach use, with long unspoilt views. Access to the beaches at either end is good and well supported by different, but well established facilities.</p> <p>Between the two principal settlements is a coastal road, which to the north runs close to the crest of the coastal slope. This is both an important local and regional transport link.</p> <p>Whitby harbour forms the central core to the town and sustaining the various harbour use is considered and important to the well being of the town.</p> <p>Over most of the Whitby frontage there are coast protection works and the walls are backed by a promenade over most of its length. The walls act to retain and prevent erosion of the coastal slope, with property and significant tourist accommodation the crest of the cliffs. The harbour structures influence the need for coastal defence as well as providing a harbour function. To the south of the Harbour is the eroding Abbey cliff. This has been protected over its toe. The Abbey is a notable landmark of the area.</p> <p>At Sandsend, the road is protected by a revetment to the coastal slope and with a more substantial wall along the main village frontage.</p> <p>Over much of the area its character is heavily reliant on but not dominated by significant intervention stopping erosion.</p>	
<i>Coastal Process Links and Pressure</i>	
<p>The bay is considered to be a relatively closed system, with little linkage to adjacent section of the coast. Within the bay, however, there is likely to be a substantial transfer of material over the bay. There is supply from unprotected sections of the frontage in the centre of the bay.</p> <p>Protection works resist erosion, however, apart from locally at Sandsend there sees little overall pressure. This will change to a degree given sea level rise, even so, in terms of overall management the protection is not seen as fundamentally unsustainable. There may, however, be a trend of beach loss, which would impact on the character of the area.</p>	
<i>Key Values</i>	
<p>While the area has to be seen in the context of the National Park hinterland, drawing certain values from this interrelationship, the area is fundamentally different in its emphasis as a regional residential, commercial and tourist centre. Defence management principles, therefore need to reflect this in the need to sustain the important built and linked human use of the area. Despite this, management should also avoid damaging the underlying values attributed to landscape and apparent naturalness of the overall frontage, upon which much of the human environment is funded.</p>	

Area:	Saltwick to Scalby Ness
<i>General Description</i>	
<p>The overall character of the area is similar to that north of Whitby bay, sitting within the North Yorkshire National Park. In particular the spectacular and predominantly natural coastal scenery of the heritage coast directly complimenting the important hinterland values. There are, however, important differences in the underlying geology, resulting in a generally softer coastal slope liable to slumping and major slippage.</p> <p>Main settlements include:</p> <ul style="list-style-type: none"> • Robin Hoods Bay, an important residential area and tourist destination, as well as linking to the Cleveland Way coastal path and the coast to coast walk from the west coast. • Scalby Ness, a more recent residential area, linked to Scarborough. <p>The park recognised the importance in maintaining thriving communities.</p> <p>The coastal area has important ecological and heritage interests, reflected in specific designations and scheduled sites.</p>	
<i>Coastal Process Links and Pressure</i>	
<p>The coastal slope in the area is more active than further north potentially providing some drift material into the coastal system. Drift is, however, limited by headlands. Even so the area may provide some sediment further south.</p> <p>There is a general pattern of erosion over much of the frontage and this, quite apart from the scale required for any intervention, could make intervention on more exposed frontages difficult to sustain. Within Robin Hoods Bay, while still relatively active, there is less overall pressure for retreat.</p>	
<i>Key Values</i>	
<p>The National Heritage Coast objectives are:</p> <ul style="list-style-type: none"> - to conserve, protect and enhance the natural beauty of the coasts, including their terrestrial, littoral and marine flora and fauna, and their heritage features of architectural, historical and archaeological importance, - to facilitate and enhance their enjoyment, understanding and appreciation by the public by improving and extending opportunities for recreational, educational, sporting and tourist activities that draw on and are consistent with the conservation of the natural beauty and the protection of the heritage features, - to maintain and improve (where necessary) the environmental health of the inshore waters affecting the Heritage Coast and its beaches through appropriate works and management measures, - to take account of the needs of agriculture, forestry and fishing, and of the economic and social needs of the small communities on the coast, by promoting sustainable forms of social and economic development, which in themselves conserve and enhance the natural. <p>These objectives are felt to appropriately define the key values and management principles.</p>	

