

# Bannow Bay



Perennial Glasswort



## Location

Bannow Bay (Irish Grid: S8209) is located on the south coast of County Wexford immediately east of the Hook Head peninsula (extreme bottom left-hand corner of the map below)<sup>1 & 2</sup>. The village of Wellingtonbridge is located at the head of the bay.



**Location map:** Screenshot from <https://maps.wexford.ie/imaps/>. OSi copyright Permit No 9142. © Ordnance Survey Ireland/ Government of Ireland.

## Placename

The meaning of the placename 'Bannow' is unknown. The name has been used in English since the early 13th century. The name in Irish: 'Banú', is a phonetic approximation based on the historical evidence. Another Irish form that was used in the past was 'Cuan an Bhainbh' meaning 'harbour of the piglet'<sup>3</sup>.



Mudflats and tidal channel at Bannow Bay.

## Description

Bannow Bay is a sheltered, estuarine system. Two medium-sized rivers, the Corock River and the Owenduff River, two small streams, the Battlestown Stream and the Tintern Stream, and a numbers of smaller waterways flow into the estuary. The main body of the bay has a north-east to south-west axis and is about 8km long and 1.5km wide. The bay is silted and shallow so very extensive intertidal mudflats and sand flats are exposed at low tide.

## Protected area

Bannow Bay is a protected area. It is a Natura 2000 site chosen for the wild birds and habitats that it supports. The site is both Special Protection Area

(SPA) number IE0004033 designated for wild birds<sup>4</sup> and Special Area of Conservation (SAC) number IE0000697 designated for habitats<sup>5</sup>. These natural heritage resource values are described overleaf.

## Bedrock geology

In many places, the fringes of Bannow Bay are eroded down to the underlying bedrock and there are several exposures around the bay. All the rocks belong to the Booley Bay formation, the youngest formation of the Cahore Group. The rock types are mudstones and siltstones derived from fine sediments that were laid down, often chaotically, on the abyssal plain of the Iapetus Ocean late in the Cambrian Period of geological time some 500 million years ago. The formation is named after Booley Bay on Hook Head.



Rocks belonging to the Booley Bay formation are very well exposed at both Wood Village and Bannow Island (pictured above)<sup>6 & 7</sup>.

## The glacial legacy

Geographically, a bay is a broad curved inlet of the sea. Bannow Bay discharges into Ballyteige Bay. While Ballyteige Bay is an example of a sea bay, Bannow 'Bay' is not a sea bay. Since the origin of the landform is river-based rather than sea-based, it is a ria, a long narrow inlet formed by the partial submergence of a river valley<sup>8</sup>. The Corock River is the largest river on the South Wexford Coast and is the only one aligned along the axis of Bannow Bay.



The Corock River flowing through Wellingtonbridge village.

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**SWC Promotions:** promoting the natural heritage resource values of the South Wexford Coast.





# Bannow Bay

The Corock River is a misfit river flowing through a large river valley that it could not have formed. The valley is interpreted as the silted remains of a former glacial waterway. The waterway comprised the spillway from an ice-dammed lake located adjacent to Forth Mountain and fed by the swollen River Slaney.

Two ice streams impacted on the South Wexford Coast during the last glaciation: an ice stream flowing south along the axis of the Irish Sea and one pushing south-eastwards from the Midlands. As it moved southwards, the Irish Sea Ice Stream (ISIS) expanded inland in an oscillating way. Its maximum landward extent was a line extending from Enniscorthy to Duncormick approximately. It did not, therefore, impact directly on the Bannow Bay area. It did, however, have a profound indirect impact.

An ice-dammed lake was centred over the Slaney Estuary and Wexford Harbour. It was fed by the River Slaney to the north, was dammed by ice to the east and south and rose to the 60m contour on its western flank before cutting into and discharging via the Mulmontry Gorge (pictured below)<sup>9 & 10</sup>. Bannow Bay is, therefore, a ria, the partially submerged and silted remains of the lower reaches of the river of a spillway that drained a former, large, ice-dammed lake centred over Wexford Harbour.



The Mulmontry Gorge.

## A fossil beach

Wood Village is No 33 in the provisional list of 38 sites of geological and geomorphological interest in County Wexford<sup>11</sup>. The site supports a wave cut platform about 2m above modern sea level with an example of the Courtmacsherry Raised Beach (pictured below). That fossil deposit comprises bedded beach gravels about 53,000 years old<sup>12, 13 & 14</sup>.



Fossil beach on wave-cut platform

Modern beach



This image shows the Corock River valley north-east of Wellingtonbridge. The Corock flows in front of the treeline in the background. It is a misfit river flowing through a broad and silted valley that it could not have cut. The origin of the valley is part of the legacy of the last glaciation.

## Climate

The South Wexford Coast enjoys climatic conditions that are generally sunnier, drier and warmer than the temperate maritime Irish norm<sup>15</sup>.

