geography southwest

Place To Walk

The 'Red Coast' - Exmouth to Sidmouth

Location & Access:

The route is described from Exmouth to Sidmouth, but could be reversed. Exmouth can be reached via A376 road from Exeter. There is also a regular train link from Exeter Central Station and a regular bus service (number 57) from Exeter.

There is plenty of parking in the town of Exmouth, and this walk begins at the car park close to the sea front to east of town - past the Maer recreation ground, and by the lifeboat station at GR SY0121 8000.

At the completion of the walk, a return bus (number 57) is available from Sidmouth.

Hern Point Rock, Ladram Bay

Key Geography: Stunning section of the South West Coast Path - part of the Jurassic Coast World Heritage Site. SSSI, Triassic geology, spits, steep cliffs, coastal erosion, landslips, sea stacks.

Description: This walk of 12.5 miles (20 km) covers a stunning section of the 95 miles Jurassic Coast, a UNESCO World Heritage Site. Its geology includes Permian and Triassic rocks overlain in part by rocks from the Cretaceous Period. It is informally known as the 'Red Coast' due to the colour of the cliffs. From the car park, there is a brief moment to admire the sandy beach of Exmouth before making for the cliffs at eastern end of esplanade. Here, the cliffs of Rodney Point give the first decent view of the red geology.

From here, the path climbs to Orcombe Point, where it is possible to stop and take a look at the geoneedle, a monument that marks the start of the Jurassic Coast. It is made of Portland Stone, but the central column of the obelisk displays the rock types from the main formations seen along this stretch of coast. The cliffs by the geoneedle offer excellent views of the Exe Estuary, Dawlish Warren, Teignmouth and beyond.

Sea birds nesting on the cliffs at Sandy Bay

The coast path continues towards the Devon Cliffs Holiday Centre that overlooks the sheltered beach of Sandy Bay. The sandstone cliffs show clear evidence of extensive cross -bedding, and provide nesting sites for kittiwakes and cormorants in summer months. After the caravan site, the path turns inland and then on to Littleham Cove to avoid the Royal Marines rifle range that occupies the headland of Straight Point. Resistant sandstones on this coastline form headlands jutting out into the sea, while interbedded mudstones form bays in between. At Littleham Cove the steep cliffs are unstable, with many landslips evident. It is hard to get to the beach here, but if

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Curiosity Questions:

What is the local name for the Budleigh pebbles? # On top of the Budleigh Salterton pebble beds is a thin layer of red clay. On top of this are found quartzite pebbles with a more angular appearance. What are these pebbles called, and why do they appear this way? # What do the letters 'SSSI' stand for? # Why are cliffs along this walk red in colour?

Further information:

https://jurassiccoast.org

https://m.southwestcoastpath.org.uk/walksdb/179/

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you can find your way there at low tide, it is possible to spot radioactive nodules in the cliff. They appear like flattened fried eggs measuring up to 7 cm in diameter. Although they are not necessarily dangerous, it would be wise not to carry any home, certainly not in your pocket!

The cliffs after Littleham Cove are known as 'The Floors' and are very unstable, with many land slips and areas of recent collapse. The coast path rises to West Down Beacon - an escarpment of pebble beds - and then descends through woodland by the side of the East Devon golf course, and on to Budleigh Salterton.

Budleigh Salterton Pebble Beds with honeycomb weathering above.

The path leads to a slipway (opposite toilets) that runs down to the pebble beach. Head a few metres westwards (to your right as you walk onto the beach) to take a close look at West Cliff. Here, you can see the famous Budleigh Salterton Pebble Beds in all their glory. Keeping a safe distance from the cliff face, you should be able to pick out a clear layer of pebbles around 25 to 30 metres thick in places. The pebble beds are a formation packed with large round pebbles cemented by sand. These are the most-travelled pebbles in Europe, having started life 400 million years ago in Britanny. They have since been transported in the Triassic Period by large fast flowing rivers from high mountains here to the south coast of England. Around the pebble beds, you can also see some excellent examples of honeycomb weathering in the cliff geology, caused by wind and salt erosion.

Budleigh Salterton town is worth a visit, and marks the halfway point of this walk. The town got its name from the salt pans (salterns) that can be found at mouth of river Otter at the east end of the beach. Salt was extracted here from at least Domesday times.