Area:	Scarborough to Filey Brig
<p><i>General Description</i></p> <p>Scarborough provides a key regional centre for commerce, industry, population, culture and tourism. Management of the area has to reflect both this importance and diversity.</p> <p>North Bay consists of a generally sand beach area backed by a seawall and main transport link. Set back from the promenade and road is a coastal slope with residential and tourist accommodation to the crest. The coastal slope is an open recreational area adding to the general openness of the local frontage. To the north end of the bay, is a relatively new tourism attraction adding to the more established coastal facilities. This area is also protected by a seawall founded to a rock outcrop.</p> <p>To the south the coastal road runs beneath the Castle headland, the defence of which has recently be significantly upgraded. This work has been extended to address needs of the northern pier to Scarborough Harbour.</p> <p>The Harbour provides an important feature of the frontage as a tourist attraction but also essentially is a major factor in the economy of the area, with recreational water use, an important fishing fleet, general cargo terminal and associated commerce and industry. The promenade behind and continuing south of the Harbour is a varied and vital seafront, providing tourism and local facilities and interest. This area links directly through to the town centre.</p> <p>Further south, the area is characterised by older, Victorian development historically matching the development of the coastal slope behind the promenade. Along this section the Spa Centre has been refurbished as a conference centre. While defence continues some way south from the Spa, the character is dominated by the open coastal slope to properties at its crest.</p> <p>Beyond the main area of Scarborough the coast takes on a more natural nature round into Cayton Bay. Although arguably separate in term of the character of the actual coast the development at the crest of the coastal slope is closely linked with Scarborough itself. The coastal use has a strong association with the more developed area to the north and the management approach to the frontage. This said, Cayton Bay is recognised to have different specific management issues, reflected in the more natural approach developed the towards the area owned and managed by the National Trust.</p> <p>The whole frontage is therefore dominated by the built environment associated with the importance of Scarborough. Within this, is a degree of zoning in actual use. North Bay is typically important for recreational use including beach use. The harbour area is both important as a commercial and tourism centre. South beach directly compliments this centre. The area of the Spa is a more formal traditional promenade running to a more natural, if developed coast to the south. This zoning reflects the diversity which is part of the frontage's appeal and importance to the town itself.</p> <p>The area relies strongly on intervention and protection against erosion and overtopping.</p>	

Coastal Process Links and Pressure

There is a potential drift link with the coast to the north, possibly maintaining important sediment supplies to the frontage. The coast is, however, strongly controlled by the Castle headland and within this artificially by substantial defences; most significantly through the reinforcement of the natural rock outcrop at the northern end. To the south the main frontage is controlled by the hard rock headland north of Cayton Bay with Cayton Bay contained by Old Hors rocks and beyond this Filey Brigs.

Overall the frontage, while having a general trend of erosion, is fixed to a large degree by these various control features. Therefore, while under pressure the frontage is seen as basically sustainable. Sea level rise could result in increased pressure and may result in significant beach loss. In areas not currently defended, the trend for erosion would threaten further the stability of the coastal slope with significant retreat of the crest.

Key Values

As with Whitby the character of the coast does reflect a continuation of the broader natural and high visual value of the Yorkshire coastline as a whole, particularly in the transition back to the undefended frontage to the south. However, within this, there has to be a far greater emphasis based on the needs to sustain the specific and local aspects of the built environment created by Scarborough as a regional centre. The principles for management are therefore to maintain the essentially built environmental character, to deliver the diversity of human use. Within this is the importance of the active harbour use and the transport links, as well as the recreational and tourism value of the beaches and promenade. Beyond this, the more natural aspects, particularly of the coast to the south, have to be respected but in relation to the association with the town centre relating to land use at the crest of the coastal slope.

Area:	Filey Bay
<i>General Description</i>	
<p>Filey Bay comprises mostly a glacial till coastal slope contained by the hard rock headland of Filey Brigg to the north and the massive chalk cliffs leading to Flamborough Head.</p> <p>The unspoilt nature of the bay is an essential feature of the bay, with wide sandy beaches backed by the cliffs. There are numerous environmental designations supporting significant ecological value. This underlying natural value provides the backdrop enhancing the human settlement of the area.</p> <p>Within the immediate shelter of Filey Brigg is a largely undeveloped section of coastal slope. The Filey Bay Sailing club is situated within this section and minor stabilization works have been undertaken to the toe of the slope.</p> <p>Further along the coast is the main development area of Filey. The town built largely situated at the crest of the slope but extends down the slope to the historically important Cobble Landing and the promenade and retaining seawall. This lower area is an important local and region attraction, supporting fishing boat use, water sports, tourism facilities and access to the beach. This is the principal area of defence within the bay.</p> <p>The active coastal slope continues to the south, with relatively small communities of Flat Cliff and Reighton developed close to the cliff edge. Behind these communities, and spreading over larger areas are various holiday and caravan parks.</p> <p>The clay cliffs give way to the hard chalk cliffs further south. There are some small communities along the chalk cliff top, the most significant being North Landing, towards Flamborough Head. These settlements tend to be set within small coves in the chalk cliff.</p> <p>The communities along the softer clay coastal slope are linked to services and the main sewer runs along the cliff towards Filey. The need for these services are obviously linked to the existence of the communities and the respective ability to maintain either.</p>	
<i>Coastal Process Links and Pressure</i>	
<p>The bay is seen basically as a closed system in terms of sediment. There is some leakage to the south, but with a postulated return of material under specific conditions. Sediment supplies from the eroding cliffs would appear to balance occasional loss.</p> <p>Within the bay, there is significant movement of sediment both north and south with a slight southerly bias tending to accumulate at the point where there is a slight variation in bay shape between the chalk cliff and the more erodable clay slopes. This accumulation is not a fixed feature, with certain storm conditions capable of stripping any area of the bay down to the underlying clay. Defences within the bay, particularly over the more central section of the clay cliffed section would, as the coast continues to erode, disrupt this natural redistribution of material, affecting other sections.</p> <p>Control of the bay is at either end with little intermediate influence. The bay acts as a single unit, although as the bay continues to adjust, greater stability, even in the event of sea level rise, is likely to develop to the north and south.</p> <p>Currently, erosion continues to the main frontage and this progressively destabilises the coastal slope, resulting in potentially sudden and larger change at the cliff crest. In terms of</p>	

