

Location & Access:

Portreath is located on the north Cornwall coast.

The B3300 road connects the village to the A30 road at the mining town of Redruth, just a ten minute drive away.

The main village car park is by the beach at SW 654453.

The 44C bus service links Portreath to the railway station at Redruth.



Portreath—photo: Paul Berry

Key Geography: Stunning section of the South West Coast Path that includes views of cliff geology, coastal management, an arch, a sea stack, and a chance to examine the industrial history of an ancient Cornish port town.

Description: Portreath is part of the Cornwall and West Devon Mining World Heritage Site. Tin streaming was recorded here from 1602, and the area played its part in the Industrial Revolution, with its growth and development closely linked to local physical geography and geology. In its heyday during the 18th and 19th centuries, Portreath was a busy port exporting copper and importing coal and limestone. It is now a centre for tourism.

The walk begins in the sea front car park (SW 654453), and from the top of the beach steps (S1) you gain a good overview of the cliffs, harbour and beach. The walk visits a number of interesting coastal landscape features before examining the industrial history of the area.

Walk down the steps to the beach, and turn left towards the surf life saving club (S2). In 1984, large clumps of the cliffs close to the building here collapsed into the sea after a long period of heavy rain. Signs on the beach warn tourists of the potential danger. Later cliff failure in 1995 threatened buildings and the road on the top of the cliffs, so a number of management techniques have been employed to protect them. Look for the sea wall of concrete sheet piles and rock-filled gabions at the base of the cliffs.



As you continue travelling west the cliffs (S3) gain in height, and expose the 400 million-year-old rocks of the Devonian period. The beds of rock seen in the cliffs dip seawards, and face constant erosion from high tides. Look for contorted layers of green-brown sandstones and siltstones with muddy shales and slates. There are also many obvious joints and *(continued overleaf)*

Curiosity Questions:

Part of this walking route follows the South West Coast Path. How long is this footpath in total?

Copper mining eventually declined in importance in Cornwall. What is the biggest copper producing country today?

Portreath is part of the Cornwall & West Devon Mining World Heritage Site. How many WH sites are there in the UK?

Further information:

Portreath geology guide & illustrated rock trails - a rock and stroll story by Adrian Marks
www.devongeography.wordpress.com/2022/01/27/portreath-a-guided-walk-to-investigate-beach-geography-and-industrial-history/

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faults in the cliffs. Differential weathering and erosion of rock types has created a series of ribs and indentations in the cliffline here. Generally speaking, the harder sandstones and siltstones protrude, while the less-resistant muddy shales and slates are more easily worn away.



Cliff faults —photo: Paul Berry

Vertical joints in the sedimentary cliffs are clearly visible below Battery House (S4). Some of these have opened up sufficiently to cause giant blocks of the cliff to rotate and collapse onto the beach below. Distinct quartz veining injected along the fault planes can also be seen here. In addition to protection from the sea wall, engineers have profiled the cliffs here and covered them with a textile layer to encourage vegetation growth.

Amey's Side (S5) is the site of former small-scale tin streaming operations working the beach sand. Sand rich in mineral ore was collected by horse-drawn carts and crushed using metal stamps before being separated in concrete structures known as buddles.

The original harbour for Portreath was built at the southern end of the beach (S6) - the opposite side to the present one. Little was known about it until 1983, when storms lifted the sand cover to reveal foundations. At low tide, three wooden posts are still visible.

Many caves and mini bays have been created in the cliffs at Western Hill due to the erosion at the fault lines. Look out for the rectangular slots cut into the rocks of the shore platform—these are old baths created by local landowner Sir Thomas Bassett for his daughter Frances, so she could bathe safely here and enjoy the scenery.

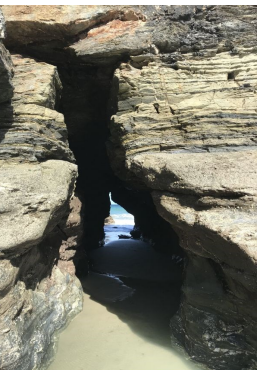
A cliff arch can be seen at S7, although it is often cut off from the beach by the incoming tide. Looking out to sea, the stack of Gull Rock stands proud (S8). At one time, this would have been connected to the mainland as part of a headland jutting out into the sea. Start to head northwards across the open beach (S9), and look out for the rich variety of pebbles, with sandstones, slates, granite, breccias, and quartz all represented.

At the east (harbour) end of the beach is a fine example of a wave cut platform, exposed at low tide (S10). A storm in 2016 exposed a petrified forest here (S11), that now emerges from below the sand every few years. It is the remains of a Neolithic (4000 year-old) peat bed that was created from a forest that grew here when sea levels were lower, and the coastline extended further out to sea. Rising sea levels submerged the forest and covered it with later sediments, eventually forming the peat bed that contained alder and oak tree trunks and branches.

