



## History

100 million years ago, in a much warmer climate, the sea was 300 metres higher than it is today. On land dinosaurs roamed, and flowering plants and bees had only recently evolved. In the sea were trillions of microscopic plankton called coccolithophores, each with skeletons or shells of calcium carbonate. As these died and sank to the bottom they formed, over millions of years, layers of chalk which were compressed by the weight of water above. The seabed gradually rose up, the sea level went down and the surrounding clays and sandstones of the Weald were eroded away, leaving us with the huge domes of chalk we now know as the South Downs.

In places rivers carved a way through the chalk to the sea - the Cuckmere is thought to be around 2 million years old. Thousands of years ago, melting snow and ice from the Ice Ages carved further valleys in the chalk, giving the Downs their sculpted look. At the end of the last Ice Age the rising sea eroded the chalk cliffs back to their current position, a process which still continues today - on average the cliffs erode by half a metre a year.



© Plymouth Marine Laboratory

## The bigger picture

The Seaford to Beachy Head Site of Special Scientific Interest was first notified in 1953, in recognition of its diverse range of habitats including herb-rich chalk grassland, chalk heath (a unique and rare habitat), maritime grassland, foreshore and chalk cliffs and river meanders. It supports a number of nationally significant, scarce and rare plants, invertebrates and birds. It would be a mistake however to view the nature reserve or even the SSSI in isolation. They form just part of the South Downs National Park, and are naturally connected to areas further up the river valley, and to the Lullington Heath National Nature Reserve just the other side of Friston Forest.

Sussex Wildlife Trust has a 50 year history of working and campaigning to protect the wildlife of Sussex, for its own sake and for people to enjoy. As stewards of some of the most beautiful yet vulnerable natural resources in Sussex, they have drawn on their experience and history to develop a new strategy, a **Living Landscape**, to rebuild the county's wildlife and wild places over the next 50 years.

Nature is not a luxury. It underpins our economy and social well-being and its natural processes give us clean water, food, flood protection and climate control. Sussex Wildlife Trust wants to see the natural areas of our towns and countryside thriving, full of flowers and alive with birdsong, wherever you live.



© Sussex Wildlife Trust

## A vision for the future...

All of the habitats at Seaford Head need to be protected for the important range of specialised plants and animals that live in them. Of these, the chalk grassland and chalk heath are perhaps most at risk. In the absence of a grazing regime, which helped form the chalk grassland many centuries ago, scrub has come to dominate many parts of the reserve. While this provides some shelter for birds migrating along the river corridor, it is quickly destroying the chalk grassland. The rabbits help to maintain it a little, but they also tend to overgraze some of the plants, meaning we are in danger of losing some of the specialised plants here such as the very rare moon carrot.

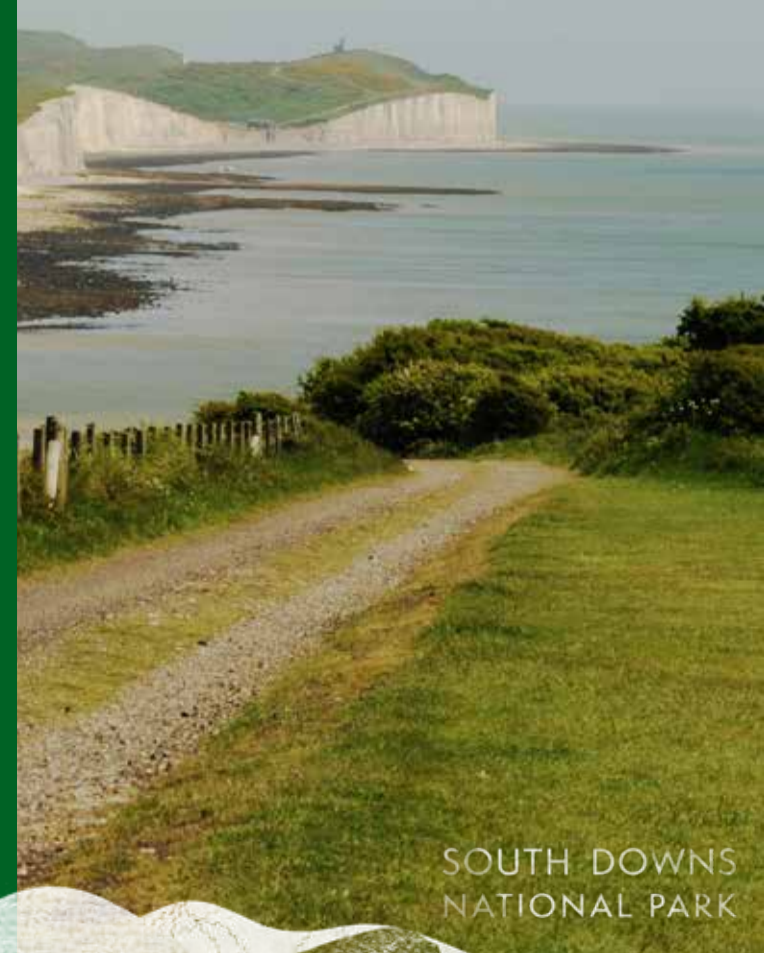
The Sussex Wildlife Trust has been trimming back some of the encroaching scrub (though plenty will remain in support of the bird interest), whilst maintaining some scrub edges for important invertebrates, and has re-introduced grazing by sheep and cattle, using temporary electric fencing to rotate grazed areas around the reserve, whilst continuing to be mindful of the needs of other users such as golfers, dog-walkers etc. This approach has been extremely successful on many of the Trust's other downland reserves resulting in significant improvements for wildlife and landscape.



