

= Blakeney Point =

Blakeney Point (designated as Blakeney National Nature Reserve) is a National Nature Reserve situated near to the villages of Blakeney , Morston and Cley next the Sea on the north coast of Norfolk , England . Its main feature is a 6 @. @ 4 km (4 mi) spit of shingle and sand dunes , but the reserve also includes salt marshes , tidal mudflats and reclaimed farmland . It has been managed by the National Trust since 1912 , and lies within the North Norfolk Coast Site of Special Scientific Interest , which is additionally protected through Natura 2000 , Special Protection Area (SPA) , International Union for Conservation of Nature (IUCN) and Ramsar listings . The reserve is part of both an Area of Outstanding Natural Beauty (AONB) , and a World Biosphere Reserve . The Point has been studied for more than a century , following pioneering ecological studies by botanist Francis Wall Oliver and a bird ringing programme initiated by ornithologist Emma Turner .

The area has a long history of human occupation ; ruins of a medieval monastery and " Blakeney Chapel " (probably a domestic dwelling) are buried in the marshes . The towns sheltered by the shingle spit were once important harbours , but land reclamation schemes starting in the 17th century resulted in the silting up of the river channels . The reserve is important for breeding birds , especially terns , and its location makes it a major site for migrating birds in autumn . Up to 500 seals may gather at the end of the spit , and its sand and shingle hold a number of specialised invertebrates and plants , including the edible samphire , or " sea asparagus " .

The many visitors who come to birdwatch , sail or for other outdoor recreations are important to the local economy , but the land @-@ based activities jeopardize nesting birds and fragile habitats , especially the dunes . Some access restrictions on humans and dogs help to reduce the adverse effects , and trips to see the seals are usually undertaken by boat . The spit is a dynamic structure , gradually moving towards the coast and extending to the west . Land is lost to the sea as the spit rolls forward . The River Glaven can become blocked by the advancing shingle and cause flooding of Cley village , Cley Marshes nature reserve , and the environmentally important reclaimed grazing pastures , so the river has to be realigned every few decades .

= = Description = =

Blakeney Point , like most of the northern part of the marshes in this area , is part of the parish of Cley next the Sea . The main spit runs roughly west to east , and joins the mainland at Cley Beach before continuing onwards as a coastal ridge to Weybourne . It is approximately 6 @. @ 4 km (4 mi) long , and is composed of a shingle bank which in places is 20 m (65 ft) in width and up to 10 m (33 feet) high . It has been estimated that there are 2 @. @ 3 million m³ (82 million ft³) of shingle in the spit , 97 per cent of which is derived from flint .

The Point was formed by longshore drift and this movement continues westward ; the spit lengthened by 132 @. @ 1 m (433 ft) between 1886 and 1925 . At the western end , the shingle curves south towards the mainland . This feature has developed several times over the years , giving the impression from the air of a series of hooks along the south side of the spit . Salt marshes have formed between the shingle curves and in front of the coasts sheltered by the spit , and sand dunes have accumulated at the Point 's western end . Some of the shorter side ridges meet the main ridge at a steep angle due to the southward movement of the latter . There is an area of reclaimed farmland , known as Blakeney Freshes , to the west of Cley Beach Road .

Norfolk Coast Path , an ancient long distance footpath , cuts across the south eastern corner of the reserve along the sea wall between the farmland and the salt marshes , and further west at Holme @-@ next @-@ the @-@ Sea the trail joins Peddars Way . The tip of Blakeney Point can be reached by walking up the shingle spit from the car park at Cley Beach , or by boats from the quay at Morston . The boat gives good views of the seal colonies and avoids the long walk over a difficult surface . The National Trust has an information centre and tea room at the quay , and a visitor centre on the Point . The centre was formerly a lifeboat station and is open in the summer months . Halfway House , or the Watch House , is a building 2 @. @ 4 km (1 @. @ 5 mi) from Cley Beach car park . Originally built in the 19th century as a look @-@ out for smugglers , it was used in

succession as a coast guard station , by the Girl Guides , and as a holiday let .

