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Redcar Flood Alleviation Scheme

Planning, Design & Access Statement

October 2008

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Published by:

Environment Agency
Phoenix House
Global Avenue
Leeds
LS11 8PG
Tel: 0870 8506506
Email: enquiries@environment-agency.gov.uk
www.environment-agency.gov.uk

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APPENDIX A - Plans and Drawings

Drawing No.	Description	Paragraph Ref.
B0220800/PL/001	Typical Cross Sections	
B0220800/M/003	Intrusion of Proposed Sea Wall into T & C SPA and Redcar Rocks SSSI	6.2.1
B0220800/PL/004	Site Location Plan and Planning Zones	1.2.1 6.4
B0220800/M/005	Nature Conservation Landscape Features	2.1.4
B0220800/PL/009	Indicative Landscape Assessment Plan	
B0220800/PL/010 (Eight Sheets)	Scheme Alignment & Cross Sections	4.3 6.2
B0220800/PL/013	Site Context Plan	1.0
B0220800/PL/014 (Two Sheets)	Indicative Landscape Masterplan	1.2.2 6.2.1 6.4

1.0 Introduction

The Environment Agency (hereafter referred to as 'we') is responsible for the management of flood risk throughout England and Wales. Redcar has been identified as an area that is vulnerable to coastal flooding and coastal erosion, particularly as a result of severe storm events from the North Sea (See Dwg. no. B0220800/PL/013). Historically, the town has suffered from wave overtopping and coastal erosion causing seawall damage. This means that the existing sea wall and concrete revetment protecting the town are gradually degrading. Redcar is likely to suffer



increasingly frequent and severe flooding and seawall damage due to the effects of climate change. Given the age and previous damage to the sea defences, we are proposing to improve the standard of protection against flooding and reduce the effects of coastal erosion.

We intend to achieve this by increasing the height of the existing sea wall along Redcar's frontage and by replacing the failing revetment with a new revetment that will dissipate storm wave energy much more effectively. In addition it is intended to repair the existing groynes, strengthen the existing revetment to manage coastal erosion, and by filling in gaps along the seawall.

We are aware of potential future risks to properties beside the dunes to the south of our scheme due to beach erosion potentially affecting the integrity of the sea defence provided by the dunes. At this stage our proposals do not cover this area as there is no imminent threat and Redcar & Cleveland Borough Council (RCBC) are maintaining an on-going erosion monitoring programme and will determine the need for any future works at a later stage.

1.1 Purpose of this Document

In June 2006 the Department of Communities and Local Government (DCLG) released Circular 01/2006 'Guidance on Changes to the Development Control System'. This provided the formal requirements for the submission of Design and Access Statements to support planning applications and which are intended to help deliver quality and inclusive design in line with the aims and provisions of the Planning and Compulsory Purchase Act 2004. The Circular states that the use of Design and Access Statements should:

"...help to ensure development proposals are based on a thoughtful design process and a sustainable approach to access; allow the applicant to explain and justify their proposals and to help all those assessing the application to understand the design and access rationale that underpins them".

Local Planning Authorities also typically require a 'Planning Statement' for 'significant' planning applications. These statements summarise the land use planning background and policy context for the scheme. It is considered that the merging of the Design and Access Statement and the Planning Statement into one document often makes it simpler for all interested parties to

understand how the proposal has evolved, the factors that have influenced its design and access and how it conforms to policy.

The purpose of this document therefore is to provide appropriate information to assist RCBC in determining this application for the Flood Alleviation Scheme at Redcar and to allow other interested parties to understand how the proposal has evolved and taken into account design and access issues.

The document will briefly present:

- A review of relevant planning policy and the compliance by the development proposals;
- The design aspects of the proposal, i.e. layout, scale, landscaping and visual impact of the proposal developed through an optioneering process;
- How stakeholders and the local community have been involved in the design process through consultation;
- Access details associated with the proposal; and
- How it corresponds with environmental surveys and assessments, including the Environmental Statement.

1.2 Redcar Flood Alleviation Scheme

1.2.1 Background

This project has been identified from the Redcar Coastal Defence Strategy (Babtie, 2002) (referred to as the Strategy). The Strategy sets out the most appropriate way to manage the coastal frontage of Redcar, from Coatham Sands to The Stray over the next 100 years.

The proposed Flood Alleviation Scheme (FAS), forming the subject of this planning application, involves re-construction and in some places improvement works to the existing coastal defences, consisting of sea walls, revetments and groynes (repairs to the groynes are permitted development under the provisions of Town and Country Planning (General Permitted Development) Order 1995). The scheme extends along a 2.4 km length of coastline that fronts the central area of Redcar and incorporates a 1.5 km stretch along the Promenade and the 0.9 km length of the Stray. The application red-line is shown on Drawing B0220800/PL/004 and the corresponding site area is **6.84 ha** which includes an area for public realm improvements as well as the site compound. The scheme is necessary as the current defences are unable to provide the required standard of defence against coastal flooding and coastal erosion. There are over 1,200 residential and commercial properties within the flood risk area and of these over 200 properties fall within the coastal erosion risk area. The existing defences have reached the end of their practical lifespan and the sea wall revetment has already started to deteriorate significantly in certain places during recent storm activity in March 2008, requiring emergency repairs.

The precise extent of the proposed FAS is from the boating lake at the western extent of 'The Esplanade', to 'the Stray' at the eastern extent of Redcar as shown on Drawing B0220800/PL/004. The promenade alongside the defences is connected to the residential central area of the town via The Esplanade, which provides a coastal route through the town and local access to the town centre is to the west. In addition to the promenade, the land use adjacent to The Esplanade includes residential, retail and commercial properties. Notwithstanding this, access and interaction between the town centre and the promenade along the beach are poor. From the town centre,

views of the sea are only afforded through narrow alleyways and side streets, even though views of the sea are currently very good along the Esplanade itself.

The improved sea wall defences of Redcar, with a design life of 100 years, will provide a 1 in 200 year standard of protection taking into account climate change for the next 50 year period.

1.2.2 Other Impacts

The enhancements are also designed to help other regeneration initiatives that together will revitalise links with the seafront. The main initiatives within Redcar complementary to our scheme are:

- The regeneration proposal at Coatham Enclosure immediately to the west of the FAS area and adjacent to the existing sea wall. It will be a mixed use proposal linking directly to the town centre via the sea front.
- The redevelopment of the former Leo's nightclub, which currently forms part of the flood defences, including the enhancement of the associated promenade.
- RCBC recognise the need to provide stronger and more attractive links between the town centre shopping area and the sea front to improve Redcar for residents and visitors. As a consequence RCBC have commissioned the Royal Institute of British Architects (RIBA) to run a 'Design Competition' for the remodelling of the streetscape and public realm from Coatham Enclosure to the Stray, involving the environment of the flood defences and promenade.

We are working closely with RCBC to align this proposal with the Council-led RIBA organised design competition. However, as high tides and heavy seas caused significant damage to a stretch of the sea wall approximately 100m west of the lifeboat station slipway in March 2008, it has become imperative that the flood alleviation scheme planning application be progressed as soon as possible and in parallel with the RIBA competition to ensure commencement of works currently scheduled for August 2010.

The Redcar frontage landscape reinstatement proposals shown on Dwg B0220800/PL/014 are currently indicative, as they may be amended to incorporate the 'Design Competition' winning proposals for the streetscape and public realm along The Esplanade. Incorporation of the Design Competition is subject to the winning design achieving the appropriate consents within our timeframe outlined in the next sub-section. It is a requirement of the competition that there should be a clear synergy between the competition designs and the public realm works associated with the new sea wall. Overall, the new frontage should aim to rejuvenate the appearance in a creative, coherent and cost effective way to positively influence the economy of Redcar prior to any long term investment in the 'backdrop' zone.

In the long term, the security and the enhancements being proposed as part of this flood defence scheme will help act as a catalyst for further regeneration of the town and above all encourage a more unified and interactive setting between the town centre and seafront. It is anticipated that this more connected centre would help attract more people to the seafront and to Redcar, improving economic and social benefits.

1.2.3 Timescales

The project is anticipated to commence construction during August 2010 and be completed in January of 2012. The timing of the works has been carefully considered to cause minimal

disturbance to local fishermen, the RNLI's operations at the seafront, local residents, tourists, and seasonal birdlife movements. In addition it is intended that the RIBA Design Competition proposals, subject to appropriate permissions, will coincide with the timescales for the implementation of the FAS.

1.3 Summary

The proposed Flood Alleviation Scheme for Redcar seafront will not only provide the necessary sea defences for the town centre, but also be the catalyst to enable significant enhancement to the fabric of the centre. It provides the opportunity to incorporate within it the influences of a number of other proposals, including redevelopment of the former Leo's nightclub site on the sea wall and the proposals from the RIBA Design Competition.

2.0 Assessment

2.1 Site Description and Context

2.1.1 Introduction

This section considers the context of the scheme area, its key features (See Drawing No. B0220800/PL/013) and its surroundings. The local context of the site includes the:

- physical character of the existing buildings;
- the landscape features; and
- the social and economic characteristics of the site and its surroundings.

We have carried out a full character assessment as part of an Environmental Impact Assessment and included the results within the Environmental Statement supporting this application.

2.1.2 Historical Context

Redcar is a historically well-established seaside resort with origins dating from the 15th century. Redcar came to prominence as a Victorian seaside resort benefiting from the railway link to Middlesbrough. The seafront is a core feature of the area, its history and tourist identity. For example, Redcar is home to the Zetland, the world's oldest surviving lifeboat, situated at the Lifeboat Museum on the Esplanade. During the winter, local fishermen park their boats on the front to sell their catches. Redcar also offers a 2.5km stretch of sandy beach. These are all part of the traditional seaside resort character that makes up Redcar.

2.1.3 Adjoining Land Uses

There is a mix of land uses adjacent to this site, encompassing retail, commercial and residential property. The residential areas are generally concentrated to the west and east of the main frontage, along Newcomen Terrace and Granville Terrace respectively. Bed and breakfast establishments, amusement arcades, souvenir shops and hot food take-aways are typical land uses adjacent to the promenade, and near to the town centre frontage. Other retail outlets include high street names such as Woolworths and Marks & Spencer's, although many of these outlets only face in toward the central area, rather than out toward the seafront.

