The Trail starts at the east end of Victoria Park where the cliffs begin. These cliffs are undoubtedly the glory of the Angus coast, being visible for some considerable distance out to sea as a gigantic wall of red. While the Trail extends along only a small portion of their length, it encompasses a considerable selection of interesting features.

Part of the Trail passes through Seaton Cliffs Wildlife Reserve which is managed by the Scottish Wildlife Trust. This extends from point 4 to Seaton Burn.

The grassy sea braes behind the promenade at Victoria Park and again at Carlingheugh Bay represent an ancient coastline, the terrace below being an old beach now raised above sea level and covered with vegetation. Raised beaches are found along the entire coastline of Scotland and are due to the land rising relative to the level of the sea since the last Ice Age.

The total length of the Trail is just a little over 5 km (3 miles) there and back — most of it on well defined footpaths. Even in winter it would be advisable to allow at least two hours in order to see and enjoy all the interesting things to be found along its length.

There are facilities for car parking along Arbroath promenade and public toilets at the beginning of the Trail. There is also an access point at East Seaton Farm and pedestrian access through farm tracks to Carlingheugh Bay and Dickmont's Den.

Throughout the length of the Trail the cliffs are composed of Old Red Sandstone, which are between 400 and 350 million years old. They were deposited in a series of river deltas which are thought to have been similar to the Mississippi delta today. As the high ground eroded, sediments were washed into the basin. This explains why some pebbles are made up of rocks not found at the coast of Arbroath. The deltas had a series of lakes, rivers and dry land in a semi arid climate. The different environments gave rise to different rock types. Most of the rocks are sandstones and conglomerates. A conglomerate is a rock made up of pebbles,

Clustered Bellflower

Green-veined White

which were deposited in rivers as they meandered over flood plains. The same kind of deposition happened when the River Tay flooded in 1993. Excellent examples of conglomerates can be seen at Whiting Ness at the beginning of the Trail, in the bluffs separating the two bays at Cove Haven and in the spectacular three-humped headland which separates Cove Haven from Carlingheugh Bay. The relatively older, purer and more uniform sandstone beneath the Upper Old Red Sandstone suggests rapid deposition of sand in relatively calm waters. This is Lower Old Red Sandstone. There are no fossils at all and evidence points to desert conditions on land at that time.

In some parts of Scotland an intermediate formation famed for its fossil fish, the Middle Old Red Sandstone is found, but not here. The bedding or stratification of the Old Red Sandstone is very noticeable in both Upper and Lower deposits. That of the Lower Old Red Sandstone has a strong tendency to tilt seawards while that of the Upper Old Red Sandstone is more horizontal. This suggests a significant time lapse between the deposition of the two. From the seaward side of Whiting Ness you can see the two deposits sitting one on top of the other with their very different degrees of tilt.

Vertical cracks or faults which have developed subsequent to the deposition of the sandstone are numerous, and it is along these lines of weakness that many of the more striking geological features like coves, sea caves, natural arches and pinnacles have been carved by the sea.

Where there is conglomerate (Upper Old Red Sandstone), shingle beaches may be found with the pebbles coming from the conglomerate. There may be comparatively gentle, vegetated sea braes extending down to the shore in the rear vicinity, as at Cove Haven and Carlingheugh Bay. Springs of fresh water are frequent in the conglomerate and a marsh type of vegetation can be found here and there on these braes.

The Old Red Sandstone is quite rich in minerals. Veins of crystals, mostly barytes (barium sulphate) often fill the vertical faults and the conglomerate seems to be particularly rich in lime. The Clustered Bellflower and the Carline Thistle, both plentiful on the chalk and the softer limestones of southern England, are found on the Seaton Cliffs along with certain other lime-loving plants.

Meadow Brown

The abundance of certain plants more commonly associated with woodland is also a feature of these cliffs. Primroses are abundant at Dickmont's Den along with Wood Violet and Early Purple Orchids. Red Campion and Wood Vetch grow plentifully in Carlingheugh Bay where stands of Bracken may also be found.

In the main the vegetation of the cliffs, cliff edges and sea braes is a combination of truly maritime and definitely non-maritime plants. The non-maritime plants flourish in a refuge safe from the effects of cultivation and grazing. It is not only plants that flourish here — a variety of interesting animals may also be found.

