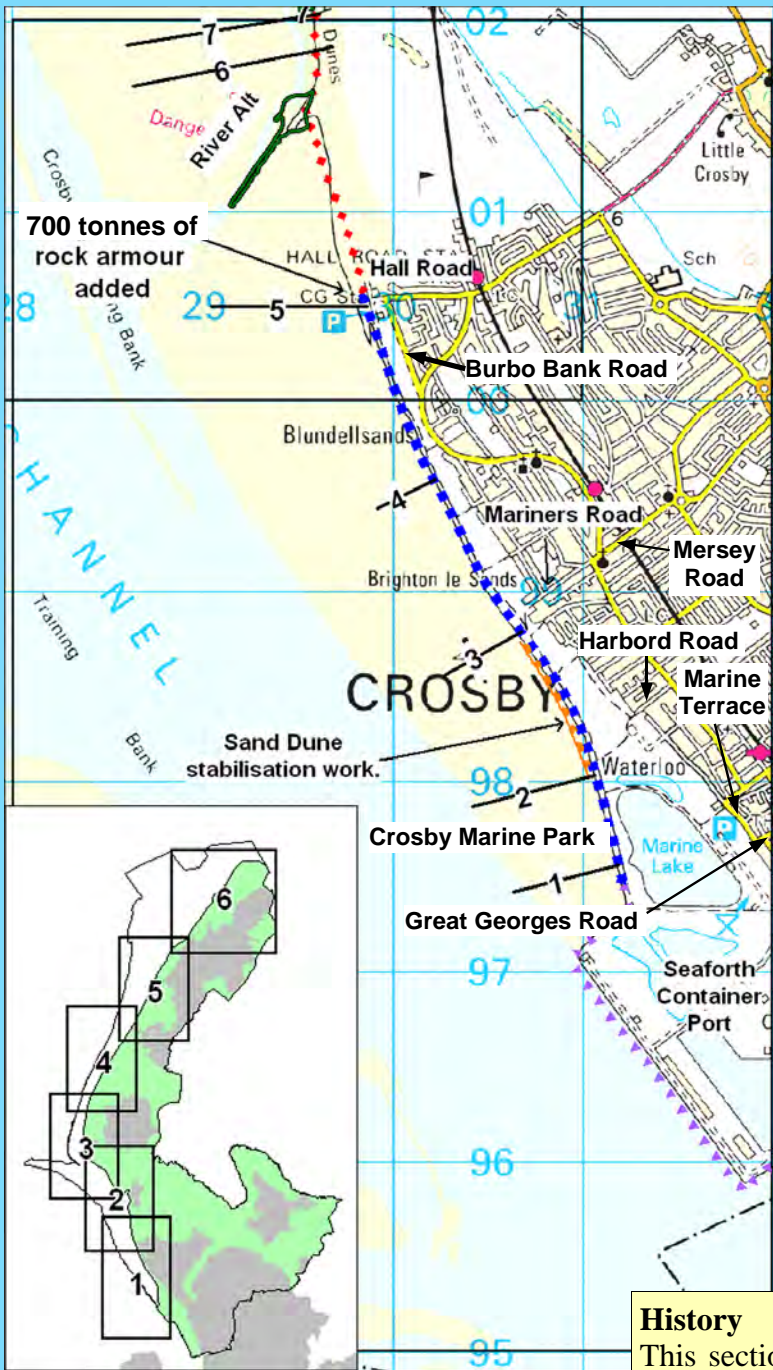


# Area 1- Crosby Summary



- ◆◆◆◆ Informal Rubble
- ▲▲▲▲ Rock Armour
- Sand dunes
- Saltmarsh
- Saltmarsh/embryo dune
- ■ ■ ■ Sea Wall
- Training Wall
- Profile Line

**Length of coastline** (all values approximate)  
 2km docks – rock armour  
 3.5km concrete sea wall  
 (1.4km of sea wall fronted by dunes)  
 1.5km informal rubble  
7km Total

**Monitoring carried out**  
 Profile lines  
 Beach topographic Survey  
 False colour infra red aerial photography  
 Colour aerial photography  
 Coast defence inspections  
 GPS surveys of sand dunes

**Designations**  
 SSSI, cSAC, SPA, Ramsar

**Co-ordinates**  
 Top right 332000 402000  
 Bottom left 328000 395000

## Introduction

This report summarises the coastal process monitoring and coastal defence work carried out by Sefton Council 2000-2004 and provides relevant background and historic information for Area 1–Crosby.

## Coastal Defence Policy

This length of coast is currently undergoing a strategy study assessing future coastal defence options. From Crosby Marine Lake to Hall Road the current policy is to hold the line at the current position of the hard defences. The policy for the section from Hall Road to the River Alt Pumping Station will be refined by the strategy study (see over).

