

## **Broad Character: Cultural Topography**

### **Character Type: Cultural Topography (landward)**

#### **Irish Sea Regional Perspective**

##### **Introduction: Defining/Distinguishing Attributes**

There are few cliffs along the Irish Sea coastline of north-west England. Apart from low bluffs at Heysham Head and Cockersands in Lancashire, where the small headlands at both sites attracted monastic settlement, all the cliffs in the region are in northern Cumbria. In particular, cliffs dominate the coastline from the former port of Harrington, south of Workington, southwards to St Bees Head. The cliffs exploited for minerals from the post medieval period, including stone, iron pyrites, gypsum and coal. St Bees Head, an outcrop of Permo-triassic sandstone, is the highest cliff. It is one of the most well-known and dramatic landmarks on this coastline, and is the only Heritage Coast ([magic.defra.gov.uk](http://magic.defra.gov.uk)) along England's Irish Sea coast. St Bees Head provides a spectacular viewpoint for wildlife watching out to sea and is accessible to the public by the coastal footpath as well as the long-distance Coast to Coast walk.

Dunes can be found in various locations around the lower-lying parts of the Cumbrian coast, away from Morecambe Bay, and along the coast of Merseyside at Southport, Formby and Crosby. In north Cumbria, dunes form an important feature within the Solway Coast AONB, and wherever they occur, are valued for nature conservation. In Merseyside, the dunes also front leisure beaches, and are visitor attractions in their own right.

Watercourses frequently intersect the Irish Sea coast, forming significant landscape features as well as significant modern and historical boundaries. Two river estuaries, the Dee and the Solway Firth, form the southern and northern boundaries, respectively, of England's Irish Sea coastline. The Mersey is another major estuary, providing a water-based communications corridor inland which was important for the transport of export goods in the industrial period. The river became the focus of early canal development to assist with the transportation of goods, culminating in the construction of the Manchester Ship Canal in 1894 (Wood 2005). With the River Dee, the river Mersey defines the Wirral peninsula. In Lancashire the rivers Ribble and Wyre also formed significant estuaries and became the focus of post medieval port facilities at Lytham and Poulton-le-Fylde. The creation of a navigation channel through dredging and the use of training walls on the Ribble, allowed the development of a port and the construction of a wet dock at Preston in the later 19<sup>th</sup> century.

The coastal fringes of Morecambe Bay are defined by the watercourses that open into it, including the Rivers Lune, Kent, and Leven and their tributaries which all have major estuaries, and which have created the highly indented and complex coastal outline with dynamic shifting sediments. The Lune had an important port at Lancaster in the post medieval and early modern periods, and all the other estuaries also had port facilities in the form of individual wharves and quays, and all were a focus for fishing in the shallow waters around the mouths of the estuaries. Further north in Cumbria, the Duddon, Irt and Esk, and Derwent estuaries, too, were a focus for fishing and port facilities, the later becoming the focus for the industrial town of Workington.



*The Lune estuary, a focus of post medieval port facilities for Lancaster on the near shore, and for the 18<sup>th</sup> century port of Glasson on the far shore. The river and its sand and mudflats are traditionally used for shellfishing and haaf netting*

### **Historical Processes; Components, Features And Variability**

St Bees Head is a traditional landmark for coastal vessels around the northern coast of Cumbria, and is marked on historic charts and views as such. The cliff was also a danger to ships, and was marked by a lighthouse first built in 1718 ([http://www.trinityhouse.co.uk/interactive/gallery/st\\_bees.html](http://www.trinityhouse.co.uk/interactive/gallery/st_bees.html)). North of St Bees, the cliffs are distinguished by the range and extent of extractive industries, all of which have now gone out of use, but which have left a legacy of industrial buildings and scarring. The former coal mines at Saltom Pit and Haig Colliery, and the Barrowmouth Alabaster and Gypsum mine at Salton Bay are now Scheduled Monuments, and Haig Colliery has a museum and is open to the public.