sustainable intervention it would become increasingly difficult to maintain defences along the central section of the clay slope.

Key Values

The overriding value of the coast is its natural quality. This together with the underlying difficulty in maintaining defences without disrupting the coast's ability to adjust to change in sea level rise, particularly over the main central softer frontage strongly indicates a general principle to minimise both intervention and the need for intervention. However, there has to be recognition of the important cultural, heritage and economic values of Filey. As such the basic principles of management given for the Heritage Coast are seen as appropriate, but with an addition principle; not to disrupt the natural behaviour of coastal processes.

- to conserve, protect and enhance the natural beauty of the coasts, including their terrestrial, littoral and marine flora and fauna, and their heritage features of architectural, historical and archaeological importance,
- to facilitate and enhance their enjoyment, understanding and appreciation by the public by improving and extending opportunities for recreational, educational, sporting and tourist activities that draw on and are consistent with the conservation of the natural beauty and the protection of the heritage features,
- to maintain and improve (where necessary) the environmental health of the inshore waters affecting the Heritage Coast and its beaches through appropriate works and management measures,
- to take account of the needs of agriculture, forestry and fishing, and of the economic and social needs of the small communities on the coast, by promoting sustainable forms of social and economic development, which in themselves conserve and enhance the natural

Summary	
South Shields to Whitburn	While generally perceived within an urban context and recognised as providing important amenity and recreational value, the coast is valued for its distinct natural appearance, in particular for its high landscape and important ecological status. The overarching management principle is, therefore, are to allow natural evolution of the coast. Within this, however, is a recognised need to maintain recreational and amenity facilities, particularly over the northern section of the frontage, but still maintaining as far as possible the relatively soft defence line.
Whitburn to Sunderland Harbour	The existing value of the frontage is for amenity, recreation, tourism and economic generation and is built around intervention on the coast. This has not led to significant pressure although in the future there may be an increased loss of beaches due to possible beach steepening as sea levels rise. The current values are not inherently unsustainable. Given this, the overall principle for management is to maintain these current values based on economic evaluation. Within this, opportunity has to be sought to maintain or improve the integrity of the natural ecology and to maintain the quality of the coastal amenity, which remains fundamental to the overall values of the area.
(the Durham Coast)	The vision of the Heritage Coast is <i>“To conserve and enhance the Durham Heritage Coast in perpetuity for the enjoyment and benefit of this and future generations, allowing local people and visitors to enjoy the peace and natural beauty of the Durham Coast”</i> . Implicit within this is the vision to recreate a more natural coastline from the industrial heritage of the area but, equally, to develop this with, and to use the coast to support, the regeneration of the built environment. This inclusive approach inevitably results in some zoning from the natural to built environment, but the transition between areas aims to be soft and works within an overall context of improving the environment. Common principles for management can, therefore, be derived: to reduce intervention, and the need for intervention, along the shoreline as a whole through land use planning, but in such a manner as to allow commercial and economic re-generation of hinterland through creating opportunity for development, tourism and enhancing recreational and amenity value.