Adonis blue butterflies are real specialists of southern chalk grassland. Their caterpillars only feed on horseshoe vetch, and need a close relationship with ants to complete their life cycle.

# Seaford Head

## Local Nature Reserve Guide



## What makes Seaford Head so special?

Seaford Head is the best spot to enjoy the most iconic view in England - of the majestic Seven Sisters cliffs.

But there's much more to it than that. It's part of the Seaford Head to Beachy Head Site of Special Scientific Interest, designated for its outstanding biological and geological features.

The geology here is particularly unusual with a layer of sand overlying much of the chalk cliffs. This results in rare communities of both chalk and acid-loving plants growing together, with rare butterflies, bees and other insects associated with them.



## How to find us

Seaford Head lies just west of the Cuckmere estuary at the Seven Sisters Country Park. It can be accessed from the footpath which runs along the west side of the river (from the Cuckmere Inn pub), from the private road which runs south from the eastern end of Chyngton Way, or along the coastal path from Seaford Esplanade. If using a satnav or GPS, the nearest postcode for the car park is BN25 4JE; or N50.7625, E0.1322. The OS Grid Reference is TV504980.



The Local Nature Reserve adjoins the Seven Sisters Country Park, and is owned and managed jointly by Seaford Town Council (chalk grassland, cliffs and foreshore) - this area is managed by the Sussex Wildlife Trust and a tenant farmer; the National Trust who own and manage the former floodplain to the west of the river; and East Sussex County Council who own and manage the area between the river and the meander, along with the rest of the Seven Sisters Country Park. A joint planning committee exists so that management takes place in partnership involving all interested parties.



SOUTH DOWNS NATIONAL PARK

**Chalk grassland**

The thin, poor soils of well managed chalk grassland can support an extraordinary number of species, as no one type of plant is able to grow strongly enough to dominate over others. It is however, highly vulnerable to change, particularly if there is no grazing from either rabbits or livestock, or both. The soils become enriched with the remains of dead plant material if it is not grazed off or removed, then scrub begins to prosper, with more dead plant material and a cycle then develops which would ultimately end in woodland if there were no management. Chalk grassland covered up to 50% of the Downs up until the 1940s, but since so much sheep grazing ceased at that time it accounts for only 3-4% today. There can be 30 or 40 different plant species in only a square metre of good chalk grassland, in turn supporting a huge number of insects. This chalkhill blue butterfly for example can only survive by feeding on horseshoe vetch growing on chalk grassland.



Here at Seaford Head other plants associated with the chalk soils include kidney vetch, squinancywort, clustered bellflower and the extremely rare moon carrot. There is also a good colony of green-winged orchids. Besides the chalkhill blue, butterflies include the dingy skipper, silver-spotted skipper, the beautiful adonis blue, the diminutive small blue, and also the rare forester moth. Another species of note is the potter flower bee, known from only a few sites nationally for which Seaford Head is the most important in Sussex. It nests in the crumbly loess soils on the cliff edge.