Head eastwards along the pebble beach and look out for a sign that points out the location of some interesting fossils found in the sandstone cliffs. These are groups of vertical, tube-like features called rhizocretions. During the Triassic period around 235 million years ago, ancient plants grew here amongst the shifting streams of a desert river system. The roots of these thirsty plants burrowed down into the soft red sand of the desert, drawing on any water they could find. Minerals that were dissolved in the water grew in crystals around the roots and encased them. As time passed, the streams moved and the plants died. But the encased roots remained as fossil evidence for us to examine.

As you reach the end of the beach, you can see how a shingle ridge has grown to almost block the journey of the river Otter to the sea. This shingle spit was enlarged greatly in the great storms of 1824, and prior to this, small ships of up to 60 tons could pass up river. The path winds inland from here to cross the Otter estuary, through the Otter Estuary Nature Reserve - a 57 acre SSSI. Salt marshes and mud flats have developed behind the shingle spit, and the area is rich in bird life, particularly wintering wildfowl and waders.

The path loops back on the east side of the river to Otterton Ledge. From here, the coastline consists of vertical cliffs of Otter sandstone up to 60 metres in height, but is fairly straight with a few small headlands. The path eventually reaches Ladram Bay, a delightful secluded bay with a flint and chert pebble beach. The main features here though, are the sandstone cliffs, caves, and impressive sea stacks. These structures contain numerous fractures and vertical joints that are eroded by the sea to form caves at sea level, which then develop into arches as the sandstone headland is attacked by wave action from both sides. The roofs of these arches eventually became so unstable they collapsed to leave the stacks we see at Ladram today. In 1925, the last arch in Ladram Bay collapsed to isolate a stack. Old postcards and photographs in the Pebbles restaurant show views of the old arches from the beginning of the 20th Century, and an excellent noticeboard in front of restaurant clearly explains how processes of erosion have shaped this landscape. Given time, the stacks themselves will be undercut and collapse as well, overcome by the force of the sea.

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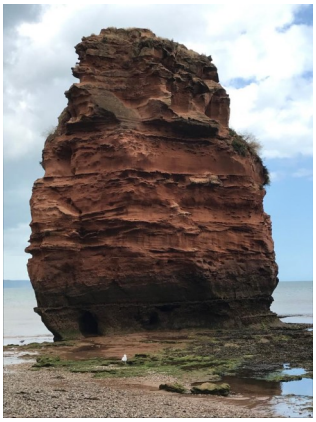


Sea Stack, Ladram Bay

It is interesting to consider why stacks appear here at Ladram, but not further along the coast. Certainly, faults and joints are more common here, and there are also hard beds of rock that form a tough platform on which the stacks sit, resisting sea erosion.

A wide wave cut platform is exposed at low tide at the far western end of the bay, leaving numerous rock pools to explore.

Cross bedding, Ladram Bay

The cliffs and stacks below the restaurant display superb examples of cross bedding. Here, thin curved layers in the rock cut across each other – a sign of either wind or river deposition. In deserts, layers of sand build up in dunes which then migrate and change direction with the wind. This creates a crisis-cross pattern. Changing river channels can produce the same effect, and this is what we see here at Ladram Bay.

The path from Ladram Bay to Sidmouth rises to the Upper Greensand rock of High Peak, where a modern plantation hides the evidence of an old iron age hill fort that once existed here. Glimpses of the red cliffs can be caught through the bushes and trees. On this stretch of the walk, the lower half of cliffs is made up of Otter sandstone which forms a vertical cliff face. The upper half of the cliff is Mercia mudstone, which is less resistant to weathering and erosion and produces a less steep profile. This rock contains a number of rare but important fossil fish, amphibians and reptiles that help us reconstruct past from 230 million years ago. Below High Peak are the impressive stacks of Big Picket and Little Picket.

The path descends from High Peak via an area known as Windgate to Peak Hill. All of this area is Mercia mudstone, and the route crosses many distinct hollows that provide evidence of old disused marl pits. Marl is mudstone with calcareous content, and is spread on fields to improve soil quality. The descent from Peak Hill leads into the town of Sidmouth. The path runs through the open Cliff Fields where numerous benches offer a chance to rest and enjoy the views to the distant chalk cliffs of Beer Head.

Sidmouth itself is framed by Peak Hill to west and Salcombe Hill to east. Before entering the town, and just before Connaught Gardens, it is worth descending the white steps of Jacob's Ladder to take you down to the beach. Here, you can see a large north to south trending fault extending out across foreshore - particularly obvious at low tide. To the west are Mercia mudstones, and to the east are Otter sandstones. Some cross bedding in the Otter sandstone can also be seen at foot of cliffs by Jacobs Ladder.

Complete your walk by strolling along the fine esplanade to reach the river Sid – confined into narrow space between a shingle ridge and sandstone cliffs just like river Otter.