Butterflies such as the Green-veined White, Common Blue, Small Heath and Meadow Brown are usually plentiful and rarer butterflies such as the Small Blue are found in certain parts of the cliffs.

There are always plenty of birds to be seen at any time of year. Always present are Herring Gulls which nest on almost every suitable ledge and stack. A few Fulmars may also be seen. Rock Doves/Feral Pigeons inhabit the caves and ledges, their original habitat before man provided them with ready made roosts on buildings.

In the summer months House Martins nest in some of the caves and Meadow Pipits and Skylarks can be heard in the adjacent fields. Oystercatchers, Curlews, Turnstones, Purple Sandpipers and other waders can be seen in the winter months and sometimes Snow Buntings and Bramblings can be seen.

Out to sea Shags and Cormorants can be seen flying low over the water, or resting on rocks, even 'sunning' their wings. Eiders are most usually seen on the water, the ducks being sombre brown whilst the drakes are strikingly black and white.

On clear days it is possible to look south from the Trail and see the Bellrock lighthouse.

Along the first 2 km (1 mile) of the Trail the cliffs are steep and broken with very little foreshore. In several places the sea never leaves the foot of the cliffs, even at the lowest spring tides and deep water extends far into some of the caves. Great care must be taken near the cliff edge and remember that vegetation can be as slippery in dry weather as in wet. Remember it is safest to keep to the path and to take care at all times.

POINT ONE

Unconformity

The Trail begins at Whiting Ness where the bare rocky cliff contrasts with the grassy banks of Victoria Park which are a fine example of a raised beach and shows the site of the coastline thousands of years ago.

The outstanding geology of Seaton Cliffs can be seen from this point, with the conglomerate of Upper Old Red Sandstone lying above the more uniform Lower Old Red Sandstone.

Just around the headland lies a good example of a geological unconformity which can be seen by walking around the headland at low tide. An unconformity occurs when there is a break in the usually continuous deposition of sediments. At Whiting Ness, deposition stopped, the rocks were tilted by earth movements and were eroded over great periods of time.

The plank bridge on the shore leads to a rocky reef and a large natural pool nearby which was a well used swimming pool with a diving board at the turn of the century.

At the base of the footpath lie 2 springs — one of which is called St Ninian's Well. This lies below the site of St Ninian's Chapel. The Chapel was built in honour of St Ninian who brought christianity to the east coast of Scotland from Iona.

During the summer months the banks by the path are ablaze with the colour of wild flowers such as Kidney Vetch, Thrift, Birdsfoot Trefoil and Scurvy Grass. Even in winter the variety of plants can be seen from the variety of leaves such as the waxy heart shaped leaves of Scurvy Grass and the spiky cushions of Thrift. Once on the cliff top other maritime plants such as Sea Campion and Sea Plantain can be seen in abundance by the side of the path.

Kidney Vetch

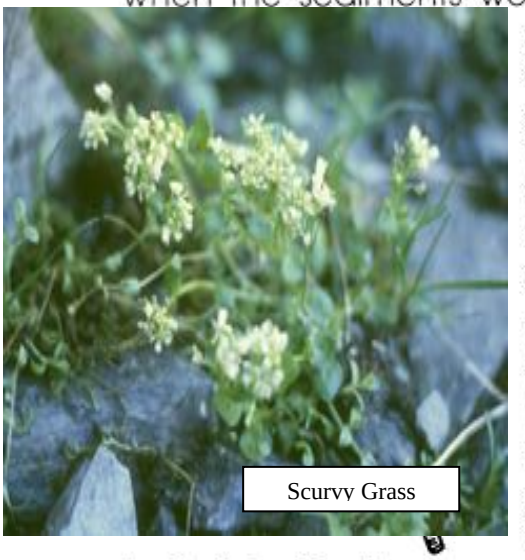
At the base of the cliffs are numerous rock pools in the rocky platform which forms the coastline along this cliff trail. Two parallel grooves can be seen cut into the rock which are known locally as the Deil's cart tracks as they appear to stop and start abruptly. In fact they are the tracks from carts carrying quarried stone to Arbroath to be used in building. It is

thought that the monks themselves quarried and carried the stone to build the Abbey.