2.1.4 Landscape Characteristics

As well as the town centre frontage, the site area is also set within the context of the following character elements and allocations:

- Teesmouth and Cleveland Coast Special Protection Area (SPA), including Coatham Rocks SSSI and Redcar Rocks SSSI - illustrated on Drawing B0220800/M/005;
- Redcar to Saltburn Coast Site of Nature Conservation Importance;
- Street furniture including seating shelters, viewing platforms and public artwork; and
- Parking areas and access routes to the sea for traditional coble fishing boats.

With regard to design and conservation, there is only one listed building near the scheme, which is the Zetland museum - shown on Drawing B0220800/M/005. Given the design of the current defences and the nature of the proposed scheme, it is considered there would be no adverse effect on the setting of the listed building.

2.1.5 Existing Rights of Way

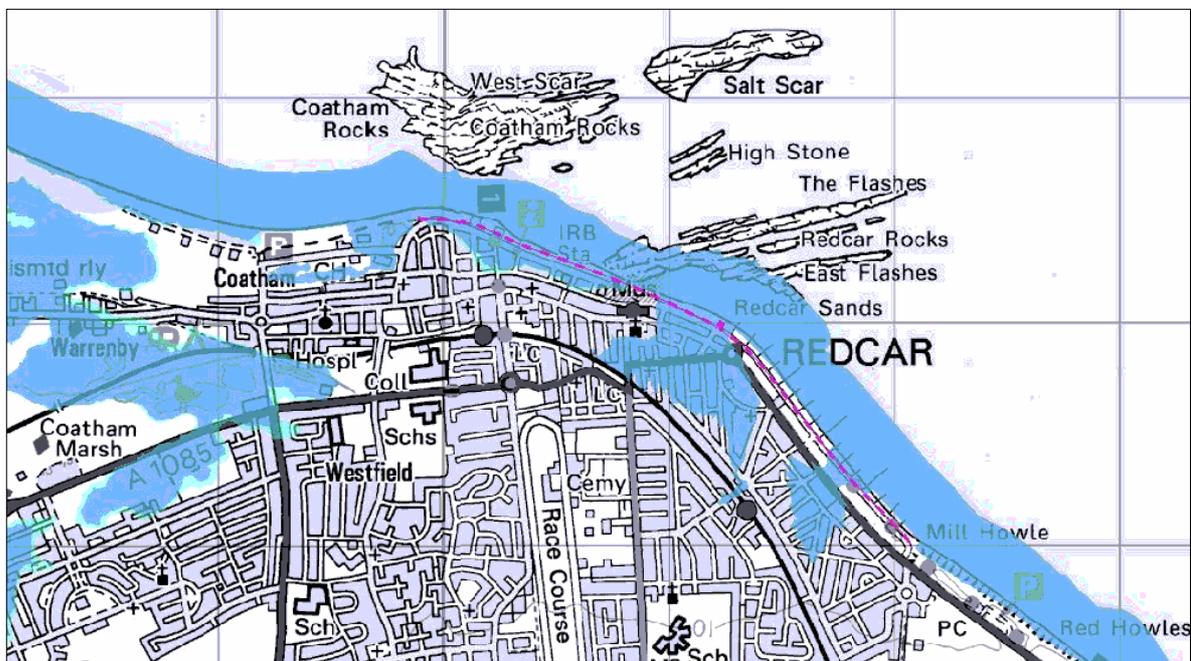
The proposal is set within the Redcar seafront, which features an existing well-used promenade alongside The Esplanade route and surrounding road network. The site is owned by RCBC and the black block paved area adjacent to the highway is an adopted highway and will be temporarily diverted during construction.

2.1.6 Current Flood Defences and Impacts

The current flood defence frontage to be improved is approximately 2.4km in overall length and extends across the whole of Redcar town frontage from the western end of the Esplanade to the southern end of the Stray. 1.5km of the area is taken up by the Esplanade, and 0.9 km of the area is part of the Stray. Figure 2.1 shows an area at risk of flooding by overtopping from Newcomen Terrace (at the western end of the Esplanade) to the junction of Granville Terrace and Oxley Street (towards the eastern end of the Esplanade). Within this area there are over 300 residential and commercial properties. Coastal erosion is also likely to threaten this part of the frontage at a rate of more than 0.4m/year if the seawall is damaged and fails¹. Such a rate of erosion would result in a severe impact to access and operation of the Esplanade and properties served by it. If the defences are not maintained and coastal erosion allowed to continue, key infrastructure including the highway, sewers, and water mains is likely to be eroded. Loss or failure of this kind would have a significant impact on the socio-economic well-being both of the local and wider community.

The existing sea wall has suffered flood damage in recent years, the most recent event occurred in March 2008. A number of holes appeared in the sea wall approximately 100 metres west of the lifeboat station slipway, leaving the defence vulnerable to washout that required emergency repairs.

Figure 2.1 Existing Flood Risk Plan



The darker blue area illustrates the flooding impact from rivers or the sea without flood defences. The paler blue indicates the extent of extreme flood events. The purple indicates the extent of existing flood defences. (This figure is based on EA flood data).

¹ **Royal Haskoning (2007) Shoreline Management Plan 2: River Tyne to Flamborough Head, February 2007** (<http://www.northeastsm2.org.uk/finalSMP2.htm>).

2.2 Social and Economic Characteristics

Redcar is the largest town and main retail and commercial centre in the Borough of Redcar & Cleveland. In 2007 the Borough had the 12th highest concentration of deprivation in the country (Redcar and Cleveland Partnership Area Profile, 2008).

Redcar's sea frontage is typical of a traditional seaside town, with the promenade being important for tourists, local residents and commercial enterprises. The town initially became important for tourism during the 19th century, but the changing nature of the tourist market and the development of heavy industry close-by have contributed to the gradual decline of Redcar as a holiday resort. Despite this, the town continues to be an important regional day visitor centre, with the coastal location playing an important role in attracting both local residents and visitors to the area.

Given that the Redcar and Cleveland coast supports one of longest stretches of unbroken beach in the UK, it is a valuable resource for attracting both tourists and local residents to the town and the seafront. The importance of tourism to the local economy makes the beach a feature of high significance.

Commercial fishing is also of high importance to the local economy and many fishermen sell their catches straight from the boat. The majority of the fishing activity is for lobster and crab, which takes place between April and October. Many of the fishing vessels are parked along the promenade and to the east of the Moore Street Slipway where they have easy access to the slipways. This is also a characteristic feature of Redcar, with the Royal Slipway most frequently used by fishermen. Other active slipways include the slipway adjacent to the Regent Cinema, however with the agreement of the RNLI & fishermen the slipway adjacent to Regent Cinema will be removed, to reduce its role in coastal erosion and flood risk. The lost slipway will be replaced by a new slipway west of the Regent Cinema where it will also improve safety of access from the adjacent road. Given that only one slipway will be relocated and that the remaining slipways will be repaired, the magnitude of the effect associated with its loss will be very low. The resulting significance of the impacts on the slipways will therefore be negligible.

2.3 Summary

A number of key issues were considered during the assessment in the design and evaluation of the scheme. Particular key issues included the following:

- Redcar's historically important links to the sea mean that the seafront area forms a core feature of the local identity. The local fishing and tourist economies rely on this relationship and thus the wider socio-economic health of the borough;
- There are international and national nature conservation designations (e.g. SSSIs and SPA) that apply to the seafront area;
- The existing flood and erosion risk could, without any action, seriously impact on the town;
- The seafront contributes significantly to the development potential of the town and to Redcar's regeneration agenda. Acknowledgement of the wider benefits and impacts has been central to the development of the FAS proposals.

Sections Consultation (4), Scheme Evaluation (5) and Design (6) later in this statement, illustrate in further detail how these key issues have influenced the design process.

3.0 Planning Policy Context

3.1 Background

3.1.1 Introduction

We have provided an overview of the National, Regional and Local Planning policy guidance within this section. In setting out the current policy position that applies to the Redcar seafront and the FAS, a hierarchy of policy and guidance and advice is set out. As the existing policy and guidance does not all carry the same legal/material weight, this has implications for how the existing policies can be applied. All development schemes need to take account of and conform to relevant Planning Policy and Guidance, or indicate clear material reasons to justify any departure from adopted policy.

The Development Plan has the highest status in the planning system, consisting of the Local Development Plan/Local Development Framework and the Structure Plan/Regional Spatial Strategy as appropriate, providing a framework that sets out land use allocations and planning policies, and is used as a decision making tool for all development. Where a Development Plan is reaching the end of its life, national and adopted regional policy guidance generally takes on greater weight in the determination of proposals.

3.1.2 National Guidance

This comes primarily in the form of Governmental Circulars and Planning Policy Guidance Notes (PPGs), which are currently in the process of being superseded by Planning Policy Statements (PPSs). PPGs and PPSs can be applied to developments across the country and it is assumed that the Development Plan is in accordance with National Guidance. The main PPGs and PPSs of relevance to this scheme include:

- PPS 1: Creating Sustainable Communities;
- PPS 9: Biodiversity and Geological Conservation;
- PPG 17: Planning for Open Space, Sport and Recreation,
- PPG 20: Coastal Planning;
- PPS 23: Planning and Pollution Control and
- PPS 25: Development and Flood Risk.



3.1.3 The Development Plan

The development plans relevant to the FAS are:

- Tees Valley Structure Plan – Saved Policies;
- Regional Spatial Strategy – (Proposed Changes, May 2007);
- Redcar & Cleveland Local Development Framework – (Core Strategy and the Development Policies DPDs were adopted in July 2007).

Tables 3.1 and 3.2 contain an overview of national guidance and Development Plan policies considered relevant to the assessment of the proposed Redcar FAS.

Table 3.1 Overview of Relevant National Planning Policy Guidance

Policy	Requirement
<i>Planning Policy Guidance Notes</i>	
PPG 17	Planning for Open Space, Sport and Recreation Key objectives for this PPG note include the provision of recreational needs over a wide area; <ul style="list-style-type: none"> • supporting urban renaissance by providing plentiful and visually attractive green space; • promoting health and well-being by delivering recreational opportunities to the broadest cross-section of society; • acting as habitat corridors for flora and fauna; • as a community resource; and adding visual interest and amenity • A PPG17 audit is a key tool in developing planning obligations and hence contributing to sustainable development and can also provide opportunities to develop funding applications.
PPG 20	Coastal Planning This PPG note reflects the need for special status and designation for areas of high landscape value or where nature conservation or scientific interests are particularly important. It sets the general context for planning policy in coastal areas, identifies planning policies for coastal locations, and sets out policies for developments that require a coastal location and how they should be reflected in the development plan process.
<i>Planning Policy Statements</i>	
PPS 1	Delivering Sustainable Development Establishes the overarching planning policies on the delivery of sustainable development through the planning system.
PPS 9	Biodiversity and Geological Conservation Sets out the principles and policies that apply to the integration of nature conservation priorities and land use planning. Nature Conservation advice should be taken into account in the preparation of regional and local advice, and it can be a material consideration in the determining of planning applications.
PPS 23	Planning and Pollution Control Sets out the importance of pollution control and the obligations required by the Government. Local Planning Authorities must be satisfied that planning permission can be granted on land use grounds taking full account of environmental impacts. This will require close co-operation with the Environment Agency and/or the pollution control authority, and other relevant bodies.
PPS 25	Development and Flood Risk This guidance sets out a range of degree of flood risk and the appropriate planning response and is directly applicable to development proposals in the area.