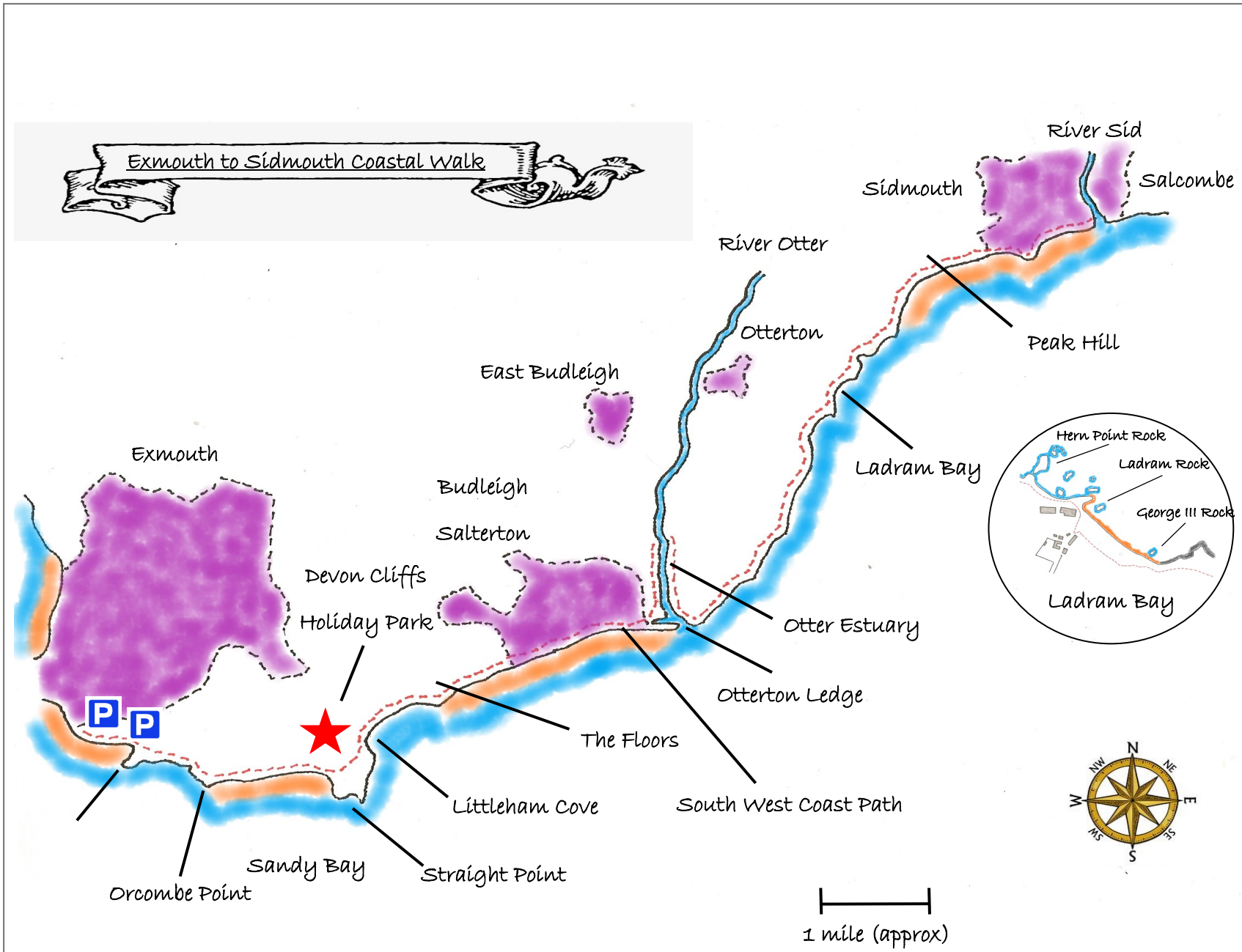
Answers to Curiosity Questions:

On top of the Budleigh Salterton pebble beds is a thin layer of red clay. On top of this are found quartzite pebbles with a more angular appearance. What are these pebbles called, and why do they appear this way? *(They are called ventifacts, and are formed by sand blasting in times of dry wind-blown stony desert)*

What is the local name for the Budleigh pebbles? *(They are known locally as 'popples' or 'Budleigh buns')*

What do the letters 'SSSI' stand for? *(Site of Special Scientific Interest)*

Why are cliffs along this walk red in colour? *(Due to oxidation of iron staining the geology – literally 'rusting' the rock)*



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