<p>(Tees Bay)</p>	<p>To a degree more than anywhere else on the coast, there is no one clear coastal theme or vision for the area. Within a largely man made structure the most important principles guiding management is seen as achieve or maintaining a balance of interest and values. This principle applies equally over the whole area as it does within individual sections. Examples of this can be seen in the importance in management of the Teesmouth Flats and Marshes in maintaining the adequate balance of diverse habitats in sustaining the integrity of the ecosystem; rather than one specific habitat. Similarly, both in the impact of any defence policy and in any requirement to defend, the broader consequence of failing to sustain a specific element of the socio-economic or economic structure, the value of the whole co-evolutionary system has to be maintained..</p>
<p>Saltburn Scar to Sandsend Ness</p>	<ul style="list-style-type: none"> - to conserve, protect and enhance the natural beauty of the coasts, including their terrestrial, littoral and marine flora and fauna, and their heritage features of architectural, historical and archaeological importance, - to facilitate and enhance their enjoyment, understanding and appreciation by the public by improving and extending opportunities for recreational, educational, sporting and tourist activities that draw on and are consistent with the conservation of the natural beauty and the protection of the heritage features, - to maintain and improve (where necessary) the environmental health of the inshore waters affecting the Heritage Coast and its beaches through appropriate works and management measures, - to take account of the needs of agriculture, forestry and fishing, and of the economic and social needs of the small communities on the coast, by promoting sustainable forms of social and economic development, which in themselves conserve and enhance the natural. <p>These objectives are felt to appropriately define the key values and management principles. Target landscape enhancement using the mechanism of the Tees Forest.</p>
<p>Whitby Bay</p>	<p>While the area has to be seen in the context of the National Park hinterland, drawing certain values from this interrelationship, the area is fundamentally different in its emphasis as a regional residential, commercial and tourist centre. Defence management principles, therefore need to reflect this in the need to sustain the important built and linked human use of the area. Despite this, management should also avoid damaging the underlying values attributed to landscape and apparent naturalness of the overall frontage, upon</p>

	which much of the human environment is funded.
Saltwick to Scalby Ness	<ul style="list-style-type: none"> - to conserve, protect and enhance the natural beauty of the coasts, including their terrestrial, littoral and marine flora and fauna, and their heritage features of architectural, historical and archaeological importance, - to facilitate and enhance their enjoyment, understanding and appreciation by the public by improving and extending opportunities for recreational, educational, sporting and tourist activities that draw on and are consistent with the conservation of the natural beauty and the protection of the heritage features, - to maintain and improve (where necessary) the environmental health of the inshore waters affecting the Heritage Coast and its beaches through appropriate works and management measures, - to take account of the needs of agriculture, forestry and fishing, and of the economic and social needs of the small communities on the coast, by promoting sustainable forms of social and economic development, which in themselves conserve and enhance the natural. <p>These objectives are felt to appropriately define the key values and management principles.</p>
Scarborough to Filey Brig	<p>As with Whitby the character of the coast does reflect a continuation of the broader natural and high visual value of the Yorkshire coastline as a whole, particularly in the transition back to the undefended frontage to the south. However, within this, there has to be a far greater emphasis based on the needs to sustain the specific and local aspects of the built environment created by Scarborough as a regional centre. The principles for management are therefore to maintain the essentially built environmental character, to deliver the diversity of human use. Within this is the importance of the active harbour use and the transport links, as well as the recreational and tourism value of the beaches and promenade. Beyond this, the more natural aspects, particularly of the coast to the south, have to be respected but in relation to the association with the town centre relating to land use at the crest of the coastal slope.</p>

<p>Filey Bay</p>	<p>The overriding value of the coast is its natural quality. This together with the underlying difficulty in maintaining defences without disrupting the coast's ability to adjust to change in sea level rise, particularly over the main central softer frontage strongly indicates a general principle to minimise both intervention and the need for intervention. However, there has to be recognition of the important cultural, heritage and economic values of Filey. As such the basic principles of management given for the Heritage Coast are seen as appropriate, but with an addition principle; not to disrupt the natural behaviour of coastal processes.</p> <ul style="list-style-type: none"> - to conserve, protect and enhance the natural beauty of the coasts, including their terrestrial, littoral and marine flora and fauna, and their heritage features of architectural, historical and archaeological importance, - to facilitate and enhance their enjoyment, understanding and appreciation by the public by improving and extending opportunities for recreational, educational, sporting and tourist activities that draw on and are consistent with the conservation of the natural beauty and the protection of the heritage features, - to maintain and improve (where necessary) the environmental health of the inshore waters affecting the Heritage Coast and its beaches through appropriate works and management measures, - to take account of the needs of agriculture, forestry and fishing, and of the economic and social needs of the small communities on the coast, by promoting sustainable forms of social and economic development, which in themselves conserve and enhance the natural environment.
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B5.2 Briefing Note and Figure for June 2005 Meeting regarding Objective Evaluation / Assessment

Policy Development Analysis Procedure

Purpose

One of the key differences between the SMP1 and the current SMP2 is the reinforcement of the underlying aim to examine management of flood and erosion risk and develop policy in a continuous manner along the coast. This then recognises the interactions over the whole shoreline and allows proper recognition and integration of impact between sections of policy.