POINT TWO

The first of many sea caves can be viewed at this point with the entrance being just visible from the northern side.

The rocks are deposited in layers, called the bedding plains by geologists. Some beds were formed when the sediments were deposited as ripples or dunes, either in shallow water or on land. This is called crossbedding and is recognised by the dune faces lying at an angle to the layer of the bedding. By studying rocks, it is possible to tell which direction the water current or wind was travelling when the sand was deposited.

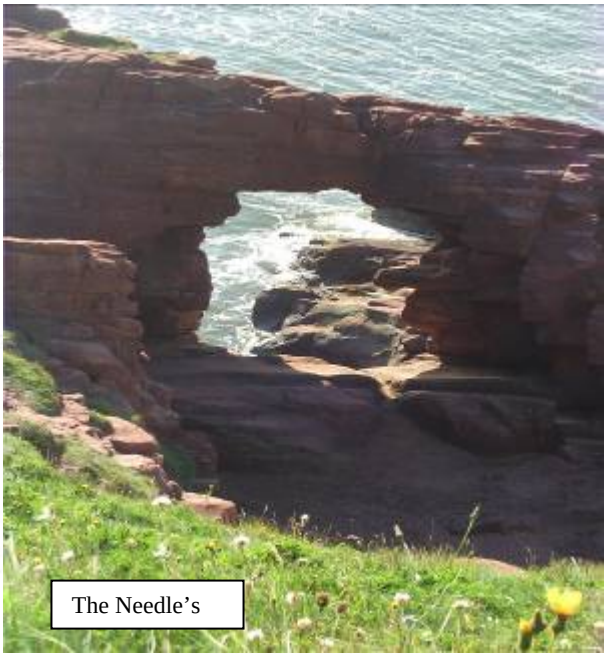


Scurvy Grass

Rocks are subject to great pressures within the earth, and will occasionally fracture. These are called faults and many are visible in the cliffs. Sometimes it is possible to see the direction and extent of movement of the rocks by looking at the bedding layers on both sides. Faults are weaknesses in the rocks which are exploited by the sea and many of the coves, sea caves, natural arches and pinnacles have been formed in this way.

POINT THREE

The Needle's E'e is a superb example unusual in that it is parallel with the coastline rather than at right angles which is more usual. The vertical fault through the middle of the arch corresponds to a crack in the floor and gives a clue to the origin of the arch — the sea probably carved out a cave along the line of this fault and with the erosion and collapse of the rear of the cave we are left with the arch as it is today. This will in time collapse — erosion is a continual process and coastlines are constantly changing.



The Needle's

To the north of the Needle's E'e is another natural arch in the making in the same ridge of rock. This is at a lower level and at high tide the sea washes in via a narrow sea cave into a natural amphitheatre filled with a pebble beach. This unusual cove is called Mermaid's Kirk. The different elevation of the Needle's E'e suggests it was formed at a time when land levels were lower than they are today.

Six-spot Burnet Moth

POINT FOUR

Common Gull

This point marks the beginning of the Wildlife Reserve and is adjacent to a sheltered hollow where the vegetation is lush and insect life is abundant — Six-spot Burnet moths are often seen. They are unusual in that they are day flying moths and are brightly coloured in contrasting colours of deep metallic green and red.

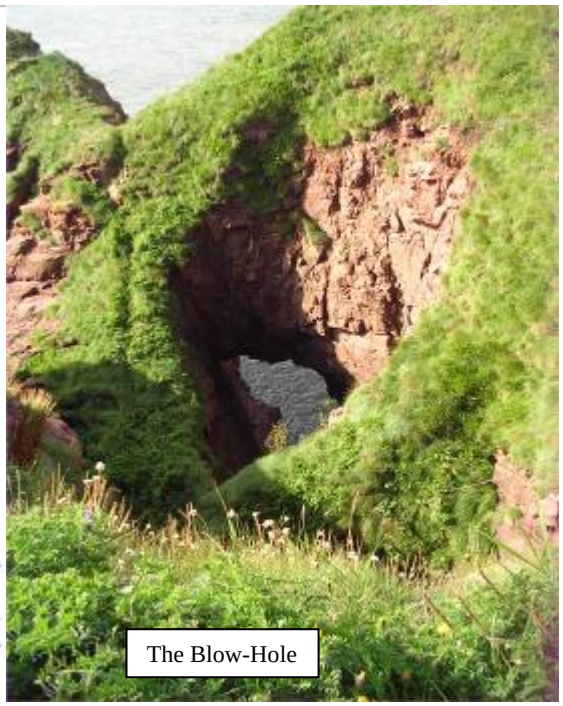
From the hollow a steepish path leads down the cliff slope to give a good view of a cove called the Seaman's Grave or Mariner's Grave.

