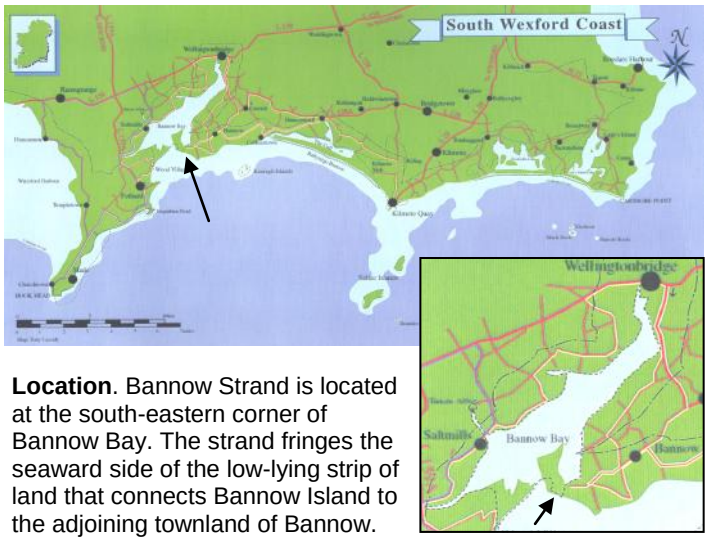
Bannow Strand

An information sheet compiled, produced and distributed by Jim Hurley, SWC Promotions. Email: swc@eircom.net. Telephone: (053) 912 9671. 21 August 2011.



Location. Bannow Strand is located at the south-eastern corner of Bannow Bay. The strand fringes the seaward side of the low-lying strip of land that connects Bannow Island to the adjoining townland of Bannow.

Bedrock geology. The Cahore Group is a 25 kilometre-wide band of rocks that runs diagonally across County Wexford from Cahore in the northeast of the county to Hook Head in the southwest. The outcropping bedrock at both sides of Bannow Strand is part of the Booley Bay formation, the youngest of the six formations that comprise the Cahore Group. The Booley Bay formation surrounds Bannow Bay and is very well exposed in the sea cliffs at Baginbun. Most of the rock types in the Cahore Group formed from coarser sediments deposited in the Leinster Basin, a large, submarine, sediment sink that stretched from Waterford to Dublin. Booley Bay formation rocks formed from the finest sediments carried out, and deposited on, the abyssal plain of the Iapetus Ocean some distance from the mouth of the Leinster Basin. These sediments were laid down late in the Cambrian period about 500 million years ago.


Booley Bay formation

The Booley Bay formation is a unit of dark grey to black cleaved mudstones, often regularly inter-bedded with thin pale-grey siltstones and occasional thicker greywacke sandstones. The formation is about 2,500m thick and the assemblages in it are frequently chaotic.

Fossils. Examples of some of the fossils found in south Wexford in rocks dating from the Cambrian Period are microscopic planktonic life-forms called acritarchs, a worm called *Oldhamia* and a jellyfish called *Ediacaria*.

The glacial legacy. Bannow Bay is a silted ria. A ria is a drowned river valley. During the last Ice Age, sea level was lower than it is today. The Bannow Bay river valley was deepened and widened by meltwater flowing south from ice sheets. When the ice retreated the supply of meltwater dried up and the valley silted. Later, sea level rose drowning the silted valley, adding marine sediment and creating the extensive areas of mudflats, sand flats and salt marsh present today.

Changing channels. The former 13th century Norman town at Bannow was built near the present day ruin of the fortified parish church of St Mary. In the Middle Ages, the inlet/outlet at Bannow Bay was a deep channel located east of Bannow Island. The deep channel provided access to the town for shipping. However, the channel silted and a new channel opened naturally to the west of Bannow Island. As a result, trade with the town declined. Since ongoing silting meant that the vital shipping channel to the town was no longer navigable, the town went into decline in the 14th century and ceased to exist by the 17th century. At its peak, the town is said to have had at least six streets. In the past, a local myth claimed that the town sank beneath the waves and survives, buried in sand on the sea floor, as the Lost City of Bannow.


St Mary's Church

Soils. Local soils are deep and well-drained and are derived from parent materials transported from outside the area and deposited in it both by ice sheets and by running meltwater. The ice sheets imported pulverised shale rock, the meltwater carried outwash sands and gravels. The isthmus is a plug of mixed marine sediments transported ashore by tides and onshore winds.

Bannow isthmus. An isthmus is a narrow strip of land with sea on either side, linking two larger areas of land. The Bannow isthmus connects Bannow Island to the townland of Bannow. From cliff to cliff at its narrowest point, the low-lying isthmus measures 208m wide. And from high water mark on the sea side to high water mark on the bay side it is 172m deep resulting in it being almost square in shape. Fethard Bay in the Celtic Sea lies to the south of the isthmus and the Cockle Strand in Bannow Bay lies to its north. The 1841 Ordnance Survey map of the area shows that the isthmus as being sand and shingle over-washed by spring tides. At the site of the modern roadway, a narrow track ran across the isthmus giving access from the mainland to the farm on Bannow Island. The present roadway is carried across the isthmus raised on a causeway. The isthmus is still partially overwashed during storm events; the last significant incursion by the sea was when the sand dunes adjoining Bannow Island were breached in 2003. Today the isthmus is vegetated and supports a number of habitat types.