At the same time there is a need to provide detailed policy guidance to individual operating authorities, at a useful enough scale, as to how, in policy, they need to manage discrete sections of their coast.

It is the process by which policy is now developed that is discussed in this paper, looking at how, in relation to the procedural guidance and specifically to the NECAG coastline we may both keep our eye on the whole while still assessing areas in sufficient detail to be useful. There has to be a good rationale, not so much how we divide up the coast in discussion of policy, but more how this is achieved so that we do not miss the important connections. The paper, which will be incorporated with the main text of the final SMP, is at this stage presented to allow discussion and input from the project management group.

The Process

The procedural guidance (The Guidance) on the development of SMP2 (May 2004) sets out the general procedure for development of policy, developing from the thematic review of the coast, to identification of issues, objectives and key drivers through to scenario testing.

The Guidance recognises the need to adapt approaches to reflect the nature of the coastline and, while staying basically within an overall consistency, the need to modify procedures to deliver the aim of the SMP2. The basic steps in the Guidance procedure are, therefore, discussed below in relation to the NECAG SMP2.

Theme Review

The theme review for the NECAG area has been progressed through the development of the GIS system recording information both from previous studies and through mapping issues identified during the consultation process. In line with the Guidance recommendations, these issues have been grouped by themes:

- Physical (geomorphology, processes, erosion, topography, waves, water levels...)
- Environment (specifically the natural heritage, nature conservation and geology)
- Heritage and Culture
- Hard Assets (properties and infrastructure)
- Recreation (including beach use)
- Commercial Activities (being the area of activity as distinct from the specific hard assets associated with the commercial activity)

- Hazards (this theme being specifically and distinctively relevant to localised areas of the NECAG coastline and also essentially identified in relation to the Water Framework Directive).

The themes expand on those core themes presented in the Guidance, reflecting the particular character of the NECAG coastline. The physical process theme is supported by a draft appendix on the geomorphology and on physical processes, providing an interpretation of the data relating to the principle physical interaction over the coast. A draft appendix has been produced covering the environmental baseline for the coast. This has been taken further with the draft Bio-diversity Opportunities Report prepared by English Nature, which is currently being considered in terms of incorporating further objectives into the SMP2.

The theme review process has been complemented through the coastal characterisation developed during the course of the initial consultation period. This again is an extension of the general procedure set out in the Guidance and aims at drawing together the quite complex interaction of issues, creating a better understanding of the overall vision of management of different areas of the coast. The characterisation has been reviewed by the project partners and commented upon during the consultation period. This has resulted in a slight modification from that initially proposed such that the basic characterisation areas are now:

- South Shields to Whitburn
- Whitburn to Sunderland Harbour
- Sunderland to Hartlepool (the Durham Coast)
- Hartlepool to Saltburn (Tees Bay)
- Saltburn Scar to Sandsend Ness
- Whitby Bay
- Saltwick to Scalby Ness
- Scarborough Bays to White Nab
- White Nab to Filey Brigg
- Filey Bay

In essence these changes sub-divide the Scarborough area to reflect the more natural character of Clayton Bay through to Filey Brigg, as distinct from the strongly urban character of Scarborough itself. Arguably there could be further subdivision, but this is not seen as significantly changing the way in which the characterisation will influence the development of policy and runs the risk of moving away from the relatively high level appreciation of values which is being attempted.

The detailed features and issues are included on the database used during the second round of consultation. Responses have been received from consultees and these have now been added to the data base. The standard form as set out in the Guidance has been used as the basis for the database.

Objectives have been derived from the issues and agreement of these was one of the principal objectives of the second round of consultation.

Assessing the Objectives

Objectives are used in two ways within the development of the SMP; first to guide the selection of policy options (the reasons for management), the second at the end of the process to assess the degree to which any SMP policy scenario delivers aim of the SMP.

The Guidance suggests an approach and a need to assess objectives in terms of relative importance; suggesting further that this evaluation is reviewed and agreed through the project management group. In this scheme, the guidance suggests that:

“The relative importance of objectives can be assessed based on the significance of the benefit offered by a particular feature. For example the feature may be a European Site, designated for its rare habitat, and thus is nationally important”.

From this a ranking procedure is undertaken across each theme, recognising the difficulty of course of comparison between themes:

“i.e. one town can be compared to another town, but the importance of a town can not be directly compared to that of a designated conservation site.”