Survey work around the dune systems on the Esk estuary, near Ravenglass, have revealed evidence for Mesolithic activity on raised beaches sealed beneath the later dune sands. Concentrations of Mesolithic material, some exposed by coastal erosion, suggest that communities were exploiting coastal resources, while obtaining fresh water from inland tarns (Hodgson and Brennand 2006, 25). Likewise, there is evidence for early human activity exposed by coastal erosion of dunes at Formby Point, in the form of human and animal footprints preserved in silts and muds. Most of the footprints are late-Mesolithic (Gonzalez *et al* 1996), and represent activity along a near-shore intertidal environment. More recently, dunes were used to place 20<sup>th</sup> century defensive military structures (including anti-tank cubes, batteries, minefields, pillboxes, trenches and weapons pits), and in recent times have been a focus for holiday parks (Formby, Merseyside) and golf courses (Maryport, Cumbria).

Waterways have been a focus of settlement and human activity from prehistory. Some of the earliest evidence has come from the mouth of the Ribble Estuary, and from across the, now-

drained, former wetlands of West Lancashire, with extensive scatters of late Mesolithic material (Hodgson and Brennand 2006, 27). More recently, excavation along the line of the Carlisle Northern Development Route (<http://www.cumbria.gov.uk/roads-transport/highways-pavements/CNDR>) has revealed extensive evidence of activity and settlement on the lower reaches of the River Eden, above the Solway Firth. Here, a sequence of channels contained worked wood, and around 268,000 struck late Mesolithic lithics were found with associated hearths, stakeholes and pits. The find is much greater in size than any other of this date excavated in Cumbria.

The rivers have long been a focus for fishing, particularly salmon. Historic OS maps mark salmon fisheries at the mouth of the River Duddon and at Ravenglass in Cumbria, and on the River Lune above Lancaster. Hand netting, in the form of Haaf netting, is a long tradition still carried out on the River Lune, and in the Solway Firth along the Rivers Esk and Eden. This form of fishing is believed to date back to the early medieval period.

The waterways of north-west England also acted as important communication corridors, particularly before the advent of railways and modern roads. The River Mersey was the focus of early attempts at improving navigation through the construction of artificial channels and locks. The River Weaver, which flows into the Mersey, was one of the earliest in the region, with a new navigation built in 1732 to aid the transport of salt from Cheshire. This was followed by the earliest purpose-built canal, the Bridgewater Canal, for the transportation of coal from Manchester. The Mersey remained vital to transport even after the advent of the railways, and was eventually replaced in 1894 by the construction of the Manchester Ship Canal. Many of the ports facing the Irish Sea lie within the estuaries or lower reaches of rivers, most notably the remarkable series of docks built at Liverpool from the 18<sup>th</sup> century. Apart from the port facilities in Manchester, which were enabled by the Ship Canal, there are three ports which lie some distance up from their river mouths. The first was St George's Quay, which was the focus of port facilities in Lancaster but had limited access for ships with deep draughts and had to be supplemented with facilities at the mouth of the Lune. Second was the port of Preston, which was served by facilities at Lytham until a navigation channel could be excavated and kept open to the town in the 19<sup>th</sup> century. Finally, Carlisle was a small port at Sandsfield from the medieval period. This was limited by the shallow waters and silts of the River Eden and was replaced in the early 19<sup>th</sup> century by purpose-built facilities at Port Carlisle further downstream, and then by a dock at Silloth on the west coast.

### **Values And Perceptions**

As the highest point on England's Irish Sea coastline, St Bees has a symbolic significance as the most westerly point in Cumbria, forming a major landmark for shipping, and for its significance one of the most dramatic features along this entire coastline. In particular, the red Sandstone geology of the cliff is distinctive along a largely low-lying coast, and contrasts with the adjacent, lower-lying cliffs of Carboniferous Limestone.

While in some places the dynamic nature of dunes has been altered by settlement expansion, holiday parks and golf course developments, elsewhere they have been appreciated for their nature conservation value and protected as such. Even where late 19<sup>th</sup> or early 20<sup>th</sup> century coniferous plantations have been established, this has become a focus for wildlife and nature conservation. At Formby, for example, is one of the few remaining red squirrel reserves, which has become a tourist attraction in its own right. In the Solway Coast AONB, the dunes form part of the wild and largely undeveloped coastline which is central to the character of the AONB.

Many of north-west England's rivers are valued for nature conservation, including those which until recently were heavily polluted by industry. Fishing is probably the main recreational use on these rivers, particularly for salmon.