Table 3.2 Overview of Relevant Development Plan Policies

Policy	Requirement
<i>Regional Spatial Strategy for the North East</i>	
Policy 7	Seeks to support regeneration within the Coastal Arc.
Policy 9	Addresses the need to ensure that all development is sympathetic to its surroundings
Policy 16	Seeks to maximise the opportunity for tourism whilst effectively managing associated pressures.
Policy 36	Addresses the need to protect and enhance the region's rivers and coast.
Policy 37	Addresses the need to account for tidal and fluvial flooding in plans, strategies and programmes and development proposals
<i>Tees Valley Structure Plan</i>	
SUS1	Requires all new development to enhance environmental quality, social wellbeing and economic prosperity.

Policy	Requirement
SUS2	Ensures amongst others that local plans encourage regeneration, promote re-use of vacant land and buildings, maintain and enhance the vitality and viability of service centres, conserve the use of natural resources.
ENV4	Addresses development affecting sites of international importance for nature conservation.
ENV5	Addresses development affecting Sites of Special Scientific Interest
ENV6	Addresses development affecting local and county nature designations
ENV7	Addresses development affecting species protected by law
TC1	Seeks to maintain and strengthen the vitality and viability of the town and district centres.
<i>Redcar and Cleveland Local Development Framework Core Strategy DPD</i>	
CS1	Securing a Better Quality of Life
CS5	Spatial Strategy for Redcar Area
CS20	Promoting Good Design
CS22	Protecting and Enhancing the Borough's Landscape
CS24	Biodiversity and Geological Conservation
CS28	Sustainable Transport Networks
<i>Redcar and Cleveland Local Development Framework Development Policies DPD</i>	
DP2	Location of Development
DP3	Sustainable Design
DP4	Developer Contributions
DP5	Art and Development
DP8	Coastal Development

3.2 Key Policy Implications

All planning decisions are to be in line with the Development Plan unless material considerations indicate otherwise, and the Development Plan should itself be in general conformity with national planning policy/guidance. Set out below are the key relevant policy documents at a national, regional and local level, and how each policy area relates to and has been addressed by the FAS.

3.2.1 National Policy

PPS1, Creating Sustainable Communities: The FAS for Redcar supports PPS1 by providing the opportunity to lay the foundations for a sustainable long-term approach to the protection and enhancement of the environment in this sensitive coastal area.

PPS9, Biodiversity and Nature Conservation: In the absence of alternative sites, local planning authorities should ensure that there is adequate mitigation prior to planning permission being granted. The protection and mitigation of seasonal bird activity and coastal squeeze in the vicinity of the sea wall is a key issue in the detailed design, timetabling, construction and operation of the Redcar FAS. An Appropriate Assessment has been developed to cover the effects on Ramsar and SPA under Habitats Regulations.

PPG17, Planning for Open Space, Sport and Recreation: The development of the FAS at Redcar will be in line with PPG17 by its delivery of a more holistic and inclusive approach to sport and recreation functions, creating a destination that provides for visitors, residents and tourists alike.

PPG20, Coastal Planning: The FAS is in line with PPG20's need to protect, conserve and, where appropriate, improve the landscape, environmental quality, wildlife habitats and recreational opportunities of the coast.

PPS 23, Planning and Pollution Control: The planning system should incorporate the obligations required for ensuring the safe granting of planning permission. The proposals for the Redcar FAS have been evolved with consistent co-operation between the relevant bodies, including the

Environment Agency and the Local Planning Authority, taking full account of environmental impacts.

PPS 25, Development and Flood Risk: Tidal flood risk must be considered as a key issue in future development proposals. The Redcar FAS has been developed with a particular focus on addressing this issue.

3.2.2 Regional Policy

Moving Forward, The Northern Way First Growth Strategy Report: Highlights the importance of City Region-focused growth. Redcar sits within the Tees Valley City Region, containing regionally significant economic and industrial sites as well as prime green infrastructure, leisure and tourism; the FAS will support the growth of Redcar by encouraging investment.

Regional Spatial Strategy, Submission Draft Policy 5, Locational Strategy: Supports the Tees Valley City Region, in which Redcar is located, and promotes development focused therein. The FAS will establish a sustainable framework for the future development of Redcar.

RSS Policy 7, the Tees Valley City Region: The Coastal Arc is identified as a key spatial development priority and major projects in Hartlepool and Redcar are encouraged. The FAS will establish a long-term sustainable base for major projects in Redcar.

RSS Policy 9, Protecting and Enhancing the Environment: Promotes high quality design in all development and redevelopment. The FAS and its associated landscape enhancements have been developed to ensure that they are sympathetic to their surroundings and enhance the seafront.

RSS Policy 12, Sustainable Economic Development: Recommends development within the City Region to best achieve sustainable economic development. The FAS will provide a strong spatial foundation and contribute to the further sustainable development of Redcar.

RSS Policy 16, Culture and Tourism: Encourages strategies, plans and policies to promote cultural and tourism developments. The FAS accords with this policy by providing a base from which to secure further tourism development.

RSS Policy 36, The Aquatic and Marine Environment: Seeks to protect and enhance the rivers and coastal area of the region. The FAS has been designed to help protect and improve the designated coastal habitat at Redcar.

RSS Policy 37, Flood Risk: Addresses the need to account for tidal and fluvial flooding in development proposals; the FAS has been developed to directly address this issue.

The Revised Regional Cultural Strategy (North East): Commits to and provides a framework for making the most of the cultural assets in the region. Particular natural and cultural assets worthy of protection include Redcar seafront, and the FAS will contribute to protecting and improving this seafront.

Tees Valley City Region Development Programme: The means by which The Northern Way and the RSS will be delivered, and it recognises the Coastal Arc, including Redcar Seafront (site of the FAS) as a key economic asset to the City Region.

Tees Valley Green Infrastructure Strategy: Identifies that in coastal areas priority should be given to integrating regeneration and tourism through greenspace, access and landscaping and create new recreational opportunities that can enhance and promote health and well-being. This is supported and contributed to by the FAS.

Tees Valley Vision – Strategic Framework: Focuses on creating attractive places and Redcar opportunities include development and enhancement of Redcar's promenade, which the FAS will contribute to.

An Investment Plan for the Tees Valley City Region: A number of key projects are identified, including Redcar Town Centre, with a focus on developments including the seafront infrastructure and public realm improvements. The FAS incorporates these improvements in line with the aims of

this investment plan. The Investment Plan highlights the integrated nature of the FAS at Redcar seafront in its wider regeneration and spatial development context.

Tees Valley Coastal Arc Strategy: This is a long term strategy for the sustainable regeneration of coastal communities that will help create a critical mass of facilities for the Tees Valley. The main components of the Coastal Arc include Redcar Town Centre, and Coastal Arc is one of the three sub-regional spatial development priorities. The FAS contributes to this agenda bringing a focus on the development of the seafront.

3.2.3 Local Policy

The Redcar & Cleveland Core Strategy and Development Policies DPDs feature new relevant policies to the proposal, including:

Adopted Core Strategy

CS1, Securing a Better Quality of Life: Requires development to contribute to the future protection and sustainable development of Redcar, which is provided by the FAS.

CS5, Spatial Strategy for Redcar Area: Promotes enhancement schemes including the upgrading of the Promenade and enhancement conducive to further investment. This is directly in line with the benefits of the FAS.

CS20, Promoting Good Design: All proposals must respect or enhance local character and feature high quality and accessible design. The FAS will contribute to this, especially with the increased accessibility that will be afforded by the scheme design, which is considered to be a significant enhancement on the existing situation.

CS22, Protecting and Enhancing the Borough's Landscape: This policy requires enhancement, restoration, or creation of special landscape features where the need for development outweighs landscape considerations. The FAS will impact on landscape features; however, it will fulfil the essential task of providing necessary protection for the town, and include mitigation such as the incorporation of restoration and the enhancement to the seafront landscape.

CS24, Biodiversity and Geological Conservation: To protect the natural assets of the borough. The FAS provides support as it will provide protection to natural resources along the coast and mitigation for impacts on the designated habitats.

CS28, Sustainable Transport Networks: Encourages the development of sustainable transport networks. The FAS will meet this by integrating with the surrounding public footpath and cycle network and surrounding proposals, such as at the Coatham Enclosure.

Development Policies DPD

DP2, Location of Development: Development that causes significant loss of or adverse impact on important open spaces and assets will not be permitted. The FAS will impact on the environmental assets of the area only to the extent required to ensure protection to the settlement of Redcar from flooding and erosion.

DP3, Sustainable Design: Requires all proposals to be of a high design standard. The FAS supports this policy as it will incorporate wider pedestrian and cyclist infrastructure, and proposals have been developed to provide a high standard of public realm provision.

DP4, Developer Contributions: Ensures that community benefits are sought through planning obligations, and the FAS will be subject to obligations regarding biodiversity and landscape improvements.

DP5, Art and Development: Under this policy artistic contributions will be required as part of larger schemes. The FAS will include additions to complement the existing monument at the Royal Slipway, and it will also feature further artistic elements integrated into the restoration design.

DP8, Coastal Development: Requires proposals for coastal protection works be considered against the relevant Coastal Management Plan (CMP2). The FAS proposals have been developed and considered in light of the provisions of CMP2, and are designed to protect it against inappropriate development². The FAS also ensures that development proposals for coastal protection works are in conformity with the Shoreline Management Plan.

Relevant supporting guidance is also in place with the Urban Design SPD (2006) providing a supporting context to the Local Development Framework policy hierarchy. It emphasises the importance of innovation, design for climate change and the need for good design choices; all elements of the FAS proposal.