Bannow isthmus

Habitat types. A habitat is a place where plants and animals live. The Bannow isthmus supports the following series of habitat types moving inland from the sea to the road-bearing causeway: Bannow Strand, pioneer strandline community, embryonic dunes, sand dunes, hind-dune grassland, transitional upper salt marsh, Atlantic salt meadow, and brackish ponds. Extensive *Spartina* swards clothe the mudflats north of the causeway and patches of halophilous scrub thrive along the fringes of these swards.

Bannow Strand. The strand is a broad sandy beach. Pioneer plants colonising the upper beach include the prostrate and mealy-leaved Babington's Orache (say 'or-atch') *Atriplex glabriuscula,* the lilac-flowered Sea Rocket *Cakile maritima* and Lyme grass *Lymus arenarius*. These and other plants trap blowing sand and form embryo dunes.


Bannow Strand

Sand dunes. The prevailing wind at Bannow is south-westerly. When sand on the strand dries during periods of strong on-shore wind, the wind lifts the dry sand and blows it inland. Marram *Ammophila arenaria* traps the blowing sand. The grass grows through the fresh sand, more sand is added, the process repeats itself and the dunes grow in height as a result. The dunes grade northwards into hind-dune grassland with fine grasses like Red Fescue *Festuca rubra* and the white orchid Autumn Lady's-tresses *Spiranthes spiralis*. A single clump of Sharp Rush *Juncus acutus* is very prominent.

Salt marsh. Salt marsh is a wet coastal habitat type found in very sheltered, muddy locations. Mud, shelter and salt are the main characteristics of the habitat type. Salt marsh plants must be able to tolerate regular, or occasional, flooding by the sea and high concentrations of salt. Five salt marsh habitat types annexed in the Habitats Directive are recognised in Ireland. All five occur on the South Wexford Coast, three of them occur north of the causeway at Bannow: Atlantic salt meadow, *Spartina* sward, and halophilous scrub.

Atlantic salt meadow. This habitat type always has less than 40% *Spartina* cover, few rushes and a rich diversity of salt-loving plants like the Lax-flowered Sea-lavender *Limonium humile* and the shrubby Sea-purslane *Atriplex portulacoides*.

***Spartina* sward**. A sward is an expanse of short grass. The widespread sward-forming grass at Bannow Bay is Common Cord-grass *Spartina anglica*. The hybrid grass arose naturally around 1890 in Southampton Water in England. It is not native to Ireland and is regarded as an invasive alien. It was widely planted here during the 1930s to stabilise mudflats.


A *Spartina* sward

Halophilous scrub. Scrub is a habitat type dominated by woody plants; Bramble scrub and Gorse scrub are common inland examples. Halophilous means 'salt-loving'. The plant that characterises this habitat type is the Perennial Glasswort *Sarcocornia perennis*. Fleshy and only slightly woody, it can grow 30cm tall and form tussocks up to 1m in diameter. Perennial Glasswort is very rare and has not been found growing anywhere in Ireland outside of three locations on the South Wexford Coast. Its largest population is found north of the causeway. It is a protected species and its habitat type is the rarest Annex 1 salt marsh habitat found in Ireland.


Perennial Glasswort *Sarcocornia perennis*

Clare Island. Clare Island is a tiny, almost circular, 18m by 15m, vegetated, rock outcrop adjoining Bannow Island. The western side of the tiny island supports a kitchen midden or refuse heap of unknown age. The midden is rich in oyster shells with some animal bones and burnt stones.

Birds. Bannow Bay is a protected area for wild birds, especially the wintering waterbirds that are present from September to March each year. Numbers of these birds have been monitored each year since the winter of 1994-1995. The average of the annual peak number of birds counted each winter over the15-year period 1994-1995 to 2008-2009 was 17,149 (range 10,542 to 22,248). The bay is of international importance for the number of Pale-bellied Brent Geese it supports. In addition, the area regularly supports the following species in nationally important numbers: Shelduck, Golden Plover, Grey Plover, Lapwing, Knot, Dunlin, Black-tailed Godwit, Bar-tailed Godwit, and Redshank. The birds may be watched from the public road. The best time for bird watching is two hours before or after the time of high water. High water at Fethard-on-Sea is about 4 minutes later than the predicted time of high water at Cobh, one of the 'standard ports' in Ireland for which tidal predictions are widely published.

Protected area. Natura 2000 (N2k) sites form a network of protected natural heritage areas extending throughout the territories of all of the Member States of the European Union. There are two kinds of N2k sites: Special Protection Areas (SPAs) for wild birds and candidate Special Areas of Conservation (cSACs) for habitat types and other wildlife. The Bannow Bay complex of protected areas comprises SPA No 4033 designated in 1994 and cSAC No 697. Bannow Strand, Bannow isthmus and Bannow Bay are all included in the protected areas. For detailed maps, aerial photographs and site descriptions of the protected areas see the website of the National Parks and Wildlife Service (NPWS) at www.npws.ie/.