= = History = =

= = = To 1912 = = =

Norfolk has a long history of human occupation dating back to the Palaeolithic , and has produced many significant archaeological finds . Both modern and Neanderthal people were present in the area between 100 @, @ 000 and 10 @, @ 000 years ago , before the last glaciation , and humans returned as the ice retreated northwards . The archaeological record is poor until about 20 @, @ 000 years ago , partly because of the very cold conditions that existed then , but also because the coastline was much further north than at present . As the ice retreated during the Mesolithic (10 @, @ 000 ? 5 @, @ 000 BCE) , the sea level rose , filling what is now the North Sea . This brought the Norfolk coastline much closer to its present line , so that many ancient sites are now under the sea in an area now known as Doggerland . Early Mesolithic flint tools with characteristic long blades up to 15 cm (5 @. @ 9 in) long found on the present @-@ day coast at Titchwell Marsh date from a time when it was 60 ? 70 km (37 ? 43 mi) from the sea . Other flint tools have been found dating from the Upper Paleolithic (50 @, @ 000 ? 10 @, @ 000 BCE) to the Neolithic (5 @, @ 000 ? 2 @, @ 500 BCE) .

An " eye " is an area of higher ground in the marshes , dry enough to support buildings . Blakeney 's former Carmelite friary , founded in 1296 and dissolved in 1538 , was built in such a location , and several fragments of plain roof tile and pantiles dating back to the 13th century have been found near the site of its ruins . Originally on the south side of the Glaven , Blakeney Eye had a ditched enclosure during the 11th and 12th centuries , and a building known as " Blakeney Chapel " , which was occupied from the 14th century to around 1600 , and again in the late 17th century . Despite its name , it is unlikely that it had a religious function . Nearly a third of the mostly 14th- to 16th @-@ century pottery found within the larger and earlier of the two rooms was imported from the continent , suggesting significant international trade at this time .

The spit sheltered the Glaven ports , Blakeney , Cley @-@ next @-@ the @-@ Sea and Wiveton , which were important medieval harbours . Blakeney sent ships to help Edward I 's war efforts in 1301 , and between the 14th and 16th centuries it was the only Norfolk port between King 's Lynn and Great Yarmouth to have customs officials . Blakeney Church has a second tower at its east end , an unusual feature in a rural parish church . It has been suggested that it acted as a beacon for mariners , perhaps by aligning it with the taller west tower to guide ships into the navigable channel between the inlet 's sandbanks ; that this was not always successful is demonstrated by a number of wrecks in the haven , including a carvel @-@ built wooden ship .

Land reclamation schemes , especially those by Henry Calthorpe in 1640 just to the west of Cley , led to the silting up of the Glaven shipping channel and relocation of Cley 's wharf . Further enclosure in the mid @-@ 1820s aggravated the problem , and also allowed the shingle ridge at the beach to block the former tidal channel to the Salhouse marshes to the east of Cley . In an attempt to halt the decline , Thomas Telford was consulted in 1822 , but his recommendations for reducing the silting were not implemented , and by 1840 almost all of Cley 's trade had been lost . The population stagnated , and the value of all property decreased sharply . Blakeney 's shipping trade benefited from the silting up of its nearby rival , and in 1817 the channel to the Haven was deepened to improve access . Packet ships ran to Hull and London from 1840 , but this trade declined as ships became too large for the harbour .

= = = National Trust era = = =

In the decades preceding World War I , this stretch of coast became famous for its wildfowling ; locals were looking for food , but some more affluent visitors hunted to collect rare birds ; Norfolk 's first barred warbler was shot on the point in 1884 . In 1901 , the Blakeney and Cley Wild Bird

Protection Society created a bird sanctuary and appointed as its " watcher " , Bob Pinchen , the first of only six men , up to 2012 , to hold that post .

In 1910 , the owner of the Point , Augustus Cholmondeley Gough @-@ Calthorpe , 6th Baron Calthorpe , leased the land to University College London (UCL) , who also purchased the Old Lifeboat House at the end of the spit . When the baron died later that year , his heirs put Blakeney Point up for sale , raising the possibility of development . In 1912 , a public appeal initiated by Charles Rothschild and organised by UCL Professor Francis Wall Oliver and Dr Sidney Long enabled the purchase of Blakeney Point from the Calthorpe estate , and the land was then donated to the National Trust . UCL established a research centre at the Old Lifeboat House in 1913 , where Oliver and his college pioneered the scientific study of Blakeney Point . The building is still used by students , and also acts as an information centre . Despite formal protection , the tern colony was not fenced off until the 1960s .