3.2.4 Summary of planning policy implications

The proposed FAS works are identified as being necessary to protect the sea front of Redcar. Furthermore they will provide improved access to the coast and enhancements to be made to the urban seafront environment of Redcar. This development proposal takes account of and conforms to the relevant planning policy and guidance. Key planning issues that have emerged from the review of the spatial planning policy framework are set out below, along with the FAS compliance with the strategic and detailed planning policy:

National

- Redcar FAS is in accordance with PPS 1 by laying down sustainable long term foundations to help develop Redcar community;
- The protection and mitigation of seasonal bird activity and habitat in the vicinity of the sea wall is a key issue set out in PPS9, which has been incorporated into the detailed design, timetabling and construction of the FAS at Redcar;
- The FAS is in line with the stated need in PPS20 to protect, conserve and, where appropriate, improve the opportunities of the coast. This also accords with the need to consider pollution control and environmental impact in line with PPS23; and
- PPS 25 considers flood risk a key issue to be considered in development proposals, and flood risk management is the main purpose of this scheme.

Regional

- The RSS and this proposal support the growth and development of Tees Valley City Region;
- Within the City Region the Coastal Arc (including Redcar seafront) is seen as a key spatial development priority (Policies 5 and 7). This is also reflected in Tees Valley Vision and the Investment Plan;
- The national agenda of protection and enhancement of the natural and built heritage of the region is also supported through regional and sub-regional planning policy, which the FAS is in accord.;

Local

- The Local Development Framework promotes enhancement works such as those in the Redcar FAS; for example, upgrading the Promenade (Policy CS5) and ensuring high design standards (Policy DP3) as well as artistic elements (Policy DP5);
- Though the FAS will affect special landscape features, in the long term the scheme will support and protect and enhance these (Policies CS22, CS24 and DP2);

² Development that causes harm to the special character of the area, including heritage assets, wildlife and the marine environment.

- Integration with the surrounding public footpath and cycle network (Policy CS28) is supported by the FAS, facilitating linkages to the Coatham Enclosure and town centre; and
- The Shoreline Management Plan 2 was a fundamental influence on the development of the proposals (Policy DP8 and Para 2.22).

A key factor to help justify the scheme is to minimise adverse effects on the surrounding area. We have incorporated a variety of mitigation measures into our construction methodology and also ensured that a sensitive design has 'designed out' any long term major adverse impacts.

Of particular concern is the impact of our proposals on the SPA and SSSI. As well as potential bird disturbance, the proposed works are likely to cause a loss of SPA foreshore over a 100 year period, due to rising sea levels causing coastal squeeze as a result of maintaining the current line of Redcar seafront through hard sea defences. We have minimised the adverse construction effects of the project as much as possible and will be creating compensatory inter-tidal habitat at Greatham North, within the Tees Estuary. Natural England has been consulted and an Appropriate Assessment completed in accordance with the Conservation (Natural Habitats & c.) Regulations 1994 (Habitats Regulations). Further details are available in Sections 4 and 9 of the Environmental Statement.

Without the construction of the project, Redcar would continue to be at increasing levels of flood risk and with the effects of coastal erosion the frontage of the town would eventually be lost. We also believe that given the risks to the population and economy of Redcar, the implementation of the project is of overriding public interest and safety with regard to the effects that will result on the habitats and species of the designated sites.

4.0 Optioneering and Scheme Evaluation

4.1 Background

The context of the site is crucial in considering any proposals for improvement. Redcar has one of the longest stretches of unbroken sandy beach in the country and is highly influenced by the long history of commercial fishing in the area. The coast is therefore of high importance to the tourist economy and visual identity of Redcar.

The preferred option for Redcar FAS needs to be consistent with the national policy agenda, fulfilling the requirements particularly of PPS25, and locally the LDF stresses the need to protect and enhance the sea wall.

Overall, the design proposals have been informed by the site's context in a cohesive and inclusive manner and designed to minimise the impact of the scheme on the surrounding landscape and integrate the scheme into the seaside frontage. The preceding chapters outline how the scheme has been evaluated through thorough consideration of:

- the technical flood risk assessments;
- economic assessment and regeneration considerations;
- environmental assessment; and
- policy considerations.

In addition, the design has been developed through a Project Appraisal Report (PAR) phase to its current form, through consultation with a number of interested parties, including Natural England, RCBC, and the general public.

The following describes the appraisal of options against the criteria highlighted above.

4.2 Site Evaluation and Optioneering

4.2.1 Introduction

The *Redcar Coastal Defence Strategy* (Babtie Ltd, 2002) identified that improving the sea wall to provide protection was the most technically sound, economically viable and environmentally acceptable solution to the risks posed by flooding and coastal erosion.

In 2005 we began the outline design study to develop a robust business case for a Project Appraisal Report (PAR) submission and planning application of the Strategy's preferred option.

4.2.2 Redcar Coastal Defence Strategy

With the site context in mind six options were considered in the Redcar Coastal Defence Strategy for the Esplanade area (see Table 4.1):

1. Do Nothing: All flood defence activities in the area would stop;

2. Do Minimum: Continue current maintenance of sea wall;
3. Sustain: Raise height of sea wall to provide a 1 in 20 year standard of protection;
4. Improve standards of defence with:
 - (i) Seawall improvements;
 - (ii) Beach recharge combined with rock groynes; or
 - (iii) Offshore breakwater.

The Stray area was considered separately, with two options assessed:

- A. 'Do-nothing'; and
- B. 'Maintain the timber groynes and seawall'.

The Strategy study options 1, 2, 3 and A failed to provide an adequate standard of defence, whilst options 4(ii) and 4(iii) were rejected due to concerns raised by the RNLI, local fishermen and Natural England. Option 4(i) was further refined with three sub options to compare three different standards of defence, namely (a) 1 in 50 year, (b) 1 in 100 year and (c) 1 in 150 year. A standard of 1 in 100 year or 1 in 150 year (1:100 or 1:150) defence was deemed a technically and economically effective standard of flood risk protection.

The Redcar Coastal Defence Strategy for both areas considered the 'Do Nothing' option in detail, as it provides the benchmark against which all other options were assessed. The description of these, together with a summary of the assessment of each option is presented in Table 4.1.

The Strategy identified that the only viable option was to defend on the existing line, with a revetment and seawall providing at least a 1 in 100 year standard of defence, and also maintain the groynes along the Stray.

Table 4.1 Options Considered in the Redcar Coastal Defence Strategy for the Esplanade Area

	<i>Option</i>	<i>Assessment</i>
1	<p>Do Nothing All flood defence activities in the area would stop.</p>	<ul style="list-style-type: none"> ▪ The sea wall would fail resulting in a large undefended urban area which would increase the risk of flooding and endanger human life. ▪ Erosion of land which would lead to the loss of assets (property, infrastructure and environment) ▪ Potential public health issues and damage to the SSSI and SPA resulting from damage to the sewerage infrastructure. ▪ Potential damage to slipways and ramps making access to the beach & sea difficult for RNLI, fishermen and the public.
2	<p>Do Minimum: Maintain Sea Wall Currently employed by RCBC. This options attempts to maintain the existing defences.</p>	<ul style="list-style-type: none"> ▪ Increased risk of flooding and to human life over time. The current standard of protection is approximately 1 in 10 years and this would reduce over time with predicted increases in sea levels. ▪ Economic analysis indicates alternative options are more cost-beneficial. ▪ Structure is nearing the end of its working life and would require increased levels of maintenance to limit the effects of erosion and wave damage.
3	<p>Sustain: Maintain Current Standards of Protection Raise the height of the sea wall to take account of sea level rise and provide a 1 in 20 year standard of protection.</p>	<ul style="list-style-type: none"> ▪ Economic analysis indicates alternative options are more cost-beneficial. ▪ Limited opportunity for environmental enhancement.
4 (i)	<p>Improve standards of defence – seawall and groynes Raise the height of the seawall to take account of sea level rise. Reconstruct revetment and sheet pile toe. Maintain Groyne Field and revetment at the Stray. Sub-options for various standards of defence were considered (1 in 50yr, 100 year, and 150 year).</p>	<ul style="list-style-type: none"> ▪ Of the different standards of defence considered all had benefit cost ratios in excess of 1. The 1 in 100 year standard of defence was found to be the preferred option on economic grounds in the Strategy (feasibility) study. ▪ Improvement to the groynes at the Stray was also found to be cost beneficial. ▪ Potential for impact upon the SSSI & SPA. ▪ Potential impact on navigation & access for RNLI lifeboat & fishing boats.

	<i>Option</i>	<i>Assessment</i>
4 (ii)	<p>Improve standards of defence - Beach recharge, combined with rock groynes This would absorb energy naturally and preserve the recreational asset.</p>	<ul style="list-style-type: none"> ▪ Difficulties in sourcing suitable material. ▪ Objections from Natural England because of the impact of increased sedimentation on the SPA affecting feeding areas. ▪ Concerns from the Royal National Lifeboat Institution (RNLI) and local fishermen concerning safe access to the sea. <p>Additional Concerns raised during consultation:</p> <ul style="list-style-type: none"> ▪ Natural England raised concern that these would be constructed over the Redcar Rocks SSSI and would affect sediment transport. ▪ Commercial fisherman felt that access may be adversely affected to and from the sea. ▪ The RNLI are concerned that sand deposition in Luff Way may cause waves to break in areas where they currently do not, which would affect the options for safe navigation. This could also cause delays in reaching casualties in Tees Bay.
4 (iii)	<p>Improve standards of defence - offshore breakwater Offshore breakwaters have a calming effect, reducing inshore energy leading to the deposition of sediments in the sheltered area between the breakwater and the coast.</p>	<ul style="list-style-type: none"> ▪ Objections from Natural England because of the impact of increased sedimentation on the SPA. ▪ Concerns from the Royal National Lifeboat Institution (RNLI) and local fishermen concerning safe access to the sea. <p>Additional Concerns raised during consultation:</p> <ul style="list-style-type: none"> ▪ Natural England has expressed concerns that the offshore breakwater would cause deposition over valuable feeding grounds within the SPA. ▪ The RNLI are concerned that the drying height and visibility of the structure would affect the lifeboat movements as the width of the 'Sue' would be reduced resulting in health and safety implications. ▪ Local fisherman also raised concerns with regard to health and safety of navigation.

4.2.3 Redcar Project Appraisal Study

Following the Strategy, a project appraisal study was commenced to develop the business case for the seawall improvements and maintenance of the timber groynes. The associated detailed coastal modelling to assess the flood risk was recently updated to account for the latest climate change guidance. The economic assessment compared two new seawall improvements options, based on the Strategy's Option 4(i), for 1 in 100 year (Option 5a) and 1 in 200 year (Option 5b) standards of defence. In addition, a variety of revetment options have been considered for both the main Esplanade frontage and at the Stray.