It is now time to move inland, and explore the history of one of Cornwall's earliest industrial ports. A harbour was developed at Portreath in the early 1700s to export copper to south Wales (where coal was readily available) for smelting. Coal and limestone was shipped back in return. At its peak, around 100,000 tons of copper ore were exported annually from Portreath, which handled up to 700 ships a year in the harbour. By 1827, Portreath was described as Cornwall's most important port. However, copper production slumped in the 1860s, and ships began to sail out under ballast before returning with their loads of coal.

Return to the car park and descend the stone stairway at the far end (S12). This leads to New Dock, built around 1860 as the final addition to the harbour. This area is known as 'Little Beach' and ships were once built here. The sea wall defences date back to the 1950s, designed to prevent sea erosion.

Facing the New Dock is the Waterfront Inn (S13). Some of the original walls can still be seen in the pub, which also displays some interesting information boards about the old port. Lime kilns used to stand next to the pub,



Portreath arch —photo: Paul Berry

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making fertiliser from imported limestone. Some documents describe the pub as the site of the former Fish Palace, a pilchard processing works for a small-scale fishing industry that predated the copper and tin mining of the area.

Walk from the pub to the walls of the Outer Harbour Basin (S14). Construction began in 1801, with the walls built from local sandstones and shaped granite blocks. In 1824, the harbour was improved by extending a granite pier (originally built in 1760) into the sea. This was later broken up by the waves, and access is now fenced off. In 1846, as trading capacity grew, the Inner Harbour Basin (S15) was constructed from granite blocks.



Inner & Outer harbour —photo: Paul Berry

If you continue right around the harbour basins, you will eventually come to the old waterfront (S16). This was a storage area for the port, where ore was stockpiled in walled bays prior to shipping to south Wales. A path called New Walk cuts into the hillside behind the port, and was formerly used by mules and packhorses to bring ore from the mines to the town. One packhorse could shift 3 hundredweight of ore, and it took 1000 loads to fill a 150 ton schooner.

Heading towards the sea, you will come to the Old Harbour (S17), the centre for exported ores from 1760. First impressions might suggest that this was an unlikely place to site a harbour - this certainly is a perilous stretch of coast. Large swells and exposure to north-westerly winds make it very difficult to enter the extremely narrow harbour mouth, especially in winter.



Entrance to the old harbour

—photo: Paul Berry

Even so, in its day this was a bustling port, and the Old Harbour would have been wall to wall ships, with up to forty-seven 100 ton vessels moored up at any one time.

The backwall of the harbour used to be closer to the basins, but has been steadily cut back over time. A stretch of the old cliffline is visible at S18, and it is possible to identify layers of sandstones and slates along with numerous twisted quartz veins. The area has been recently landscaped, with a seating area and information boards added.

Steps nearby lead to a white building overlooking the Old Harbour, known locally as Dead Man's Hut (S19). This served as the lower pilot's look out, and gets its name from its reputed use as a temporary mortuary for victims of maritime disasters. Either that, or the fact that it marked the cliff-side (or dead man's side) of the harbour entrance. From the fenced wall next to the building is an excellent view across the water to the Old Harbour wall and breakwater pier.

Retrace your steps inland to take the track branching off to the left. Turn left to walk along Lighthouse Road, taking care of passing traffic. Pause at the sharp bend in the road to get a great view of the narrow and dangerous harbour entrance (S20). Continue uphill and at a finger post take the track to the left that leads to the lighthouse or Pepper Pot (S21). This old coastguard lookout was built around 1800, and offers an excellent view of the Old Harbour. From here you can pick out the Monkey House at the end of the pier, so called as it used to house ropes tied in monkey fist knots to weight them and allow them to be thrown easily and used as hobbles to guide ships into the basin. This building was destroyed in a storm in 2014, and since rebuilt.

Retrace your steps to the Inner Harbour and head for the war memorial in the town square. From here, walk southwards along Beach Road to a small granite bridge (S22). From here you can see the line of the old inclined railway. Originally, wagons were pulled by horses along an 1809 tramroad that connected to the mines of Poldice. In 1838, a 3.6 mile branch line of the Hayle railway connected with Portreath. The problem of the difference in height between terminus and harbour was solved by the 523 metres long inclined railway, which rises 73 metres at a gradient of 1:10. This linked Portreath directly to the mines of Camborne and Redruth, and ore brought by train was then lowered to the

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harbour in wagons linked by rope to a Cornish beam engine at the top of the incline called 'Lady Bassett'. This was later replaced towards the end of the 19th century by a smaller, rotary engine. There was a turntable at the bottom of the incline to help direct the wagons to north or south ends of the harbour. The trackline of the old inclined railway is still visible today, and forms part of the Mineral Tramways Coast to Coast cycle and footpath, which runs for 15 miles from Portreath to Devoran on the south coast, via the mining landscape of Poldice.

For your final stop, walk through the stone arch and along Glenfeadon Terrace to the Glenfeadon Hotel on the right hand side (S23). This was the site of an old smelting house and tin stamps, although nothing remains of this history today. Tin ore was crushed here by heavy hammers (stamps) and then smelted to produce ingots. Once cast, an emblem of the smelting house was imprinted in each ingot before it was sent away for further processing.