An extension to this process is to use the ranking of objectives to define key drivers for the development of policy. This was, in the earlier draft of the procedural guidance, put forward as an initial screening process such that in areas where there was a single key driver and a single policy option blatantly addressed this issue, this might be taken forward as in effect a fixed policy point in developing scenarios.

This and the general process for evaluating objectives has been considered in relation to the NECAG area and the results of this are presented on the attached plan. Briefly for each theme the following comment may be made. The first of these discusses the underlying physical context of the frontage, providing the background for understanding the scale of impact of any management approach.

Physical Processes and Morphology

The plan presents the coast in an orientation nominally neutral to the principal inshore wave energy direction (i.e. lengths of open shoreline which have been shown from various studies to be relatively stable; morphologically, have been plotted parallel to the horizontal axis of the plan. These beaches include to the north of the Hartlepool Headland, Coatham and Marske Sands, Whitby Bay and Rieghton Sands in Filey Bay.)

What becomes immediately apparent for the NECAG frontage is that, at a primary level, it is the natural hard geology of the coast which dominates the way in which the coast behaves. The principal underlying morphological controls are shown on the plan and are indicated³ as:

- Trow Headland
- Souter Headland
- Chourdon Point to Beacon Point (south of Seaham)
- Hartlepool Headland
- The Old Nab headland (south of Staithes)

³ These are generally recorded as specific points but in reality are descriptive of a more massive headland feature.

- Kettle Ness
- Saltwick Nab (south of Whitby)
- North Cheek (Robin Hoods Bay)
- Beast Cliff
- Filey Brigg
- Flamborough Head

Even as slightly less dominant features, other underlying controls are natural. These include:

- The mouth of the Wear,
- Coatham Rocks
- Huntcliff
- High Lingrow
- Sandsend Ness

It is only at a secondary and tertiary level that mans' influence is felt on the way in which the coast has developed. In this the principal features are:

- The South Pier of the Tyne
- Sunderland Harbour
- Seaham Harbour
- The Heugh Breakwater
- The Tees Breakwaters
- The defences at Redcar (reinforcing a more natural control point)
- Skinningrove Pier
- Whitby Piers
- Scarborough Harbour

and more locally at Staithes.

A basic analysis has also been carried out, considering the degree to which this could change if existing defence practice were maintained over the next century. This is plotted on the plan and shows that the main change in influence that might be expected is:

- within Tees Bay, as anticipated sea level rise tends to reduce the natural control imposed by Long Scar and by the Coatham Rocks and the increased morphological pressure is taken up by the interaction between the Piers and the Hartlepool Headland, and the man made defences at Redcar come under greater pressure.
- at Whitby, where anticipated retreat of the central coastline starts to expose the northern end of the Whitby defences, bringing these more to the fore as a control feature of the bay.
- at Filey and at Humanby, where defences, as at Whitby, start influencing the shape of the retreating cliff line.

None of these emerging man-made control features significantly influence the evolution of the coast above a secondary level.

Over the offshore area, there is felt to be a reasonably strong sediment continuity along the coast, between the Tyne and the Tees Bay, possibly between Saltwick Nab and Filey Brigg⁴ and to a far lesser degree offshore of Filey Bay. Inshore (at the shoreline), the drift mechanism is far more discrete, with principal linkage being constrained very much by the hard natural morphological controls. In some areas the mapped discontinuity is not absolute and sections of the coast have to be assumed to be leaky.

There is a stronger shoreline sediment linkage over the northern section of the shoreline (between Whitburn and Hartlepool and within the Tees Bay) than over the southern section. Over the section from Huntcliff through to Flamborough Head there is no evidence to suggest more than a trivial transfer of sediment between sections of the coast⁵. However, within individual bays, there is a strong association of sediment movement.

There is, therefore, a relatively strong position for developing policy scenarios over distinct sections of the coast in the confidence that, in terms of their physical influence, these policies are not going to significantly impact on adjacent sections of the coast. There would still need to be a full assessment of the preferred SMP scenario to assess such aspects as overall sustainability, aims under the water framework directive and in terms of providing benefit to the designated areas of the natural environment; the associations of the full area less linked directly to physical processes.

Environment

Much of the coast has, associated with it, ecological or geological designations. The analysis shown on the plan makes a distinction between national SSSI and NNRs and the European or international designations of SACs, SPAs and Ramsar sites. The plot does not identify, specifically, the local sites such as RIGS (being regional) or LNRs (being local) although these and other designations or interests are recorded and mapped within the GIS. Purely, such distinction is made on the difference between national and international responsibilities and, therefore the importance is being identified in terms of scale of duty, rather than at a more local perspective of quality and local context. This does tend to obscure the local level values attached to areas and highlights, in the case of the NECAG coastline, a danger in prescriptive ranking of features and objectives. The nature of the coast, as seen from the discussion of its physical nature will tend to require quite specific localised policy development. In this it may be quite realistic, based on a simple ranking scheme, to achieve an objective at the nominally higher level, such as maintaining suitable exposure and access to the international important magnesium limestone of the Durham coastline, while significantly failing to address local ecological features.