Purple Milk-vetch

POINT FIVE

Another sizeable inlet with a collapsed sea cave which opens up like a window, this feature is known as The Cruisie, taking its name from the resemblance in shape to the old cruisie lamps.

Common Blue



The Blow-Hole

POINT SIX

Just off the path a hollow in the cliff slope and a collapsed large sea cave forms the Blow-hole, so called because at very high tides and with an onshore wind the sea spray blows through rather like a whale blowing through its blow-hole. Vertical faults can be seen above the Blow-hole.

POINT SEVEN

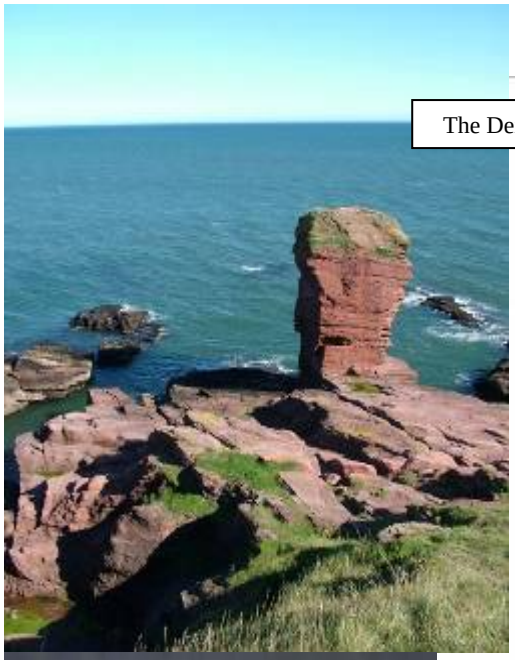
Dickmont's Den forms one of the largest sea inlets on this part of the coastline. It was probably formed from erosion of a fault forming a sea cave system which eventually collapsed. The isolated pyramidal stack at the entrance provides sanctuary for numerous Herring Gulls and occasional resting Cormorants and Shags. Dickmont's Den has been linked by legend with smuggling although few facts are known about smuggling along this part of the coast. It is believed that Seaton Cliffs were extensively used for smuggling activities in the seventeenth and early eighteenth century. Following the extension of Arbroath Harbour in 1736 and the arrival of the customs sloop in 1740 the smuggling activities moved further north. Seaton Cliffs were regularly patrolled by the customs men and the sloop "Princess Caroline" patrolled the seas.

Today the cliffs are used for more leisurely pursuits.

In spring, the banks of Dickmont's Den are covered with Primroses and Wood Violets. On the eastern side of the Den the Gorse flowers leave a scent of coconuts hanging in the air.

As you walk along the path you will notice the eroding bank between the path and the agricultural fields. This bank is bare of vegetation and has been colonised by solitary bees. As their name suggests each bee lives in an individual tunnel rather than in a hive like honey bees.

Cormorant



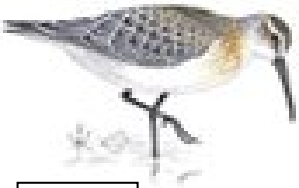
The Deil's Heid

POINT EIGHT

The large stack known as the Deil's Heid or Pint Stoup and also as The Poll forms a magnificent feature in the landscape. The cliffs which once surrounded it have been eroded away, leaving the isolated sea stack.

Peewit

Black Headed Gulls



Curlew

Oyster Catchers

Gray Heron

Purple Sandpiper

Heath Spotted Orchid

POINT NINE

Fragments of heath are all that remains of what would have been abundant vegetation before agriculture. The tussocks of Heather can be seen all year round.