Opposite the hotel is a lane called Baines Hill, which will take you back to the main road. Turn left to return to the town square and then stroll back to the beach car park to conclude your walk.



Pepper pot —photo: Paul Berry



Portreath harbour and beach —photo: Paul Berry

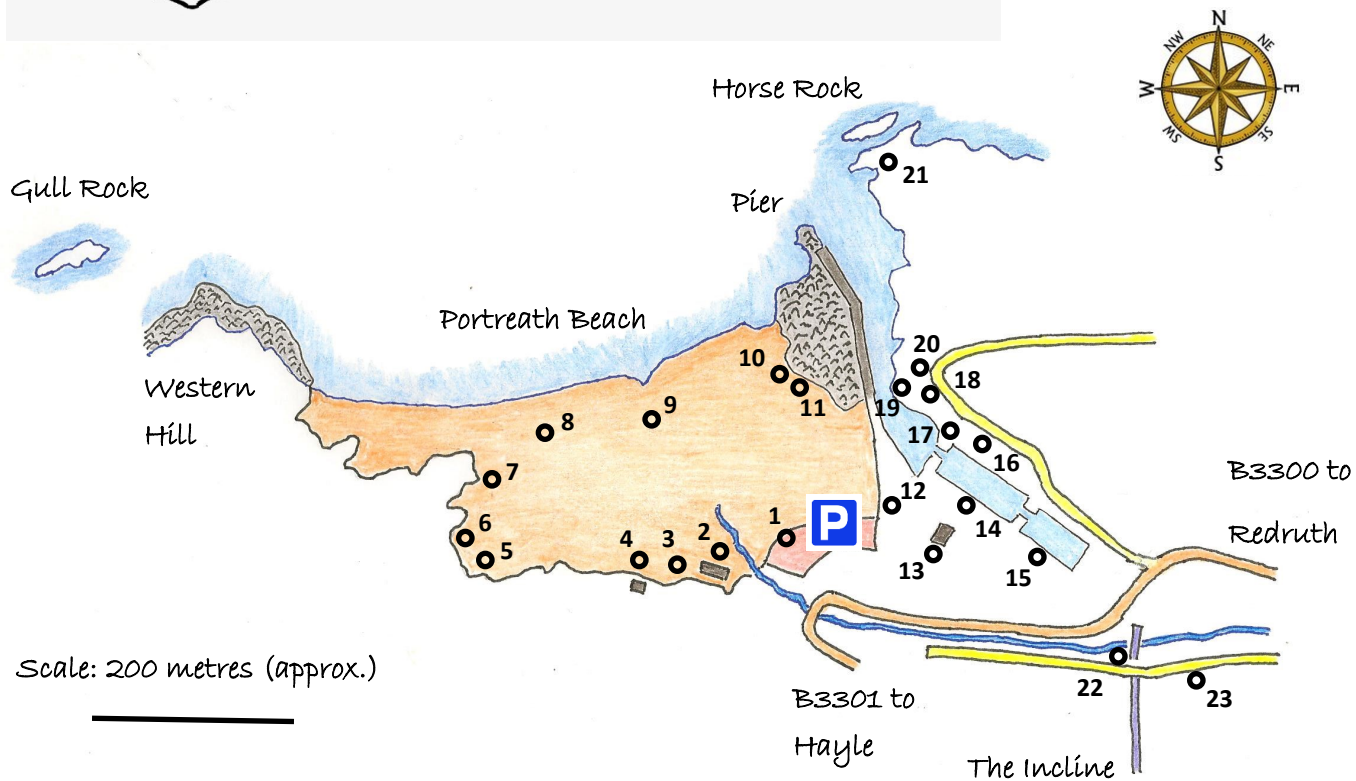


Caves below Western Hill —photo: Paul Berry

Answers to Curiosity Questions:

- # Part of this walking route follows the South West Coast Path. How long is this footpath in total? (630 miles)
- # Copper mining eventually declined in importance in Cornwall. What is the biggest copper producing country today? (Chile)
- # Portreath is part of the Cornwall & West Devon Mining World Heritage Site. How many World Heritage Sites are there in the UK? (33)

Portreath Beach & Industrial History Walk



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|--------------------------------------|--------------------------|-------------------------------------|
| 1 = Sea Front car park | 9 = Open beach | 17 = Old harbour |
| 2 = Surf life saving club & sea wall | 10 = Wave cut platform | 18 = Old cliffline |
| 3 = Cliffline | 11 = Submerged forest | 19 = Dead Man's Hut |
| 4 = Battery House Cliffs | 12 = New Dock | 20 = Old harbour view |
| 5 = Amey's Side | 13 = waterfront Inn | 21 = Pepper Pot |
| 6 = Original harbour | 14 = Outer harbour basin | 22 = Stone bridge & railway incline |
| 7 = Cliff arch | 15 = Inner harbour basin | 23 = Glenfeadon Hotel |
| 8 = View of Gull Rock | 16 = Old waterfront | |