Our current analysis has determined that the preferred option on economic grounds is a seawall with a design life of 100 years and a Standard of Protection for 1:200 years, taking into account climate change for the next 50 year period.

A number of investigations were carried out to assist the evaluation of the business case including geotechnical site investigations and a condition survey of the groyne field at the Stray.

The need for works at The Stray was confirmed by a detailed flood study, which identified a possible flood route that should be closed by construction of a new sea wall. In addition, the existing timber groynes and concrete revetment system are in poor condition and these will be refurbished.

The design has been developed during the this phase to its current form, through consultation with a number of interested parties, including Natural England, the general public and our Framework Contractors. The scheme has been designed to minimise the impact of the scheme on the surrounding landscape and integrate the scheme into the seaside frontage.

4.2.4 Conclusion

The only viable option for addressing the risk of coastal flooding and erosion at Redcar is to improve the standard of defence by constructing a new revetment and seawall, and maintenance of the timber groynes. The evaluation of providing different standards of defence has demonstrated that on economic grounds the preferred option for the Esplanade area is to 'improve the seawall to 1:200 standard', with a design life of 100 years and taking into account climate change for the next 50 year period. For The Stray, the preferred option is 'maintain the timber groynes and seawall'. These have subsequently been, considered in light of its compatibility and ability to address the issues as set out in the Assessment (Section 2), Planning Policy Context (Section 3), and this Consultation (Section 4) section of this Design and Access Statement.

4.3 The Preferred Option Details

In order to provide Redcar with flood protection against a 1 in 200 year flood event, we will be improving the existing flood defences. This will include the following key elements in an enhanced landscaped setting (see drawing sheets numbered B0220800/PL/010):

- Raising the existing height of the sea wall along the promenade;
- Replacing the existing revetment along the promenade, with stepped access from the Esplanade down to the beach level;
- Repairing the existing groyne field at The Stray;
- Improvement of the existing revetment at The Stray with revetment matting;
- Improving the sea defences along The Stray by closing informal access gaps and providing a sea wall in front of the paddling pool; and
- Closing the informal access points through the existing sea wall at The Stray, with access maintained through the provision of steps and ramps.

Any disturbance by the preferred option to overwintering birds or to recreational users of the seafront will be minimised by the timing and phasing of construction. The raising of the seawall would also cause some visual impact, including a permanent loss of beach and sea views for a few residents living along The Esplanade and Granville Terrace. Mitigation of these potential impacts is addressed in detail in the scheme design, such as raising the Promenade alongside the wall and providing new landscape features. For further details, please see Chapter 6 of this Statement.

The preferred option will minimise the risk of erosion to the Redcar frontage (Esplanade area and the Stray) and flooding to low-lying properties. However, it will be necessary to carry out monitoring after storms to determine beach levels and check on damage to the revetment and/or seawall, and arrange for any necessary remedial works to be undertaken.

4.4 Summary

A number of options were considered for both the Esplanade and the Stray areas to address flood alleviation and coastal erosion, and all these were evaluated against the existing policy, technical and physical context. Once the principle of the preferred option was agreed, further outline design work was completed to integrate it with its surroundings and to ensure that any adverse impacts were satisfactorily mitigated.

5.0 Consultations

5.1 Consultation Process

5.1.1 Introduction

The management policy for the shoreline originates from the Shoreline Management Plan (SMP), itself a document that underwent extensive consultation. An SMP provides a large scale assessment of the risks associated with coastal processes and indicates how the coastline should be managed. A 'Hold the Line' option (maintain the line rather than advancing/retreating from the sea) was the most suitable strategy for coastal flood defence at Redcar. We have undertaken extensive consultation throughout the design process, which has provided interested parties with the opportunity to raise concerns at an early stage and actively influence the outcome of the project. It also has provided us the opportunity to explain the project in detail to a wide audience.

The following lists the main consultation activities.

5.1.2 Redcar Public Consultation Open Day (27th March 2006)

The purpose of the day was to engage the public with regard to the project and seek their opinions with regard to the project. Awareness of the issues facing Redcar and the proposals for the project were raised by means of display boards (for further information refer to Appendix 4.1 of the Environmental Statement) and interaction between the open day staff and the attendees. The main findings of the day to impact on the proposals are set out below:

- In general, people agreed that increasing the height of the sea wall is necessary;
- Increasing the height of the sea wall would only be acceptable if views towards the sea were maintained;
- Respondents expressed concern with regard to the Stray and the area towards Zetland Park and Green Lane. It is perceived that this area is subject to high flood risk, and is currently afforded little protection;
- Respondents expressed a preference for traditional street furniture along The Esplanade, as it would be reminiscent of a Victorian seafront;
- Raising the promenade was seen as a positive measure to maintain the visual amenity of the promenade; preferable to minimum enhancement or a more elaborate plaza development;
- The separation of cyclists from pedestrians was seen as a positive measure with regard to health and safety;
- The suggestion of changing the existing two-way street to a one-way street along The Esplanade was generally not welcomed; and
- Overall, providing that sufficient access was maintained, a reduction in the number of steps down to the beach was not viewed as a problem.

5.1.3 The Stray Public Consultation Open Day (September 2006)

A separate public open day was held to inform the general public of the proposals to improve the sea defences along the Stray. Overall these proposals were met with approval.

5.1.4 Scoping Consultation (June – August 2006)

Following the issue of the Redcar FAS EIA Scoping Report to Redcar and Cleveland Borough Council, it was issued for comment to various statutory and non-statutory consultees. Natural England and English Heritage were the only respondents. English Heritage responded to say that the project did not raise any concerns with regard to cultural heritage or archaeology, whilst Natural England raised concerns regarding the encroachment of the revetment into the SPA/SSSI. A meeting was then arranged to discuss construction issues.

5.1.5 Natural England Consultations (August 2006)

An Appropriate Assessment was produced by Babbie Group Ltd, in July 2004 in accordance with the Conservation (Natural Habitats & c.) Regulations 1994. This was based on the initial designs which did not encroach into the SPA as much as the current designs. Based on the original Appropriate Assessment, Natural England issued a letter of support stating that they agreed with the outcome of the original appropriate assessment, that no further assessment would be required. However, since this letter was issued the design of the revetment has changed resulting in encroachment into the SPA to a greater degree than initially anticipated.

In light of design changes Natural England were consulted again. Given that the encroachment would be greater than originally designed and assessed, it was agreed that winter 2007/08 bird surveys were required to support the appropriate assessment and planning application. The purpose of this would be to gain a better understanding of the ecology of this area of the beach and the birdlife associated with it. This would therefore allow for a more targeted assessment of the effects of the project to be undertaken.

Additional meetings were held in 2006 – 2008 during which it was agreed that the replacement of the sea defences at Redcar could potentially have an impact on the SPA in three ways:

- Direct impact on SPA bird populations through habitat loss caused by encroachment of the new revetment into the SPA.
- Direct impact on SPA bird populations, through short-term construction disturbance, using either the sea defences, primarily as a high tide roost, or the adjacent coastline, as a low tide feeding site.
- Indirect impact on SPA bird populations using the adjacent coastline, as a low tide feeding resource, through long-term coastal squeeze.

The significance of the adverse impacts was discussed and, where required, appropriate mitigation measures agreed, and recorded in a revised Appropriate Assessment (further details of these discussions are detailed within Section 9 of the Environmental Statement).

5.1.6 Redcar Seafront Public Consultation (July 2008)

Redcar & Cleveland Borough Council devised and delivered the “Love it – Hate it” consultation programme consisted of a consultation event that ran from the 23rd of July to the 1st of August 2008, which recorded 7264 attendees consisting of residents, local businesses and visitors. This was designed to consider the public expressions and feelings about Redcar Seafront and its surroundings. Whilst relating more closely to the RIBA competition currently underway, the consultation indicated key issues relating to the Seafront.

Key relevant comments collected from the consultation event concern the following:

- Backdrop buildings – Poor state and negative appearance of buildings in the main section of the sea front (Esplanade);
- Traffic – Considered to be a negative feature of the seafront, and shared use of the Esplanade for cycling and walking was considered hazardous on busy visitor days; and
- Features & street furniture – The Penguin sculpture features were considered very popular, although existing seating and litterbins were considered inadequate or poorly located. The new bandstand was seen as needed, but remotely located. Having fishing boats on the seafront was seen as an important part of the visitor experience. Use of illumination was considered to have a positive impact.

5.2 Consultation Impact on Design

Our formal and informal consultations (see Table 5.1) have provided interested parties with an opportunity to influence the design of the FAS and the scope of the environmental assessment. In doing so the consultees have influenced the development of the proposals through the design process; for example:

Consultation with national and local stakeholders, such as Natural England, the RNLI and local fishermen, identified that offshore breakwaters and rock groynes might cause sedimentation of the important bird breeding grounds on Redcar and Coatham Rocks, as well as present a navigation hazard to the lifeboat and local fishing boats. Concern was raised by them with regard to the potential effects that the proposals would have on the SPA. This influenced the approach to the option selection and design process.

The comments and opinions from the Redcar Public Consultation Open Day have been taken on board by the engineering and landscape design teams to ensure the sea wall and enhancement designs to provide adequate protection against flood risk and coastal erosion alongside high quality enhancement of the promenade. The design of the revetment at the Stray was also informed by the second Public Open day in September 2006. The consultations also fed into the brief for the design competition. A copy of the brief can be found at Appendix 10.6 of the Environmental Assessment.

Table 5.1 Consultation History

Consultation	Date	What was Accomplished?
Strategy	2001/2002	Clearly identified that a 'Hold the Line' option was the most suitable strategy for coastal flood defence for Redcar.
Public Open Day	March 2006	This was organised to present the details of the project to members of the public and interested parties.
	September 2006	This was organised to present the options for improving the sea defences specifically along The Stray.
Planning Team Consultation	March 2006	This was undertaken to discuss the contents of the ES.
Site meeting with RCBC and project staff	June 2006	The project team and relevant RCBC representatives gathered in Redcar to discuss the project in detail on-site.