The Point was designated as a Site of Special Scientific Interest (SSSI) in 1954 , along with the adjacent Cley Marshes reserve , and subsumed into the newly created 7 @,@ 700 @-@ hectare (19 @,@ 000 @-@ acre) North Norfolk Coast SSSI in 1986 . The larger area is now additionally protected through Natura 2000 , Special Protection Area (SPA) and Ramsar listings , IUCN category IV (habitat / species management area) and is part of the Norfolk Coast Area of Outstanding Natural Beauty . The Point became a National Nature Reserve (NNR) in 1994 , and the coast from Holkham NNR to Salthouse , together with Scolt Head Island , became a Biosphere Reserve in 1976 .

= = Fauna and flora = =

= = = Birds = = =

Blakeney Point has been designated as one of the most important sites in Europe for nesting terns by the government 's Joint Nature Conservation Committee . In the early 1900s , the small colonies of common and little terns were badly affected by egg @-@ taking , disturbance and shooting , but as protection improved the common terns population rose to 2 @,@ 000 pairs by mid @-@ century , although it subsequently declined to no more than 165 pairs by 2000 , perhaps due to predation . Sandwich terns were a scarce breeder until the 1970s , but there were 4 @,@ 000 pairs by 1992 . Blakeney is the most important site in Britain for both Sandwich and little terns , the roughly 200 pairs of the latter species amounting to eight per cent of the British population . The 2 @,@ 000 pairs of black @-@ headed gulls sharing the breeding area with the terns are believed to protect the colony as a whole from predators like red foxes . Other nesting birds include about 20 pairs of Arctic terns and a few Mediterranean gulls in the tern colony , ringed plovers and oystercatchers on the shingle and common redshanks on the salt marsh . The waders ' breeding success has been compromised by human disturbance and predation by gulls , weasels and stoats , with ringed plovers particularly affected , declining to 12 pairs in 2012 compared to 100 pairs twenty years previously . The pastures contain breeding northern lapwings , and species such as sedge and reed warblers and bearded tits are found in patches of common reed .

The Point juts into the sea on a north @-@ facing coast , which means that migrant birds may be found in spring and autumn , sometimes in huge numbers when the weather conditions force them towards land . Numbers are relatively low in spring , but autumn can produce large " falls " , such as the hundreds of European robins on 1 October 1951 or more than 400 common redstarts , on 18 September 1995 . The common birds are regularly accompanied by scarcer species like greenish warblers , great grey shrikes or Richard 's pipits . Seabirds may be sighted passing the Point , and migrating waders feed on the marshes at this time of year . Vagrant rarities have turned up when the weather is appropriate , including a Fea 's or Zino 's petrel in 1997 , a trumpeter finch in 2008 , and an alder flycatcher in 2010 . Ornithologist and pioneering bird photographer Emma Turner started ringing common terns on the Point in 1909 , and the use of this technique for migration studies has continued since . A notable recovery was a Sandwich tern killed for food in Angola , and a Radde 's

warbler trapped for ringing in 1961 was only the second British record of this species at that time . In the winter , the marshes hold golden plovers and wildfowl including common shelduck , Eurasian wigeon , brent geese and common teal , while common scoters , common eiders , common goldeneyes and red @-@ breasted mergansers swim offshore .

= = = Other animals = = =

Blakeney Point has a mixed colony of about 500 harbour and grey seals . The harbour seals have their young between June and August , and the pups , which can swim almost immediately , may be seen on the mud flats . Grey seals breed in winter , between November and January ; their young cannot swim until they have lost their first white coat , so they are restricted to dry land for their first three or four weeks , and can be viewed on the beach during this period . Grey seals colonised a site in east Norfolk in 1993 , and started breeding regularly at Blakeney in 2001 . It is possible that they now outnumber harbour seals off the Norfolk coast . Seal @-@ watching boat trips run from Blakeney and Morston harbours , giving good views without disturbing the seals . The corpses of 24 female or juvenile harbour seals were found in the Blakeney area between March 2009 and August 2010 , each with spirally cut wounds consistent with the animal having been drawn through a ducted propeller .