In effect, the analysis is demonstrating the high environmental sensitivity of the whole coastline, such that the broadest level of defence policy should ensure that no fundamental damage occurs to the integrity of the natural heritage, while where defence

⁴ The recent monitoring scoping study for the Scarborough B.C coast indicates it is unlikely that there is significant sediment links between the North Yorkshire Coast and the Tees Bay, and that there are more probable, but uncertain sediment pathways offshore of the North Yorkshire coastline

⁵ The monitoring scoping study, in collating information from earlier studies, suggests that any linkage between sections of the shoreline over the North Yorkshire area is from inshore offshore movement and subsequent movement in the offshore region.

policy is being considered at a more discrete level there will be emerging issues that are of predominant significance. A purely legislative ranking would not be felt to reflect this.

Hard Assets

Although distorted by the projection of key areas of hard assets⁶ on the plan, what may be appreciated is the very discrete nature of economic issues. It is proposed, therefore, that there is a need to allow more focussed approach in developing specific policy for flood and erosion risk in these areas rather than in areas with little economic interest. As with the argument for the environmental issues, there seems little value in ranking the economic significance because of the need for this more local assessment of policy.

There are, however, areas where there is a coherence to the economic value which is associated with infrastructure or development further in land and as with the internationally important designated areas of habitat in the environment theme, there would be a strong case for assuming a background policy that such general area of development will be maintained. (Such areas are shown as the taller blocks on the plan.) This then needs to be taken down to a much more local level to define specific policy over the area.

The analysis also highlights in terms of purely the economic justification the very isolated nature of the various villages within the National Park Area. The significance of these local communities, identified in the Characterisation of the coastal areas, is reflected in the broader linkage across the coast indicated in the Heritage and Cultural theme (as is the coherent cultural importance of the more major development such as Sunderland or Scarborough, discussed in the previous paragraph.

Heritage and Culture

Some information on archaeology is still emerging and so not all issues in this theme are included in the analysis. However, there is a tendency, in terms of heritage issues for them to be quite specific to buildings or sites, not possibly truly reflecting their spatial context or, therefore, influence on policy. In mapping the features on the plan a degree of conglomerated issues (identified individually in the database) has been carried. Examples of this are in the area of Ravenscar where there are clearly several individual issues associated with the area and within the context of the National Trust land.

The importance of the features is taken based on their designation with respect to heritage (i.e. a scheduled Ancient Monument is given importance at a national level.) In this what is not fully represented is the importance or significance in terms of management of the coast. This is quite difficult in relation to unique heritage sites in that there is recognition that a site may be vulnerable to loss but equally would not be expected to be protected. The important issue may, therefore, be more the opportunity to record information with respect to the site (a time related issue) rather than one of its heritage significance driving the need for management of the coast. In some respect, the value of the SMP, in relation to the feature, is more one of providing an assessment of when a feature may be lost, rather than one of influencing policy; allowing planning and prioritisation of management of the archaeological interest. As such the importance in establishing long term policy might be quite low, even though the site from the archaeological perspective may be of national importance.

⁶ Areas such as the residential and hard asset areas of Sunderland cover a long section of the coast than indicated by the projection of the plan.

The theme of heritage and culture has been extended to include the cultural value of communities and more major development areas. This is reflected on the plan.

As with the hard assets, and to a degree more so, the key features of heritage and culture are quite discrete. There is obviously a tendency for these areas to overlap and assuming appropriate management of the shoreline the objectives are closely linked. The discussion in relation to the hard assets tends therefore to apply similarly to heritage and culture.

Recreation

While heritage and culture has close association with the infrastructure and hard assets, recreation over the coast is closely aligned both with the environment theme and that of hard assets. The specific difference in discussion during the consultation is the nominal scale of importance.

Examples of this work in two ways. The coastal paths have a national importance and are designated as such. It would, however, be nonsensical to suggest that this be a prime driver for shoreline management over effectively its whole length. At a local level any approach to management that might result in loss or damage to the continuity of the path needs to be addressed in the context of its national significance, but at a broader policy level this issue becomes more similar to the overall approach to maintaining environmental well being of the coast.

In contrast, the specific recreational value of the coast associated with such areas as the Durham coast is in reality a significant and important justification for the current management policy in this area. The value of the recreational amenity is diluted by its very important diffuseness. Specific areas of recreation, such as the Bents (in South Shields), Sunderland, Seaton, Whitby or Scarborough are identified as of high importance because of their concentration of use and association with tourism and economic centres.