Consultation	Date	What was Accomplished?
Scoping Consultation	June to August 2006	The scoping report was issued to statutory and non-statutory consultees for comment.
Planning Team Consultation	August 2006	The project team met with RCBC to discuss regeneration opportunities.
Natural England Consultation	August 2006	A meeting was organised with Natural England to discuss the concerns regarding the potential effects of the project on nearby designated sites.
Landowner Consultation	August 2006	Investigated the possibility to create a 5ha area of wetland. However, the proposals conflicted with current land management practices and the proposals were deemed to be unfeasible and not progressed any further.
RCBC	August 2006	Consultation regarding the development of the design proposals for the promenade area. Design guidelines are to be developed through continued liaison.
RCBC & Natural England meetings	2007 - 08	Various meetings to discuss the planning and Habitats Regulations implications and solutions.
Statutory Consultation (by RCBC) on Planning Application, ES & Appropriate Assessment.	2008	This will influence the determination of the planning application and Appropriate Assessment.
Redcar Seafront "Love it Hate it" consultation event.	July to August 2008	This consultation was influenced by the consultation work carried out for this project, and it served to successfully articulate opinion on the Seafront area in relation to the RIBA design competition.

5.3 Summary

The consultation process with the local community and the statutory consultees, in the light of technical necessities, has helped ensure that the preferred option for the Flood Alleviation Scheme is acceptable, as providing adequate flood protection for the local community. The consultations have also influenced the optioneering and will inform detailed design of the improved FAS in terms of tourism, other regeneration schemes and the protection of natural resources. The consultation responses with regard to operational procedures of the mitigation works have also been integrated.

6.0 Design

6.1 Use

The purpose of the FAS is to provide coastal flood and erosion protection to existing land uses in the area up to a 1:200 year event standard, largely updating the existing defences, and is therefore considered an appropriate land use for the site.

6.2 Amount, Scale and Layout of the FAS

This section provides a description of the physical elements of the proposed FAS and outlines how the scheme will work. Further information regarding the detailed construction and operation of the FAS are discussed in the Environmental Statement that accompanies this planning application. Details of the alignment and cross sections of the flood defence embankment are shown on the various sheets of Drawing B0220800/PL/010. In order to ensure the proposals for this project have the least damaging environmental impact, they have been designed with a number of mitigation measures and environmental enhancements incorporated. These are included within the description on the sections set out below.

6.2.1 Proposals for Redcar Frontage

Sea Wall

The existing sea wall along the promenade has been damaged during historic storm events and no longer provides adequate protection. We intend to raise height of the sea wall along the length of the promenade from Newcomen Terrace to the roundabout at Granville Terrace, and in doing so replace the existing sea wall. The existing top of the sea wall (excluding handrails) would be raised by approximately 0.8m to 7.1m Above Ordnance Datum (AOD). However, for a small stretch beside the junction of the High Street and Granville Terrace the existing ground level is above 7.1mAOD and the height of the wall will be adapted appropriately.

Although the wall will be raised along this entire length, the most pronounced effect will be between the former Leo's Nightclub and the Royal Slipway opposite Graffenberg Street (see Drawing B0220800/M/010). Within this section the new wall height would be approximately 0.9m above the promenade level. In order to mitigate the effect of this height increase, we will raise the level of the promenade accordingly. It will not be necessary to raise the level of the promenade either side of this area as seaward views will be maintained for all user groups.

The new sea wall will be a curved structure (see photo to right) that will direct wave energy back towards the sea, to prevent over-topping. The sea wall will be constructed from concrete and will incorporate drainage outfalls with linear drainage units placed along the landward side of the sea wall. The unit will be set in concrete foundation and an angled pipe will drain water seawards.



Revetment

The existing smooth revetment will be replaced by a stepped revetment. The slope of the new revetment will be 1 vertical to 3 horizontal. The stepped design will dissipate wave energy much more effectively than the existing smooth revetment. The revetment will comprise pre-cast blocks aligned on concrete packing or rails. Below this revetment the foundation will comprise granular and recycled concrete fill with concrete binding layer.

Sheet piling will be used to secure the toe of the revetment along most of the length of the works apart from at Redcar Rocks where piling will be omitted in order to maintain the integrity of the SPA and SSSI.

As the enhancements that we are providing are intended to increase visitor numbers to the promenade and beach area, we have liaised with Natural England to discuss the potential impact that this would have on the designated site present. As increased human activity within this area is considered to have an adverse impact on the birdlife associated with the SPA/SSSI, we have 'designed out' one of the stepped access points that would have allowed people direct access to the SPA/SSSI. It is anticipated that this will help minimise the number of people accessing this area of the beach. Information boards will also be provided to advise people of the sensitive nature of the area.

The other existing stepped access points to the beach from the promenade will be removed and replaced with new stepped access points at maximum intervals of 75 -100m. Hand rails will be provided on either side of the steps and, the sides will be 'shouldered' to allow floodwater to break and deflect away from the steps themselves. The hand rails will be at an appropriate height - a minimum of 1.1m in height above the steps and promenade levels.

To ensure that all user groups have access to the beach, a ramp will be incorporated into the design of the new revetment. This will allow wheelchair users and those with push chairs to access the beach without having to use the slipways.

Once constructed the new revetment will extend into the SPASSSI, as demonstrated by Drawing B0220800/M/003. It is estimated that the total intrusion into the SPA/SSSI will be approximately 2,360m². As the beach levels will be reinstated following the revetment construction, the visible area of the revetment will be reduced. The extent of proposed intrusion that will be visible above the beach will be approximately 1,326m², and the amount visible above the rocks is expected to be approximately 245m² (subject to recorded beach levels at the time of construction).

The Promenade

In constructing the new sea wall and revetment it will be necessary to amend the existing promenade. However, instead of replacing it like for like, we are also taking this opportunity to enhance the promenade area. These enhancement proposals form a key part of this project and are integral to it. An indicative Masterplan of our proposals is shown on the two sheets of Drawing Number B0220800/PL/014. Notwithstanding this, the final design will be dependant upon the outcome of the RIBA Design Competition led by RCBC (for further information please see ES Appendix 10.6). The FAS provisional enhancements are designed to provide a cohesive and unified theme for the seafront, to attract local residents and tourists to the area. The raised sections of the promenade will be fully accessible and have been designed with ramped and stepped access. Additional street furniture and paving designs are provisionally proposed to complement the existing artwork and street furniture along the promenade. Interpretation boards will be erected

to explain the built, social and natural history of the Redcar area to local residents and visitors. The provisional enhancements are intended to act as a catalyst for further regeneration projects within Redcar and promote the creation of links between the town centre and the seafront. The enhancements that we are proposing are reflective of the town's character and history, but also provide a fresh and new face to the seafront that promotes recreation and amenity within the area.

The project will require the removal of various existing elements of the promenade. These include:

- The viewpoint across from Turner Street;
- The slipway adjacent to the Regent Cinema (though it will be replaced by a new slipway west of Regent's Cinema); and
- The gallery between the Regent Cinema and former Leo's Nightclub.

However, various elements will be retained and integrated into the design of the engineering and promenade enhancement proposals:

- The slipway across from Newcomen Terrace;
- The promenade levels (existing street levels) between Newcomen Terrace and Leo's Nightclub, and between Graffenberg Street and the Stray;
- The slipway at King Street will also be repaired where necessary;
- The Moore Street and Dundas Street Slipways;
- The navigational lights present along the promenade as agreed with the Lightboat Coxswain;
- The existing Anchor Monument across from King Street;
- The cycleway along the Promenade and Esplanade; and
- Facility to provide electrical supplies to summer activities on the promenade area.

6.2.2 Proposals for The Stray

Revetment

The revetment repair will comprise an interlocking concrete block system, which will be laid over the existing revetment. This is intended to dissipate wave energy more effectively and efficiently than the existing smooth revetment, and extend the life of the existing revetment. The toe of the revetment will be anchored with stone and backfilled with beach material. The top of the revetment will be anchored with mass concrete. The existing promenade level will be maintained and the surface will be overlain to improve the existing condition.

Groyne Field

The existing groyne field seaward of the new revetment works at the Stray will be repaired using timber products in full compliance with our own sustainable timber procurement policies. The number and alignment of the existing groynes in this area will remain. These works are Permitted Development.



Sea Wall

A new section of sea wall will also be constructed. The sea wall will link the section of existing sea wall either side of the paddling pool area, and will be approximately 1.1m above the existing promenade level. At present there are informal access points through the existing sea wall at The

Stray. To improve the flood defence capability of the wall these gaps will be closed. Access will however be maintained through the provision of steps and ramps.

All existing stepped access to the beach from the Promenade along The Stray will be re-constructed in order to maintain access following the repair work. The present slipway will also be retained and repaired where necessary.

6.3 Factors Affecting Scheme Design

The scheme design has taken account of a number of factors including:

- Environmental designations;
- Seasonal bird life;
- Protection of seafront residential areas;
- Town Centre and wider regeneration initiatives;
- RNLI, Fishing, and tourism users of the area; and
- Consultation with residents and statutory consultees.

A number of these factors have been set out below and describe the influences that have taken place. However, protection of seafront residential areas and consultation with residents and statutory consultees are discussed in other sections of this Design and Access Statement; in Optioneering and Scheme Evaluation (Section 4) and in Consultation (section 5).

6.3.1 Nature Conservation Designations

The project falls partially within the Teesmouth & Cleveland Coast, which is a designated SPA and Ramsar Site, and incorporates Redcar Rocks SSSI. The SPA covers an area of 1250ha and supports various coastal habitats including rocky shores, sand- and mud- flats, saltmarsh, freshwater marsh and sand dunes. These habitats provide feeding and roosting opportunities for important numbers of water birds in winter and during passage periods. The Redcar Rocks SSSI covers approximately 31.1ha and represents the finest exposures of rock in the Lower Lias north of the Market Weighton Swell. The Redcar to Saltburn Coast has also been designated as a Site of Nature Conservation Importance (SNCI), because the sandy foreshore provides winter feeding for wading birds described previously. The area between the SSSIs is locally designated as a Wildlife Corridor.

These prominent designations influenced the design and operational procedures of the proposed works. As the areas of nature conservation value are such defining features of the area, the impact of the flood defence scheme was designed to be as small as is necessary whilst providing appropriate protection to the town of Redcar. Much of the encroachment into the SPA/SSSI will be covered by the beach when reinstated following construction so that the resultant extent of the revetment that will be visible above the beach will be reduced to 1326m² (0.1326 ha). Approximately 245m² (0.0245 ha) of the rock area, currently visible above the beach will be covered by the revetment. These figures have been discussed at length with Natural England and it is not anticipated that the overall functionality of the SPA/SSSI will be significantly altered.