The rabbit population can grow to a level at which their grazing and burrowing adversely affects the fragile dune vegetation . When rabbit numbers are reduced by myxomatosis , the plants recover , although those that are toxic to rabbits , like ragwort , then become less common due to increased competition from the edible species . The rabbits may be killed by carnivores such as red foxes , weasels and stoats . Records of mammals that are rare in the NNR area include red deer swimming in the haven , a hedgehog and a beached Sowerby 's beaked whale .

An insect survey in September 2009 recorded 187 beetle species , including two new to Norfolk , the rove beetle *Phytosus nigriventris* and the fungus beetle *Leiodes ciliaris* , and two very rarely seen in the county , the sap beetle *Nitidula carnaria* and the clown beetle *Gnathoncus nanus* . There were also 24 types of spider , and the five ant species included the nationally rare *Myrmica specioides* . The rare millipede *Thalassiosobates littoralis* , a specialist of coastal shingle habitats , was found here in 1972 , and a red @-@ veined darter appeared in 2012 . Tens of thousands of migrant turnip sawflies were recorded for a few days in late summer 2006 , along with red @-@ eyed damselflies . The silver Y moth also appears in large numbers in some years .

The many inhabitants of the tidal flats include lugworms , polychaete worms , sand hoppers and other amphipod crustaceans , and gastropod molluscs . These molluscs feed on the algae growing on the surface of the mud , and include the tiny *Hydrobia* , an important food for waders because of its abundance at densities of more than 130 @,@ 000 m² . Bivalve molluscs include the edible common cockle , although it is not harvested here .

= = = Plants = = =

Grasses such as sea couch grass and sea poa grass have an important function in the driest areas of the marshes , and on the coastal dunes , where marram grass , sand couch @-@ grass , lyme @-@ grass and grey hair @-@ grass help to bind the sand . Sea holly , sand sedge , bird 's @-@ foot trefoil and pyramidal orchid are other specialists of this arid habitat . Some specialised mosses and lichens are found on the dunes , and help to consolidate the sand ; a survey in September 2009 found 41 lichen species . The plant distribution is influenced by the dunes ' age as well as their moisture content , the deposits becoming less alkaline as calcium carbonate from animal shells is leached out of the sand to be replaced by more acidic humus from plant decomposition products . Marram grass is particularly discouraged by the change in acidity . A similar pattern is seen with mosses and lichens , with the various areas of the dunes containing different species according to the acidity of the sand . At least four moss species have been identified as important in dune stabilization , since they help to consolidate the sand , add nutrients as they decompose , and pave the way for more exacting plant species . The moss and lichen flora of Blakeney Point differs

markedly from that of lime @-@ rich dunes on the western coasts of the UK . Non @-@ native tree lupins have become established near the Lifeboat House , where they now grow wild .

The shingle ridge attracts biting stonecrop , sea campion , yellow horned poppy , sea thrift , bird 's foot trefoil and sea beet . In the damper areas , where the shingle adjoins salt marsh , rock sea lavender , matted sea lavender and scrubby sea @-@ blite also thrive , although they are scarce in Britain away from the Norfolk coast . The saltmarsh contains European glasswort and common cord grass in the most exposed regions , with a succession of plants following on as the marsh becomes more established : first sea aster , then mainly sea lavender , with sea purslane in the creeks , and smaller areas of sea plantain and other common marsh plants . Six previously unknown diatom species were found in the waters around the point in 1952 , along with six others not previously recorded in Britain .

European glasswort is picked between May and September and sold locally as " samphire " . It is a fleshy plant which when blanched or steamed has a taste which leads to its alternative name of " sea asparagus " , and it is often eaten with fish . It can also be eaten raw when young . Glasswort is also a favourite food for the rabbits , which will venture onto the saltmarsh in search of this succulent plant .