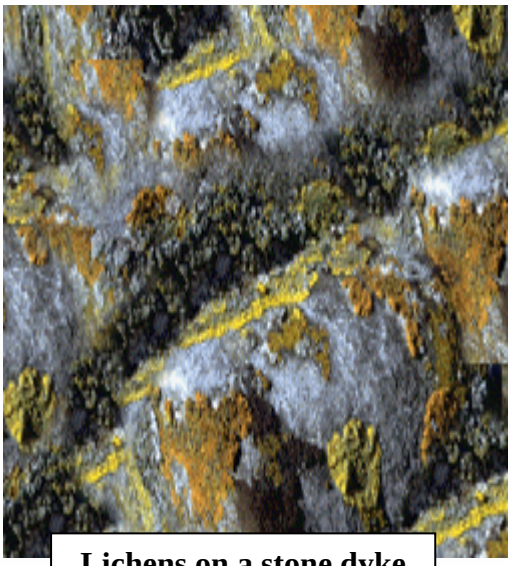
If you look carefully you can see Orchids in the summer months.

Early Purple Orchid

POINT TEN

Maiden Castle is an ancient monument, one of several earthworks (promontory forts) on headlands on this coast. They date back to the Iron Age, approximately 2000 years ago and were used for defence. The most obvious remains of Maiden Castle are the trench and distinct earth ridge beside the path.

Tormentil



Lichens on a stone dyke

POINT ELEVEN

Below Maiden Castle is Cove Haven where there is a large cave known as Mason's Cave because the Arbroath Freemasons used to make an annual pilgrimage there. This cave was also used at one time as a boat house for the Earl of Southesk, when it could be closed with wooden doors. The nearby gateposts marking the agricultural boundary could originate from this time.

POINT TWELVE

From this point is one of the finest views of the Three Sisters. This rocky headland is also known as the Sphinx and the Camels Back due to its outline. Bands of the conglomerate with thin layers of red sandstone add to the aesthetic qualities of this feature.

Just beyond this headland the path forks, with the left fork remaining on the cliff top and going to Seaton Den which is wooded. From here you may walk back to Arbroath via East Seaton Farm or northwards to Auchmithie.

The right fork leads down to Carlingheugh Bay to continue the trail.

The Three Sisters

Wood Letch

POINT THIRTEEN

The sandy ground is actually another area of raised beach, now beyond the influence of the sea, except on the highest tides.

The broadleaved bluish Lyme Grass is a common dune grass which helps stabilise the sandy foreshores and allow further colonisation by other plants.

Lyme Grass

The pebbles on the beach are multi-coloured and are of differing geological origins. They have been eroded from the conglomerate and originated in the Highlands to the north.

Bracken can be seen encroaching the hillside which is the old sea cliff. This area is covered in Blackthorn and Brambles at present and is important for small birds.

Terns

Puffins

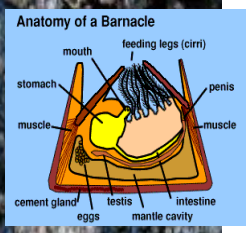
Guillemots

Elder duck

Razorbill

Barnacles

Periwinkle



POINT FOURTEEN

This part of the raised beach was formerly enclosed and probably cultivated. The remains of the boundary dyke can be seen. It has been suggested that the name Carlingheugh means "the heugh of the Carls, Karls or Churls" and refers to a small settlement which once stood there. There are no visible signs of houses today, but signs of hearths and pieces of medieval pottery have been found in the caves nearby.