### **Research, Amenity And Education**

In terms of amenity and education, the Cumbrian cliffs are frequently visited by walkers, and used as important viewpoints for appreciating the maritime vistas and wildlife watching. Therefore, there is potential to enhance the understanding, appreciation and enjoyment of the heritage encountered by these people on the cliffs. For example, the site of the Barrowmouth Alabaster and Gypsum mines and the area around Saltom Pit are now managed by the National Trust and are primarily used for recreation, for walkers and for their educational value. Apart from a section to the south of Harrington, where there is a windfarm, most of Cumbria's cliffs are accessible by the Cumbria coastal footpath. Likewise, the low cliffs at Heysham and Cockersands in Lancashire are also accessible, as National Trust land at the former, and by a coastal footpath at the latter.



*The St Bees headland, the highest cliff on the coastline of north west England. It is also the region's only Heritage Coast and is a well-known beauty spot on the Cumbria coastal path and is used for wildlife watching out to sea.*

As evidenced at Formby and Ravenglass, dunes can contain well preserved and stratified buried prehistoric remains. The study of the formation of dunes and their link to the marine environment and regional climate history could provide an important contribution to the understanding of past human activities. Hence, further research on the geomorphology of sand dunes would be beneficial. The dune systems of the region are already valued by visitors, though in areas of heavy tourism activity, this has to be managed to protect delicate and vulnerable ecosystems.

The effect of water quality (pollution) on the historic environment may be a factor affecting the preservation of terrestrial, intertidal, and submerged prehistoric and historic features. Pollution alters the chemical composition of water and soil, often making them more acidic and therefore more likely to damage prehistoric and historic features. However, little research has been undertaken on water pollution and its effect on the marine historic environment (Fulford *et al* 1997).

Overall, England's Irish Sea coastline is invaluable from both historical and natural perspectives. Information boards could be further used to convey these historical and natural interests.

### **Condition And Forces For Change**

Cliffs will continue to experience the gradual erosion by natural forces as well as the long-term threat of sea level rise. Dunes are also particularly threatened habitats and are regarded as conservation priorities under the European Community (EC) Habitats Directive ([www.ukbap.org.uk](http://www.ukbap.org.uk)). Dune systems are complex and dynamic entities prone to instability and sudden large-scale shifts. This can have significant impacts on the surrounding environment as well as important consequences for recognising, dating, and conserving archaeological remains within these areas. The main threat to dunes appears to be from erosion processes and sea level rise. On Merseyside, however, the dunes are in heavily settled areas, and stabilization at the back of dunes by agriculture, golf course management and construction can prevent landward movement of dune systems as the sea encroaches from the other side. This could result in dune systems being squeezed out and lost.

Water supply is critical for inland areas. However, there are also concerns in coastal areas especially regarding discharge of water and sewage, and maintenance of water quality. The effect of water quality (pollution) on the historic environment may be a factor affecting the preservation of terrestrial, inter-tidal, and submerged prehistoric and historic features.

### **Rarity And Vulnerability**

In terms of rarity, the cliff at St Bees is a Site of Specific Scientific Interest (SSSI) and is the only Heritage Coast on this coastline. The low cliffs at Heysham and Cockersands are the only highpoints in a coastline dominated by former mossland adjacent to widespread sandflats, and both have the remains of monastic sites which are scheduled monuments. These low headlands are vulnerable to erosion from rising sea levels and extreme weather events, and both lie in areas of managed realignment.

Much of the sand dune resource in the area has one or more designation as a Ramsar site, SSSI, SAC, SPA, Local Nature Reserve or National Nature Reserve (NNR). In North Cumbria, the dune systems lie within the Solway Coast AONB. At Formby, the dunes are valued as one of the last remaining red squirrel habitats in England, associated with coniferous plantations. Both Formby and the dunes at Sandscape Haws on Walney are also valued as habitats of the Natterjack Toad, and are amongst its few breeding grounds. Dunes are generally rich in buried archaeological deposits. Although dune systems are relatively common in the region, nationally they can be considered rare in their extent and ecosystems. Sand dune systems are vulnerable to natural forces such as coastal erosion and sea level rise as well as developments such as golf courses and other recreational facilities.

The lower reaches and estuaries of major rivers in the region are protected by multiple nature designations, including SSSIs, SPAs, SACs and Ramsar sites. The designations are mainly for wetlands considered to be of international importance and for the conservation of wild birds, and thus they can be considered to be rare on a national scale for the significance of their biodiversity. They are vulnerable to change through pressures from local communities for flood prevention measures.

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