**Seaford**



**Scrub**

Bushes and small trees such as bramble, hawthorn, privet and dogwood have developed here in the last few decades, providing nesting opportunities and cover for migrating birds like warblers (such as this whitethroat) thrushes and other small birds. However, the scrub is increasing at the expense of the chalk grassland - a much rarer habitat with high wildlife value, and so needs to be controlled by some cutting back, and possibly grazing. In the short term it's important to prevent further loss of the grassland. In the longer term it may be possible to increase the cover of chalk grassland towards former levels, but some scrub will always remain.

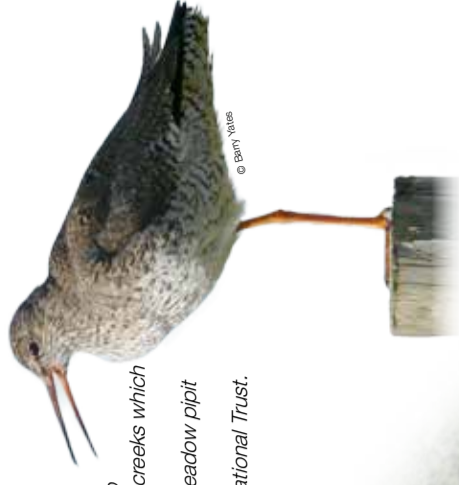
**Cliffs**

The famous white cliffs of the south coast are formed of chalk laid down as sediment from the microscopic remains of plankton some 90 million years ago. In places you can also see bands of flint - probably formed from the remains of sponges at times when they were especially abundant in the warm seas of the time. In other spots, such as at Hope Gap, the red, sandy loess soils can clearly be seen above the chalk, blown here by Arctic winds during the Ice Ages over 14,000 years ago. In summer you may see fulmars breeding on the cliffs - which although a kind of petrel, looks similar to a seagull with very stiff wings. Kittiwakes and peregrines also breed here, and numerous kinds of solitary bees and wasps, some of them nationally rare, excavate burrows in the soft rock.

**!** The cliff edge is soft and constantly eroding - do not get too close!

**Wet grassland**

The eastern sections of the Local Nature Reserve include saltmarsh and the low lying floodplain of the old river. In 1847 a canal was cut to transport water straight out to sea, leaving the meanders of the original course of the river isolated. These lush grasslands are now no longer replenished with nutrient-laden silt from the river, but there are creeks which fill with fresh water so the ground remains damp. Redshank breed among tussocks of longer grass, and skylark and meadow pipit may also breed in the drier areas. These areas are managed by East Sussex County Council and the National Trust.



**Saltmarsh**

Saltmarsh has a very high conservation value for the communities it supports. It is rich in invertebrates and is especially good for birds, but it is a fast disappearing habitat. Where coastal zones are 'squashed' between sea defences and land based developments, many habitats such as saltmarsh have become increasingly rare both nationally and internationally. The Nature Reserve and Seven Sisters Country Park have around 10% of the total saltmarsh area in East Sussex.

In the future as sea levels rise, we may have to allow the sea to gradually flood the lower river valley, recreating more rare habitats like saltmarsh, which is a natural flood defence. Storms now regularly cause severe damage to Cuckmere Haven sea defences (shingle bank, groyne and beach). To date this has been repaired but it may not be sustainable on a long term basis. 'Managed Retreat' may be necessary.

**Vegetated Shingle**

Another scarce habitat, vegetated shingle has become increasingly rare as beaches are managed for sea defences. But there is some shingle here on both sides of the river mouth with unique plant communities, including the yellow horned-poppay.



the old Coastguard Cottages are privately owned



**Wave-cut platform and rockpools**

The rocky platform at the base of the cliffs shows a former extent of the cliffs, perhaps only 100 years ago. Gullies within the rock have been formed through frost shattering and the abrasive action of flints, and these rock pools provide an excellent opportunity to see marine animals and plants at low tide. Anemones, starfish, molluscs, shrimps, crabs and seaweeds may all be found. Be sure that you can always see a clear exit back to high ground - take great care that you do not get cut off by the incoming tide.