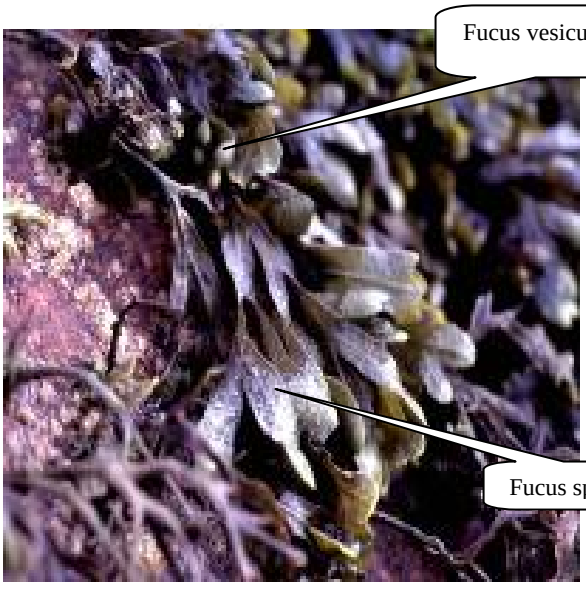
Limpets

Sea Lettuce

In more recent times the fisher-women of Auchmithie came to the Flairs to collect the seaweed from the rock pools to sell as food.

Beadlet Anemone

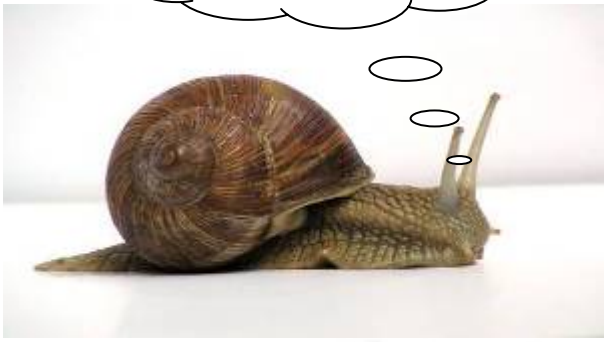
Today at low tide, you can see the variety of seaweeds and life in the many rockpools.



Fucus vesiculosus

Fucus spiralis

Snail (Cepea hortensis)
Don't like sea weed!



POINT FIFTEEN

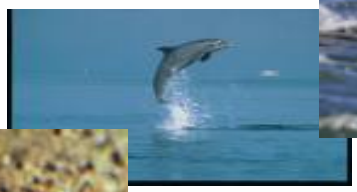
At the head of the Bay the remnants of an old boathouse can be seen. Faults and seams of calcite crystals can be seen in the rocky cliffs. Close by is Dark Cave which goes right through the headland to the Bay beyond. If you are tempted to explore — beware — the difference in levels can cause you to misjudge the rising tide and you may be cut off!


Sweet Briar


Greater Knapweed

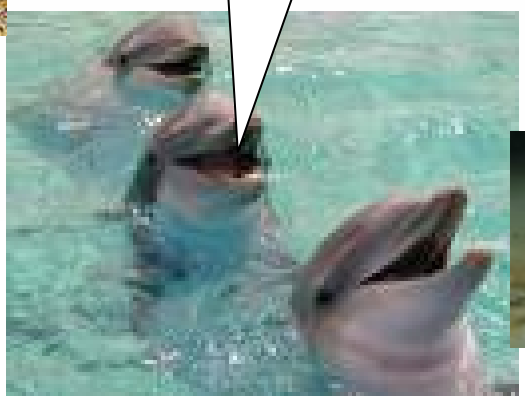
Looking back across Carlingheugh Bay the rocky outline of the coast can be clearly seen, providing many features of interest. The return trip takes approximately 20 minutes.

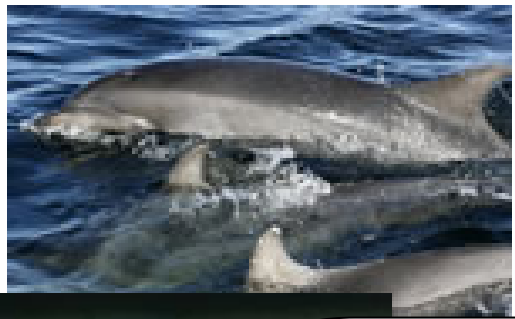
Many Bull nose Dolphins can be seen off the Arbroath Cliffs especially on a calm day all year round diving for sand eels and just generally frolicking with one another.




Sand eel

I'm a Bull Nose Dolphin
We eat sand eels






And I'm a Sand eel hiding !