The Appropriate Assessment also reviewed the following potential effects of replacing the sea defences at Redcar on the Teesmouth and Cleveland Coast SPA:

- Direct impact on SPA bird populations through habitat loss caused by encroachment of the new revetment into the SPA.
- Direct impact on SPA bird populations, through short-term construction disturbance, using either the sea defences, primarily as a high tide roost, or the adjacent coastline, as a low tide feeding site.
- Indirect impact on SPA bird populations using the adjacent coastline, as a low tide feeding resource, through long-term coastal squeeze.

The SSSI and SPA is located within an urban beach, thus existing disturbance due to human activity is already high with dog walking and walking/beachcombing. However, we have considered the potential effects of the construction phase on the designated areas, and in particular on the SPA, SSSI, and birdlife present, we have consulted with Natural England and with our contractors to ensure that a sensitive and suitable construction method has been developed. The following mitigation measures will be incorporated into the construction method to minimise the risk of noise and visual disturbance by the construction activity, and ensure no long term adverse effect on the SPA bird populations.

- Construction will be phased to contain activities within a local area;
- Construction works will avoid any areas within 60m of Coatham Boating Lake during the hour and a half before, and the hour immediately after high tide, during the winter months of September to April inclusive;
- During the hours of darkness all construction works will be avoided within 100m of Coatham Boating Lake;
- During periods of prolonged cold weather no work will be undertaken within 100m of Coatham Boating Lake for two hours before and one hour after high tide;
- Construction will be phased to avoid the SPA and SSSI during the important pre-migration months of March and April;
- Site hoardings will be used to minimise the visual disturbance of the construction works to roosting and feeding birds; and
- Areas of operation for construction plant will be restricted to avoid the rocks within the SPA/SSSI. Plant will only be permitted to temporarily encroach up to 3m beyond the new revetment boundary within these areas.

During early development of the designs for the project, stepped access was provided down to the beach (part of the SPA/SSSI). Through consultation with Natural England we decided to remove the steps down into the SPA/SSSI to minimise the number of people accessing the beach within this area and disturbing the birdlife foraging in the SPA/SSSI. Information boards will also be provided to advise people of the sensitive nature of the area and to encourage more responsible behaviour, such as keeping dogs on a lead.

No mitigation can be provided for the indirect effects on the SPA bird populations due to coastal squeeze, so the predicted impact would remain unchanged. However, an application will be made to the Secretary of State for consent under the Conservation (Natural Habitats &c.) Regulations 1994 as reducing the coastal flood and erosion risks provide an Imperative Reason of Overriding Public Interest for the works to be undertaken. As part of this process a series of compensatory habitats and biodiversity enhancement schemes, within both the Redcar area and the wider Tees

Estuary, will be provided, benefiting a range of bird species, including some for which the SPA is designated.

Seven hectares of this mudflat and saltmarsh managed retreat will be allocated as compensation for the predicted habitat loss at Redcar. Part of 29 hectares of inter-tidal habitat creation proposed at Greatham North within the Tees Estuary has been allocated to fulfil this commitment, alongside the compensatory requirement of the Tees Tidal Flood Risk Management Strategy. This managed realignment will provide an ideal feeding resource for Redshank, Knot and Ringed Plover, along with a number of other species of wader.

In addition to the statutory compensatory habitat, we are investigating other potential local habitat creation and enhancement opportunities, such as:

- We are liaising closely with Tees Valley Wildlife Trust, who manage Coatham Marsh, with the aim of providing unvegetated gravel-filled wader rafts on some of the pools. This would provide additional safe and secure roosting opportunities at a site already used as a winter high tide roost. These rafts would in turn double up as potential tern breeding platforms. Discussions are also being undertaken to investigate the potential for constructing additional wader scrapes at Coatham, providing a further feeding and roosting resource.
- We are also liaising closely with the Redcar and Cleveland Borough Council Countryside and Public Rights of Way Manager to identify other potential local habitat creation and enhancement opportunities. Potential schemes include: preservation of a Sand Martin colony on the Stray, between Redcar and Marske, that is struggling due to erosion of the bank sides; and creation of 'wet woodland' and associated habitat at Flatts Lane Woodland Country Park, through redirection of surface water that currently causes problems in other areas of the woodland.

6.3.2 RIBA Public Realm Design Competition

The new sea wall will form a foundation for high quality and bespoke landscape treatments along the Redcar Seafront. A competition proposal has been prepared inviting proposals to cover The Esplanade, from Coatham Enclosure to the Stray, to consider the streetscape and public realm for the lifespan of this scheme. The competition brief was made available to the public on 1st July 2008, and is available in Appendix 10.5 of the Environmental Statement.

Detail of the planning application has therefore been prepared in co-ordination with the Development Brief for the competition. We will be liaising with RCBC throughout the competition period and, subject to the selected design achieving appropriate consents within our timeframe, we will accommodate the competition design proposals within our reinstatement works. This potentially will create an even more cohesive and high quality scheme that will positively influence the environment and economy of Redcar.

6.3.3 Regeneration

The FAS at Redcar lies adjacent to the town centre of Redcar, parallel to Newcomen Terrace and the Esplanade. Being located close to the town centre will provide the opportunity for the scheme to positively influence other potential regeneration initiatives that may take place in the town centre and in the surrounding area. These initiatives may include proposals to the 'backdrop' properties to the sea front along Newcomen Terrace and the Esplanade.

The principal current regeneration initiative close to the site is Coatham Enclosure, which will cover an area of approximately 16 Ha (39.4 acres), and is located immediately to the west of the sea wall area. The proposal is for predominantly residential use, but will include a mixed leisure, recreation and tourist facility together with housing and community facilities. There will also be public space in the form of a main piazza between the visitor centre and leisure complex. The recent planning application in May 2008 (Reference: R/2008/0480/RSM) for this proposal includes these uses along with 359 dwellings.

It is envisaged that the FAS for Redcar will integrate with the Coatham Enclosure scheme by the use of compatible materials, street furniture, and lighting (subject to detailed design). The sea wall will therefore link the new development at Coatham Enclosure with the town centre through cycleway and pedestrian links. It is envisaged that there will be no cumulative adverse direct impact between our proposed scheme and the Coatham Enclosure Redevelopment works, currently planned to commence in spring 2009.

A series of developments is also proposed along the Redcar seafront between Regent's cinema and site of Leo's nightclub. However, this proposal is in an early stage of development, with a feasibility study currently being undertaken.

6.4 Landscaping

Depending upon the RCBC led RIBA Design Competition, the provisional landscaping proposals that apply to the Promenade and to the Stray are set out illustratively in the Landscape Masterplan (Drawing number B0220800/PL/014). The main principles that apply to the scheme are set out below:

- Integrates with Coatham Enclosure proposals to create an integrated seafront. This will link the Coatham Enclosure proposals with the existing town centre by way of a compatible palette of materials, lighting, and street furniture;
- A network of pedestrian routes including a beachfront walkway will follow the Esplanade along the sea front and be linked into the main piazza that forms part of Coatham Enclosure. Majuba Road is also retained as the main thoroughfare through the area. Seafront improvements along the Stray, increasing access and maintaining existing grassland habitat;
- Raised sections of promenade to mitigate loss of views from seawall rise;
- Dedicated cycleway, which will reduce pedestrian/cycle conflict;
- Seating incorporated into the low seawall created by the promenade being lifted to meet flood requirements;
- Utilities provided along promenade area to allow increased flexible use of space for events and exhibitions; and
- Artwork incorporated into proposals to inspire and integrate with wider network of artworks over the whole of Redcar.

We are working closely with RCBC to align the final landscape proposals with the 'Design Competition' for the remodelling of the streetscape and public realm between the seawall and roadside of the promenade along the 1.5km long linear strip of Redcar's Seafront between Coatham Enclosure and the Stray. As there is the possibility the design competition proposals requiring a request for a planning variation to the proposal within this application, Drawing number

B0220800/PL/004 illustrates the distinct sections of the Redcar FAS. The Design Competition falls within Promenade Zone 2A on the drawing.

The following sub-sections summarise those measures that will contribute to the provisional landscaped enhancements.

6.4.1 Environmental Measures

As part of this project we will implement various environmental measures that will improve the visual appearance and amenity of the Redcar frontage. The majority of the measures would be focused upon the promenade. Other environmental measures that are included as part of this project will result in improvements for the internationally important populations of birdlife present along the coast, education, social inclusion and amenity. The main measures include:

- Reducing direct access from the promenade to the SPA/SSSI.
- Provision of interpretation boards along the promenade.
- Improvements to disabled access from the promenade and down to the beach.
- Additional monument along the promenade.

Reducing direct access from the promenade to the SPA/SSSI will reduce the overall human disturbance to birdlife, especially in overwintering periods, whilst ramp access to the public beach will ensure that all different user groups will have appropriate access. Information boards will provide a focal point for the SSSI and SPA areas along the promenade, and there is opportunity for an additional monument to be incorporated into the promenade area to complement the existing anchor.

All these measures will be designed as a single package to present a cohesive and integrated frontage to the town.

6.4.2 Promenade Enhancements

The preliminary proposals for provision of various landscape enhancements will revitalise the seafront with a cohesive suite of materials and street furniture that will add to the character of the area.

The design of the enhancement features provisionally proposed for the promenade will be of high quality. Depending upon the outcome of the RIBA Design Competition, provisionally it is proposed that appropriate street furnishings, lighting, artwork and features will be chosen that reflect the character and history of Redcar, and any new structures and public art will be designed to create positive landmarks along the promenade. As part of the provisional package of mitigation, the existing artwork along the promenade will also be retained and incorporated into the enhancement designs to ensure that the character of the local areas remains reflected in the revitalised promenade.

Careful consideration will also be given to the choice of hard materials used for the enhancement of the promenade. The finished surfaces will take into account the coastal environment and the weathering that it will endure, whilst being favourable to wheelchair and pushchair users. Depending upon the outcome RIBA Design Competition, areas of hard landscape will also be sympathetic to the location, and in keeping with the Redcar area.

As the final design for the promenade enhancements will be an iterative process, the final negotiations and detailed design integration process will continue with RCBC. Also, the result of the

RIBA Design Competition requires development and feasibility work to ensure they are deliverable within the FAS timescale. For this reason, only indicative features and drawings have been included accompanying this application. Notwithstanding this, it is considered that the current proposed enhancements will provide a cohesive image of the Redcar Frontage and will reflect the Victorian heritage of the promenade through the use of traditional materials, re-constructed existing features and avoidance of features that would unsatisfactorily contrast with the local surroundings.