= = Recreation = =

The 7 @.@ 7 million day visitors and 5 @.@ 5 million who made overnight stays on the Norfolk coast in 1999 are estimated to have spent £ 122 million , and secured the equivalent of 2 @,@ 325 full @-@ time jobs in that area . A 2005 survey at six North Norfolk coastal sites , including Blakeney , Cley and Morston found that 39 per cent of visitors gave birdwatching as the main purpose of their visit . The villages nearest to the Point , Blakeney and Cley , had the highest per capita spend per visitor of those surveyed , and Cley was one of the two sites with the highest proportion of pre @-@ planned visits . The equivalent of 52 full @-@ time jobs in the Cley and Blakeney area are estimated to result from the £ 2 @.@ 45 million spent locally by the visiting public . In addition to birdwatching and boat trips to see the seals , sailing and walking are the other significant tourist activities in the area .

The large number of visitors at coastal sites sometimes has negative effects . Wildlife may be disturbed , a frequent difficulty for species that breed in exposed areas such as ringed plovers and little terns , and also for wintering geese . During the breeding season , the main breeding areas for terns and seals are fenced off and signposted . Plants can be trampled , which is a particular problem in sensitive habitats such as sand dunes and vegetated shingle . A boardwalk made from recycled plastic crosses the large sand dunes near the end of the Point , which helps to reduce erosion . It was installed in 2009 at a cost of £ 35 @,@ 000 to replace its much less durable wooden predecessor . Dogs are not allowed from April to mid @-@ August because of the risk to ground @-@ nesting birds , and must be on a lead or closely controlled at other times .

The Norfolk Coast Partnership , a grouping of conservation and environmental bodies , divide the coast and its hinterland into three zones for tourism development purposes . Blakeney Point , along with Holme Dunes and Holkham dunes , is considered to be a sensitive habitat already suffering from visitor pressure , and therefore designated as a red @-@ zone area with no development or parking improvements to be recommended . The rest of the reserve is placed in the orange zone , for locations with fragile habitats but less tourism pressure .

= = Coastal changes = =

The spit is a relatively young feature in geological terms , and in recent centuries it has been extending westwards and landwards through tidal and storm action . This growth is thought to have been enhanced by the reclamation of the salt marshes along this coast in recent centuries , which removed a natural barrier to the movement of shingle . The amount of shingle moved by a single storm can be " spectacular " ; the spit has sometimes been breached , becoming an island for a time , and this may happen again . The northernmost part of Snitterley (now Blakeney) village was lost

to the sea in the early Middle Ages , probably due to a storm . In the last two hundred years , maps have been accurate enough for the distance from the Blakeney Chapel ruins to the sea to be measured . The 400 m (440 yd) in 1817 had become 320 m (350 yd) by 1835 , 275 m (300 yd) in 1907 , and 195 m (215 yd) by the end of the 20th century . The spit is moving towards the mainland at about 1 m (1 yd) per year ; and several former raised islands or " eyes " have already disappeared , first covered by the advancing shingle , and then lost to the sea . The massive 1953 flood overran the main beach , and only the highest dune tops remained above water . Sand was washed into the salt marshes , and the extreme tip of the point was breached , but as with other purely natural parts of the coast , like Scolt Head Island , little lasting damage was done .

Landward movement of the shingle meant that the channel of the Glaven was becoming blocked increasingly often by 2004 . This led to flooding of Cley village and the environmentally important Blakeney freshwater marshes . The Environment Agency considered several remedial options . It concluded that attempting to hold back the shingle or breaching the spit to create a new outlet for the Glaven would be expensive and probably ineffective , and doing nothing would be environmentally damaging . The Agency decided to create a new route for the river to the south of its original line , and work to realign a 550 m (600 yd) stretch of river 200 m (220 yd) further south was completed in 2007 at a cost of about £ 1 @. @ 5 million . The Glaven had previously been realigned from an earlier , more northerly , course in 1922 . The ruins of Blakeney Chapel are now to the north of the river embankment , and essentially unprotected from coastal erosion , since the advancing shingle will no longer be swept away by the stream . The chapel will be buried by a ridge of shingle as the spit continues to move south , and then lost to the sea , perhaps within 20 ? 30 years .