Arbroath Cliffs

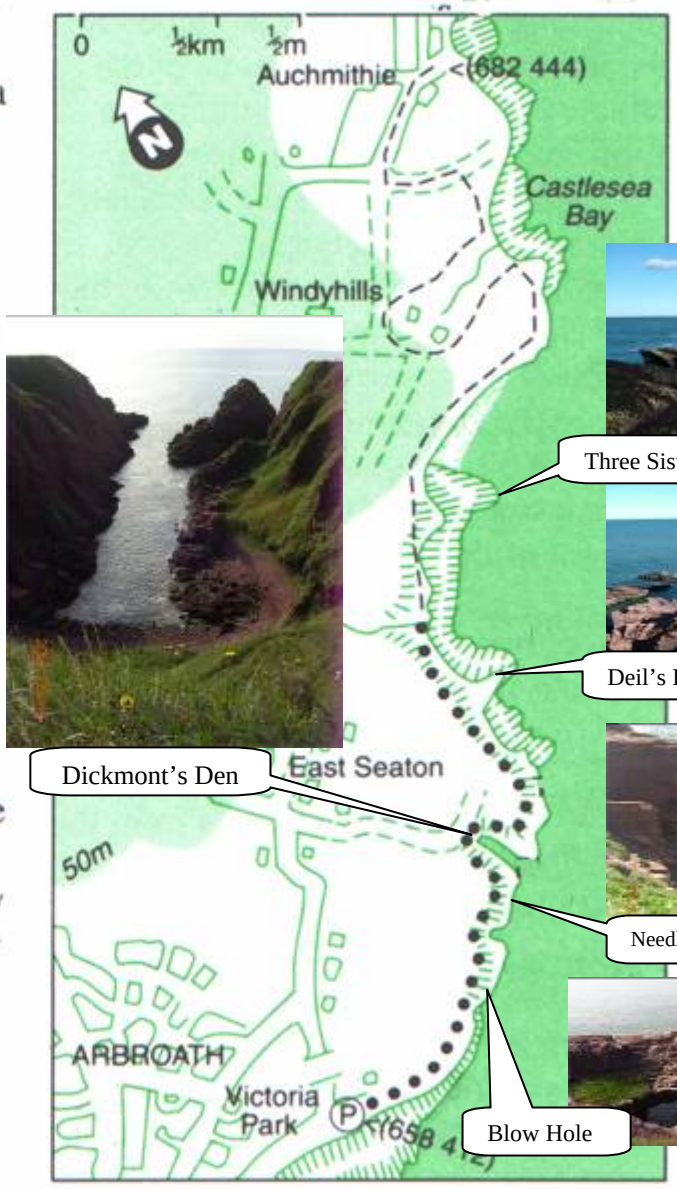
A walk along the top of the red sandstone cliffs of the Angus coast. Paths are of variable quality, with fine views. Public car park at Victoria Park. On site interpretation. Length: **3 miles/5km** (there and back)*; Height Climbed:* negligible. ***Please note: cliff-top walks are dangerous; particularly in high winds. This route is unsuitable for children and animals if they are not kept under control at all times.***

This walk starts at the eastern edge of the town of Arbroath. Park on the Promenade, at the east end of Victoria Park, just where the cliffs begin.

The first 1½ miles/2.5km of path is along a nature trail (Seaton Cliffs Wildlife Reserve), which is managed by the Scottish Wildlife Trust. A series of information panels provides a good insight into what can be seen on the trail.

The path is good as far as the woodland at Carlinheugh Bay. The cliffs are composed of old red sandstone between 350 and 400 million years old. Along the way you will pass the narrow inlet of Dickmont's Den, the Needle E'e – a superb example of a sandstone arch – and the Deil's Heid stack (or 'Pint Stump', as it is known locally). You can see why this rugged coastline was favoured by smugglers in the early 1700s, with so many nooks and crannies to hide in. Return by the same route.

(Beyond the reserve there is a possible further 1½ miles/2.5km of rough path leading to the old port of Auchmithie. The cliffs are a joy for the botanist or ornithologist, but the walk is otherwise less interesting and harder to follow than the first section.



To start this section, climb up a grassy path behind Carlinheugh Bay and cut right. Many of the tracks are at field edges, so be careful not to damage crops or disturb livestock.)