## Relief

Due to its formation by the erosive force of running water, the shores of Bannow Bay tend to rise relatively sharply from sea level to the 30m contour<sup>1</sup>. This affords the estuary a degree of shelter from the wind, but it greatly restricts the area of marginal vegetation and swamp/marsh habitat around the water's edge.

## Coastal erosion

Big Burrow was an extensive spit growing out from the western mouth of Bannow Bay with tall, stable sand dunes supporting a diverse flora including a small stand of Wild Privet and a large stand of Travellers'-joy. The bay in the lee of the dunes supported Perennial Glasswort and the gravel beach bordering the tidal channel held breeding Little Terns and Ringed Plover in early summer. During the late 1970s and early 1980s the sands and gravels found there were subject to intense commercial exploitation and the area was reduced from 63 acres (26ha) to 46 acres (19ha)<sup>16</sup>. On-

going sand and gravel extraction together with overwashing in 1993 and wind and wave erosion completely obliterated the spit by the early 2000s.

Shortly afterwards, a new spit started to grow from Bannow Island at the eastern mouth of the bay.

## Drainage

The watercourses draining into Bannow Bay drain a large portion of the western end of the Ballyteige Bannow catchment<sup>17</sup>.

## Soils

The soils around Bannow Bay are predominantly Brown Earths and Luvisols with associated Gleys, Alluvium, Tidal Marsh and Blown Sand<sup>18</sup>.

## Nature conservation

Bannow Bay is a protected area for its wild birds and a range of habitat types.

## Wild birds

Bannow Bay is designated Special Protection Area (SPA) number IE0004033 for wetland and waterbirds in general and specifically the following 13 named species:

- Light-bellied Brent Goose,
- Shelduck,
- Pintail,
- Oystercatcher,
- Golden Plover,
- Grey Plover,
- Lapwing,
- Knot,
- Dunlin,
- Black-tailed Godwit,
- Bar-tailed Godwit,
- Curlew and
- Redshank<sup>4</sup>.



The bay no longer holds significant numbers of Pintail but is of national importance for each of the other 12 species. Bannow Bay is of international importance for two species: Light-bellied Brent Goose and Black-tailed Godwit.



Light-bellied Brent Geese on Grange Strand.

Two areas of the bay are no-shooting areas; these constitute the Bannow Bay Wildfowl Sanctuary (WFS-65): the northern portion of bay, and the Cockle Strand inlet.



# Bannow Bay

## Habitats

A habitat is a place where plants and animals live, for example, the sand dunes at Bannow Strand.



Bannow Bay is designated Special Area of Conservation (SAC) number IE0000697 for the following 11 habitats; these comprise two estuarine habitats, four salt marsh habitats and five sand dune habitats<sup>5</sup>.

- Estuaries
- Mudflats and sandflats not covered by seawater at low tide
- *Salicornia* and other annuals colonising mud and sand
- Atlantic salt meadows (*Glaucopuccinellietalia maritimae*)
- Mediterranean salt meadows (*Juncetalia maritimi*)
- Mediterranean and thermo-Atlantic halophilous scrubs (*Sarcocornetea fruticosi*)
- Annual vegetation of drift lines
- Perennial vegetation of stony banks
- Embryonic shifting dunes
- Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes)
- Fixed coastal dunes with herbaceous vegetation (grey dunes)

Perennial Glasswort  
*Sarcocornia perennis*



The two estuarine habitats support plant and animal communities that feed the wintering waterbirds.

The four salt marsh habitats include the rarest salt marsh habitat found in Ireland: 'Mediterranean and thermo-Atlantic halophilous scrubs (*Sarcocornetea fruticosi*)'. That habitat is characterised by the presence of a small, shrubby plant called Perennial Glasswort *Sarcocornia perennis*. Perennial Glasswort has a southern distribution, has stems like fleshy, jointed, small asparagus spears and is confined to two places in Ireland: Bannow Bay and Ballyteige Burrow. At Bannow it thrives at six locations around the bay.

The five sand dune habitats that are features of interest at Bannow Bay are confined to the mouth of the bay. The dunes at Bannow Strand

are a priority habitat type for protection. In late August and early September they support Autumn Lady's-tresses, a tiny, white-flowered orchid.

## Ramsar

Bannow Bay is the only Ramsar site on the South Wexford Coast. The Ramsar Convention is an intergovernmental treaty for the conservation and wise use of wetlands. The convention is named after the city of Ramsar in Iran, where it was signed in 1971. The convention entered into force in Ireland on 15 March 1985. Ireland currently has 45 sites. Bannow Bay (site No 840) was designated a wetland of international importance on 11 June 1996<sup>19</sup>.

## Shellfish aquaculture

Bannow Bay always supported a traditional small-scale public fishery for wild Cockles and Mussels. Robert Leigh of Rosegarland, writing in 1684, credited Thomas Colclough with introducing Flat Oysters to Bannow Bay from Milford Haven about 1614<sup>20</sup>.