Again in attempting to rank issues and objectives, the very ranking process becomes dependent on the scale at which sections of the coast are being examined and as such must be allowed to intuitively vary as part of the scenario appraisal process.

Commercial Activities

The final mapped theme relates to commercial activities. As identified earlier this relates to the ability to operate, in terms of aspects such as the navigation, or at a more local level use of an area for water sports. The most significant interests on the coast in this regard are the ports. Although in the case of the Tyne, the Wear, Seaham, Whitby or Scarborough these ports are considered of considerable importance, their actual impact as a driver for coastal management is quite limited.

It is only at the Tees that policy driven by the need to maintain the port activity would prove to influence management of a substantially larger area.

In addition to the port activities the basic linkage provided by the coastal roads or railway lines along the coast is plotted. In this regard the connection over the whole section of coast serviced by the road is indicated with more local areas where there are actual threats identified at a more significant scale.

Along the North Shield to Sunderland Coast there is a coastal road, the influence of which is identified. To the South of Sunderland Harbour, the proposed new road is identified has to be recognised as a potential influence on the way in which the coast is managed in the long term. Further south from here the railway has been identified as an important element of the national rail service; issues in relation to this line at Hawthorn and Skippersea, therefore, take on a more important perspective, but at a strictly local level.

Other important locations are Huntcliff, Sandsend and Scarborough.

Key Drivers

Considering the coast as a whole there are in effect no areas where there is but one essential driver for management or policy. However, there are synergies between different themes which allow a broad level composite driver to be developed.

For example:

- In the area of South Shields to the north of the Trow Point, at a broad level, key drivers are the need to maintain navigation of the Tyne, the wish to maintain recreational beach use and the need to maintain the dune habitat against the South Pier. While there many local and specific issues and objectives which need to be considered, and for the local area may be as significant, the overall policy for the area might most favourably be seen as being to hold the existing structure of beach management and therefore hold the line of defence. This needs to be examined through this broad policy in greater detail.
- The main issues identified for the North Yorkshire Moors area, either side of Whitby Bay, is the natural environment and the recreational value, and at more specific sites the cultural and heritage values, both archaeological and cultural (communities). At a broad scale the policy of Do Nothing clearly matches the high level drivers. Within this, and allowing a focus to be given to the more local (but at that scale of equal importance) issues of the communities such as Staithes or Robin Hoods Bay.

The Proposed Approach

The above analysis of the NECAG coastline throws up some difficulties in rigorously applying the procedure set out in the Procedural Guidance, if we are to maintain the aim of the guidance to appropriately take into account objectives. The main difficulties arise from the nature of the coastline; in its very diverse nature and its varied interactions both in terms of its physical behaviour and in terms of different themes.

In developing policy, therefore, it is proposed that a nested approach be taken, maintaining the overview, while still addressing usefully the more local issues in setting policy. The approach would look to define overarching policies over certain sections of the coast through which more detailed policies may be developed for shorter sections of the coast.

Three basic techniques would be applied as appropriately to different areas of the coast:

1. Principal Drivers covering an area where there are more detailed local drivers.

Within a certain area there are major influencing factors (or drivers) such as the need to maintain the integrity of use of the Tyne; as in the above example. While this driver, strictly influences the whole section of coast between the Tyne and Trow Point, it should not at a detailed level fully dominate the selection of policy. A background policy option would be determined and from this more detailed local policies would be developed.

2. Areas where policy may be developed for principal control features.

In all areas there is more than one primary driver, and in some areas there are many different but equally important issues. One very obvious area of this is within Tees Bay. The analysis of the processes and morphological control has shown that certain features impose a broader control on the area than others. In this nested approach, the areas of prime sensitivity would be examined initially to assess the degree to which different policy options would meet key objectives. Where different options proved acceptable, policy for other areas would be considered under the different scenarios developed under different policy at the control features. An example of this would be considering policy around different sections of the bay assuming either the piers at the mouth of the Tees were maintained or were removed. Clearly this fundamental change could result in very different scenarios for other areas of the Bay. A diagram of dependencies would be developed to demonstrate how the assessment of policy was to be undertaken.

3. In areas such as the National Park and the South Durham Coast an overarching policy would be developed, most probably that of no active intervention. Beneath that policy specific local areas would be examined and policy or policies would be developed to address the specific issues.

Approaches 1 and 3 differ in that in one the policy for the section of the coast provides a background guidance or limitation on what might actually be developed in a more detailed manner over the full length of that section of coast. In approach 3, the general policy would actually be that for the main part of the coast and the local policies would be areas of exception.