## History

This section was originally a natural foreshore with sand dunes on the north-east side of the Mersey Estuary. In the early 19<sup>th</sup> Century terraces of seafront villas were built at Waterloo (Marine Terrace) and Brighton-le-Sands (Mersey Road). In the 1930's public gardens were built between Great Georges Road and Harbord Road. Gladstone Dock (1912), Royal Seaforth Dock (1972) and Crosby Marine Park (1973) occupy land reclaimed from the shore and protected by sea walls.

North of Mariners Road, the foreshore was very much under the influence of the River Alt. Severe erosion became a problem at Blundellsands from about 1910 as the River Alt migrated southwards along the coastline and all the houses on the seaward side of Burbo Bank Road were abandoned. The erosion was finally brought under control after the completion in 1937 of the River Alt training wall.

## Site Description

This stretch of coastline is artificially defended with concrete and rock sea walls from Seaforth Container Dock to Hall Road. The remaining length of this shoreline, north to the Alt training wall, has been reinforced with demolition rubble. The shore gets gradually wider from Seaforth Container Dock to the River Alt training wall. The upper shore is composed generally of clean sand being replaced on the mid and lower shore by muddier deposits. Since the early 1970's sand dunes have been forming in front of the sea wall from the Marine Lake up to Mariners Road.

The Crosby foreshore is protected by several nature conservation designations; a candidate Special Area of Conservation (cSAC), Site of Special Scientific Interest (SSSI), RAMSAR site and Special Protection Area (SPA).

## Summary of Coastal Processes

- There is sand drift south from Formby and east from the Irish Sea, which accumulates on to the Crosby shore.
- Interaction between tides, currents and the beach have resulted in a ridge (crests) and runnel (troughs) system on the shore. There has been local small-scale changes in the positions of the ridges and runnels, which is to be expected.
- The dominant winds and waves are from the west. Strong onshore winds are frequent. Wave impact is moderate, particularly at the southern end, where the higher beach dissipates energy.
- The shoreline is subject to erosion from the end of Crosby seawall at Hall Road to the mouth of the River Alt at Hightown. The scale of this erosion is typical about 1 to 1.5 metres per year.
- The volume of beach has marginally increased (0.3% 2001-2003). The topographic and beach profiles do not show any substantial change. The beach profile (shape), as a whole, has remained relatively stable.
- The dunes on the beach have increased in area by 1740m<sup>2</sup> (9%)(2001-2004). The growth has been outwards towards the sea while the northern and southern limits have remained stable.
- A 1-in-10 year storm event occurred on the 1st February 2002, which resulted in some overtopping but no major damage.
- The 6 monthly maintenance inspections and annual structural inspections of the sea wall didn't find any structural problems, other than those at Hall Road, though sections are becoming 'tired' and are being closely monitored for signs of structural damage.

## Summary of Coastal Defence Works

- Damage to the wooden revetment adjacent to the coastguard station at Hall Road in 2002 required 700 tonnes of rock armour to be put in place.
- The sand dunes in front of the promenade have become more stable. Mechanical clearing from the back of dunes to the front was undertaken to help keep sand from blowing on to the sea wall promenade. Sea Lyme grass was also planted on these dunes to help retain the sand on the beach and dunes.
- Other works along this stretch of coast mainly involve the replacement of hand railing along the promenade, which have either been damaged by storms or are missing as a result of theft.

## Other Projects of Interest

- Crosby to Formby Point Strategy – the council is currently developing a strategy for this length of coastline that will identify requirements for future coastal defence works and the appropriate timescale for their implementation. This will form the basis of grant applications to fund future works in this area.
- Wind farm – In August 2001 a proposal to construct a wind farm in Liverpool Bay was submitted by Seascope Energy. This proposal was followed up in 2002 with an extensive consultation programme. An Environmental Statement was prepared following various studies concerning the impacts on wildlife, sediment flows, shipping etc. In September 2002 a bid for consent to build Burbo Offshore was submitted.

## Future Coastal Developments

Its anticipated that following the completion of the Strategy Study there will be some coastal defence works undertaken to control the erosion and at some point in the future the existing defences will be refurbished. The Government's understanding of climate change is constantly being improved and the latest predictions will be incorporated into any design work or policy development on the Sefton Coast.

## Further Information

The full coastal process monitoring report and all the reports in this series as well as other relevant information and a list of references can be found at:

[www.sefton.gov.uk](http://www.sefton.gov.uk)

[www.seftoncoast.org.uk](http://www.seftoncoast.org.uk)

These reports will be updated every three years and any interim reporting will be made available online. If information over and above this is required contact Graham Lymbery on 0151 934 2960 or email [graham.lymbery@technical.sefton.gov.uk](mailto:graham.lymbery@technical.sefton.gov.uk)

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