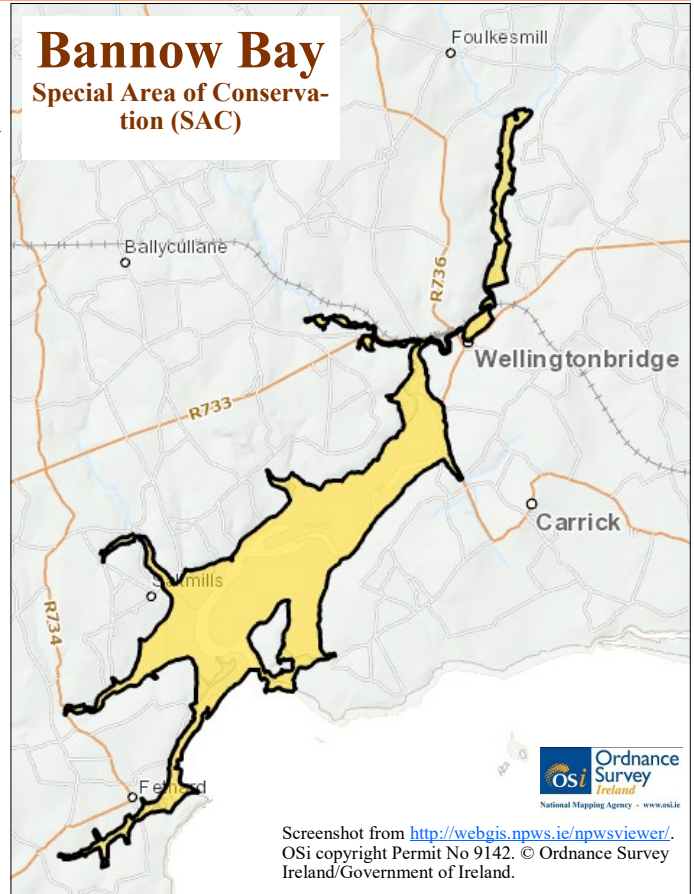
In the 1970s and 1980s trials were carried out growing Common Mussels, Manila Clams and Pacific Oysters. The first licences to farm shellfish were issued in 1993. The entire bay was designated a SPA for wild birds in 1994<sup>4</sup>; a portion of it was designated for shellfish aquaculture that same year<sup>21</sup>. The Special Area of Conservation nomination

followed in 1999<sup>5</sup>. Two judgements against the Irish authorities were handed down by the European Court of Justice (ECJ) regarding aquaculture

- in 2003 for failure to set adequate standards for water quality (Case C-67/02)<sup>22</sup> and
- in 2015 for failure to appropriately assess the negative impacts of aquaculture on the wild birds and habitats that are protected in the bay (Case C-418/04)<sup>23</sup>.

As a result, water quality standards were defined

## Bannow Bay Special Area of Conservation (SAC)



and Appropriate Assessment is now required for aquaculture projects.

## Places to visit

When visiting the extensive Natura 2000 site, it is convenient to divide the large area into the following discrete elements

- Bannow Bay, the open bay and its many segments of shoreline,
- Fethard Bay, the open bay and its shoreline,
- Tintern Abbey and its environs,
- the Owenduff River estuary,
- the Corock River estuary and valley, and
- the Bannow Strand area.

The popular and well-signposted Tintern Trails are a good starting point for exploring the Bannow Bay area.



Beautiful Jewelwing *Calopteryx virgo*, male, A common damselfly in the River Corock valley.



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## Protected sites

Bannow Bay is subject to the following two designations

- Bannow Bay **Special Area of Conservation** (SAC), Code No IE0000697, and
- Bannow Bay **Special Protection Area** (SPA), Code No IE0004033.

Each of these sites is part of the European Union's **Natura 2000** network.

## Nature conservation

A description or 'Site Synopsis' of each of the two protected areas at Bannow Bay is available online at <https://www.npws.ie/protected-sites> together with maps, conservation objectives, backing documents, Natura 2000 Standard Data Forms, etc.

## Follow the Country Code

Visitors to Bannow Bay are very welcome and can help conserve the biodiversity of the area by following the Country Code.

- Leave the area as you found it. Do nothing to destroy the wonderful amenity you have come to enjoy. Kill nothing but time; take nothing but photographs and memories.
- Please take your rubbish home with you. Leave nothing but footprints.

Concerns regarding biodiversity and nature conservation at Bannow Bay should be addressed to the National Parks and Wildlife Service at the Wexford Wildfowl Reserve, phone: +353 1 539 3460 (office hours) or email [vwreducation@npws.gov.ie](mailto:vwreducation@npws.gov.ie).

Thank you.



Much of Bannow Bay dries out at low tide exposing large expanses of mud and sand.