



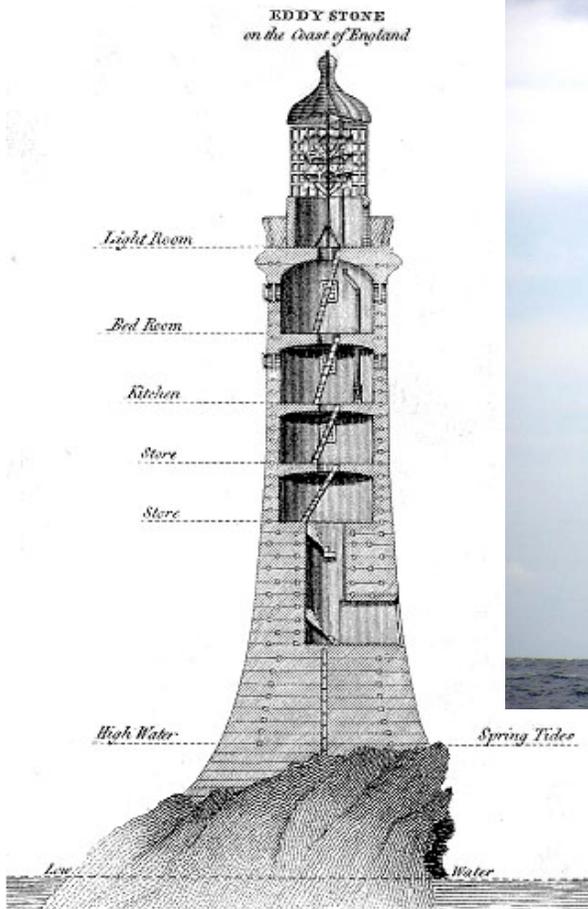
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Smeaton's Tower Lighthouse (Plymouth, Devon)





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The base of Smeaton's Tower still in position next to the current Eddystone Lighthouse

History

Smeaton's Tower is the third and most notable Eddystone Lighthouse. It marked a major step forward in the design of lighthouses. In use until 1877, it was largely dismantled and rebuilt on Plymouth Hoe in the city of Plymouth, Devon where it now stands as a memorial to its designer, John Smeaton, the celebrated civil engineer.

Smeaton was recommended to the task by the Royal Society and he modeled the shape of his lighthouse on that of an oak tree, using granite blocks. He pioneered the use of "hydraulic lime," a form of concrete that will set under water, and developed a technique of securing the granite blocks together using dovetail joints and marble dowels.

Construction started in 1756 at a site in Millbay where Smeaton built a jetty and work yard in the south west corner of the harbor for unloading and working the stone. Timber rails of 3 ft. 6 in. gauge were laid for the four-wheeled flat trucks on which the masonry was moved around the site. A ten-ton ship, named the *Eddystone Boat*, was based here and took the worked stones out to the reef. She carried the 2¼ ton foundation stone out in the morning of 12 June 1756. http://en.wikipedia.org/wiki/Smeaton%27s_Tower - cite note-MD-1



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The work was completed in August 1759, at a cost of £40,000. Many of the men employed in the construction were Cornish tin miners, and to avoid the possibility of press ganging, which was rife at the time, Trinity House arranged with the Admiralty in Plymouth that each man was issued with a medal to confirm that they were working on the lighthouse.http://en.wikipedia.org/wiki/Smeaton%27s_Tower_-_cite_note-TRI-0

After the build was complete, the lighthouse's illumination of 24 candles were first lit on 16 October 1759.^[1] While in use, Smeaton's lighthouse was 72 feet high, and had a diameter at the base of 26 feet (8 metres) and at the top of 17 feet (5 metres). It remained in use until 1877 when it was discovered that the rocks upon which it stood were becoming eroded: each time a large wave hit the lighthouse shook from side to side.

The upper part was dismantled and rebuilt as a memorial to Smeaton on a new base on Plymouth Hoe in 1882,^[5] replacing the triangular obelisk that had been built there by Trinity House as a navigation aid in the early 19th century. It was opened to the public by the Mayor of Plymouth on 24 September 1884.

The foundations and stub of the old tower remain on the Eddystone Rocks, close to the current lighthouse;http://en.wikipedia.org/wiki/Smeaton%27s_Tower_-_cite_note-MAJ-2 the foundations proved too strong to be dismantled so the Victorians left them where they stood.

Current Use

Smeaton's tower has been a Grade I listed building since 1954.http://en.wikipedia.org/wiki/Smeaton%27s_Tower_-_cite_note-loE-4 It is open for visitors who may climb the 93 steps, including steep ladders, to the lantern room and see the views of Plymouth Sound and the city.

Location