The provision of these enhancements is intended to help realise the opportunity to boost the local tourist industry, attract an increased number of local residents to the area for formal and informal recreation, and act as a catalyst for further regeneration of Redcar.

6.4.3 Operation and Maintenance

All features will be operated and maintained by Redcar and Cleveland Borough Council.

6.5 Summary

The design proposes an improvement to the sea wall to meet appropriate flood protection standards (1:200 year), whilst providing significant enhancements that integrate into the promenade area. There will be a number of landscape enhancements put in place that will revitalise the seafront through the use of a cohesive suite of high quality materials and street furniture that will add to the character of the area. It will do this whilst taking into account the present environmental designations, existing and proposed users of the site, protection of the town, as well as well as the requirements of the as statutory consultees.

7.0 Access

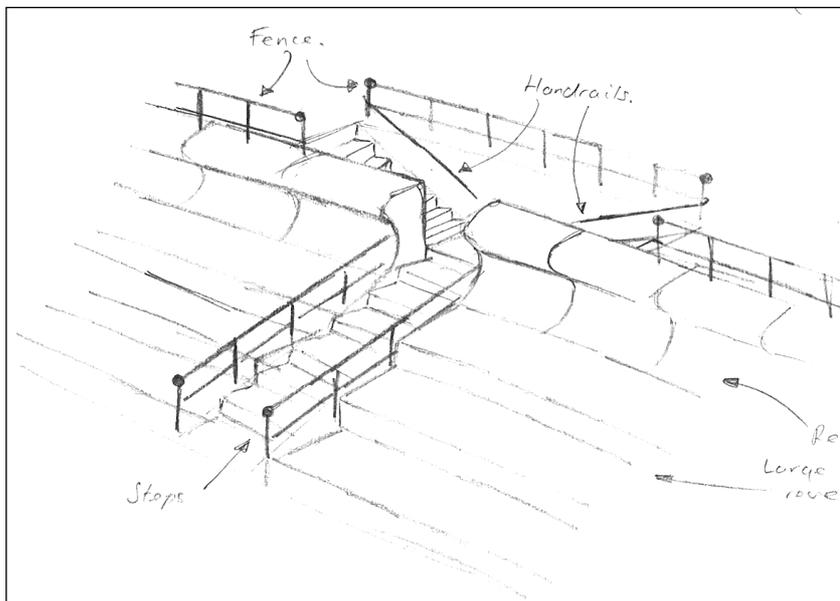
7.1 Introduction

The sea wall is in a public area used extensively by members of the public and local businesses including the fishing industry. The Promenade is also an important traffic route. Accessibility is therefore a key issue for the scheme.

7.2 Pedestrian Access

It was originally proposed that gates would be installed on the beach access points, but this was found to be unsafe for people needing to leave the beach. Access from the beach has therefore been designed by the use of ramps and steps, and it is therefore 'open' at all times and allows people to exit the beach during adverse weather and when conditions warrant a quick and safe escape. Figure 7.1 shows an example of how access is to be secured to/from the beach for pedestrians. This design ensures that the standard of protection is not adversely affected as a result.

Figure 7.1 – Pedestrian access



The shouldering used on the access steps and boat ramps will also improve the safety of the access points from the promenade to the beach, as waves will be directed back towards the sea preventing them becoming slippery. Tactile paving is also likely to be used at strategic points along the promenade. The precise locations will be addressed during the detailed design phase. Guardrails will also be placed on the sea wall and steps. The curved structure of the sea wall and shouldering effect of the stairs has been designed to deter people from running along the revetment, creating a safer flood defence structure in comparison to the existing flood defence.

The following sub-sections summarise the key access issues relating to the new sea defences.

7.2.1 General Access

Increased access will be created by:

- Provision of additional steps along the long sections of raised promenade.
- Crossing point at the former Leo's building will be wider than others along the scheme and cross Newcomen Terrace. This will link the Tourist Information building and public toilets to the promenade.
- Formalised steps will provide safe access points to the beach along the Stray.
- The footpath leading up to the sea wall will be re-graded leading up to the Stray.
- Designs will be sought to deter use of the revetment and promenade for high-risk activities (e.g. running between the ramps).
- Relocation of a slipway near Regent's Cinema to improve health and safety.

7.2.2 Pedestrian Routes

As part of the environmental improvement proposals along the promenade, slope access will be provided to the beach, which will increase accessibility to cater to all user groups and reduce the need for these users to use the existing vehicular slipways.

7.2.3 Disabled Access

There is currently no disabled access to the beach, other than existing slipways. Proposed access ramps allow access to the beach without those with wheelchairs and pushchairs having to use slipways, which can be potentially dangerous. Ramps will provide safe access points over the new sea wall at the Stray.

7.2.4 Cycle Provision

An enhanced cycleway (predominantly two metres in width) will run the length of the promenade, though there are breaks in this where it crosses the slipways. The cycleway will also integrate with the existing cycleway running along Newcomen Terrace.

Cyclists are also afforded a dedicated cycle lane as part of the National Cycle Network route no. 1 that joins the frontage from West terrace and travels along the promenade beside the Esplanade and The Stray.

The access provision for this proposal has been influenced by the Core Strategy Policy 28 – Sustainable transport Networks, integrating with the surrounding public footpath and cycle network, and surrounding proposals such as Coatham Enclosure.

7.3 Vehicular Access

During construction of the new sea wall and revetment, there will be temporary disruption to traffic movements, deliveries and access along Redcar's sea-front and to adjacent retailers. This will be attributable to the temporary increase in HGV movements, road diversions/closures and loss of parking facilities adjacent to the promenade during the construction period. Boat parking on the promenade will also be temporarily disrupted.

In the case of Granville Terrace it may be necessary to temporarily close the road in order to accommodate the construction. However, Lord Street will remain open so that residents can access their properties. In addition, the footpath will remain open along this stretch to maintain

pedestrian access. The additional movement of construction related vehicles and plant will also add to the numbers of vehicles using the route, which will slow general traffic movements.

At this stage, the Environment Agency procurement process means the Contractor who will undertake the construction works remains to be appointed through a formal tender process. The construction traffic volumes and types and transport routes are dependent upon the Contractor's detailed working method and programme.

Therefore prior to commencing construction these details would be determined and presented in a Traffic Management Plan, which will be adhered to during construction. This plan will be developed in liaison with the RCBC Traffic Manager and Emergency Services to ensure their approval and to minimise any detrimental effects. This approach has been agreed with RCBC Highways Department.

There will be no permanent removal of vehicular access to the area. Existing pedestrian crossing points and beach access will be improved, and more sustainable modes of transport (walking and cycling) encouraged.

7.4 Summary

When the proposals are implemented they will provide increased access to the beach through the provision of additional steps and new access ramps. These facilities will also provide safe access to the mobility impaired and provide consistent integrated cycle access. Vehicular access to the area will be retained. Any temporary closures or diversions will be agreed with the Local Highway Authority and other consultees such as the emergency services, as appropriate, in due course.

8.0 Conclusion

8.1 Summary

Sea defences are necessary to protect the sea front of Redcar from wave damage and to prevent coastal erosion. The current defences have reached the end of their useful life and have started to decay. The proposed combination of replacement defences and improvements to defences has been designed to be an effective defence, but also to be compatible with the surrounding land uses. Furthermore a key objective of the scheme has been to provide improved access to the coast and to allow enhancements to be made to the public realm along the seafront of Redcar

Overall, the design of the scheme has therefore respected the surroundings and optimised opportunities to reduce its environmental impact, whilst ensuring its functionality. A summary of the design influences are highlighted below:

8.1.1 Assessment

The town centre of Redcar has historically been an important link to the sea, a relationship that has been at the heart of Redcar since its origins. The local fishing and tourism economies rely on this relationship. The need to protect existing land uses and the broader socio-economic context has been central to the justification for the scheme and has also influenced the assessment of the scheme options and detailed design.

8.1.2 Planning Policy Context

Planning policy at all levels identifies the need to protect from flood damage and prevent coastal erosion. This scheme is therefore in conformity with these policy principles. The attention to detail within the scheme also ensures it satisfactorily addresses local environmental issues such as the need to protect local environmental designations.

8.1.3 Scheme Evaluation, Optioneering and Consultation

As part of a Shoreline Management plan in 2002, the principle of a variety of flood defence options were tested against a number of criteria including technically soundness, economical viability and environmental impact and stakeholder consultation. It was decided that a 'hold the line' i.e. keep the flood defences along the current line of defences, was the best way to proceed.

Consequently a number of options for the 'hold the line' approach were themselves tested for viability against the following aspects:

- technical flood risk assessments;
- economic assessment and regeneration considerations;
- environmental assessment; and
- policy considerations.

The preferred option was the most satisfactory when considering these aspects, above all the scheme needed to provide sufficient protection for both the residential and business communities. It was then taken out to widespread and extensive stakeholder/public consultation in 2006/07 and

the details of the preferred option have been developed in light of the views of the local community as well as the comments of statutory consultees.

Overall, the consultations have gone forward to influence the detailed design of the proposed improved FAS and included consideration and accommodated of issues such as tourism, the views of local residents and the protection of natural resources. This feedback has also been integrated into the mitigation works.

8.1.4 Design

The design proposes an improvement to the existing sea wall defences to meet appropriate flood protection standards i.e.1:200 year, whilst providing an enhancement of appearance and accessibility of the promenade area. There will also be a number of landscape enhancements put in place that will revitalise the seafront through the use of a cohesive suite of high quality materials and street furniture, which will add to the character of the area. The final landscape design however could be superseded by a RIBA Design Competition, which may provide an even more exciting scheme to enhance the Redcar seafront, as long as its timescale can be accommodated within the FAS timescale.

8.1.5 Access

The proposals will provide increased access to the beach through the provision of additional steps, new access ramps that will provide safe access to the mobility impaired, and consistent integrated cycle access. Vehicular access along the sea front will be retained, though during construction there will be some temporary impacts of the accessibility of the area. All temporary diversions will be agreed with the local Highways Authority.

8.2 Conclusion

The FAS has been thoroughly and comprehensively tested to ensure its viability and its details and impacts developed to accommodate public/stakeholder considerations. The scheme will also accommodate and compliment other local initiatives such as the RIBA Design Competition. For these reasons, the proposal is considered to be well thought out, appropriate for the area and thus should be approved.

APPENDIX A

Plan Drawings – See Associated Folder

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