

Forgotten lighthouse hero hailed at last

New research reveals Georgian engineer helped design Bell Rock tower alongside Robert Stevenson. By Mark Macaskill

IT is widely regarded as one of the greatest engineering feats of the 18th century. New research, however, suggests that the man credited with building the world's oldest rock lighthouse off the east coast of Scotland played down the contribution of a colleague.

Robert Stevenson, the grandfather of Robert Louis Stevenson, the Scottish writer, is widely acknowledged as the genius behind the Bell Rock lighthouse, which stands 11 miles off the Angus coast on a treacherous sandstone reef at Bell Rock, also known as Inchcape.

Despite being pounded relentlessly by the North Sea for 200 years, it has not required a single repair to its stonework.

Professor Roland Paxton, an academic at Heriot-Watt university, has unearthed previously unpublished documents that reveal John Rennie, an eminent engineer of the late Georgian period, played an important role in the construction of Bell Rock.

They include a progress report by Rennie that was omitted from an official account later compiled by Stevenson.

Paxton, the author of a new book, *Dynasty of Engineers: The Stevensons and the Bell Rock*, which was published last week, said the omission meant Rennie's contribution to the lighthouse's design and construction was overlooked.

He said Rennie designed the structural and hydraulic features of the tower, including "cycloidal" curves at the base to dissipate the energy of the waves upwards. The feature was not part of Stevenson's original design.

According to Paxton, Rennie also reduced the width of the tower by 20% to cut the surface area that would be exposed to the waves. "This is the first time the report has been

published and reveals the full extent of Rennie's contribution," said Paxton.

"The significance of Rennie's progress report is that its omission by Stevenson made it look as though Rennie played much less of a role than he actually did.

"It undoubtedly deprived readers at the time, and since, of the opportunity of appreciating Rennie's role in the design and early construction of the lighthouse. This is not to diminish Stevenson's role, but I do think Rennie has been largely ignored."

The question of who deserved credit for Bell Rock sparked a dispute between the two engineers and their families that lasted several decades.

In 1814, three years after the lighthouse was completed, Rennie confided in a private letter that he thought Stevenson was attempting to claim sole credit for Bell Rock.

In 1824, the definitive account of the lighthouse's construction, dedicated to King George IV, was published by Stevenson.

It purported to contain all the engineer's reports, but one submitted by Rennie in 1809 when the tower was 60% com-

plete, was left out. It proved that Rennie was closely involved throughout the project. Rennie, however, could not challenge the omission as he had died three years earlier, in 1821.

In 1848, Rennie's son, Sir John Rennie, wrote a book in which he asserted his father's key role in the design and construction of Bell Rock. It prompted a "pamphlet war" between the two families, each attempting to publicly claim credit for the lighthouse.

Stevenson died in 1850, but towards the end of the century, Robert Louis Stevenson published a book, *Records of a Family of Engineers*, in which he stated that Rennie played no part in the design or execution of the Bell Rock project and received no payment.

It emerged many years later that Rennie received about £450 for his work on the lighthouse.

Last week, James Will, the great, great, great grandson of Robert Stevenson, welcomed Paxton's research. "Roland is a highly regarded authority and his contribution through his new book is very valuable."

"In the 19th century, the Rennie and Stevenson families did have some fierce public disputes, but that was all a long time ago. What matters now is that both played their part in the creation of one of the wonders of the modern world and that both were great men."

The granite tower, which stands 115ft high, has saved countless ships from peril and still remains an essential life-saving aid to navigation, despite advances in radio and satellite technology.

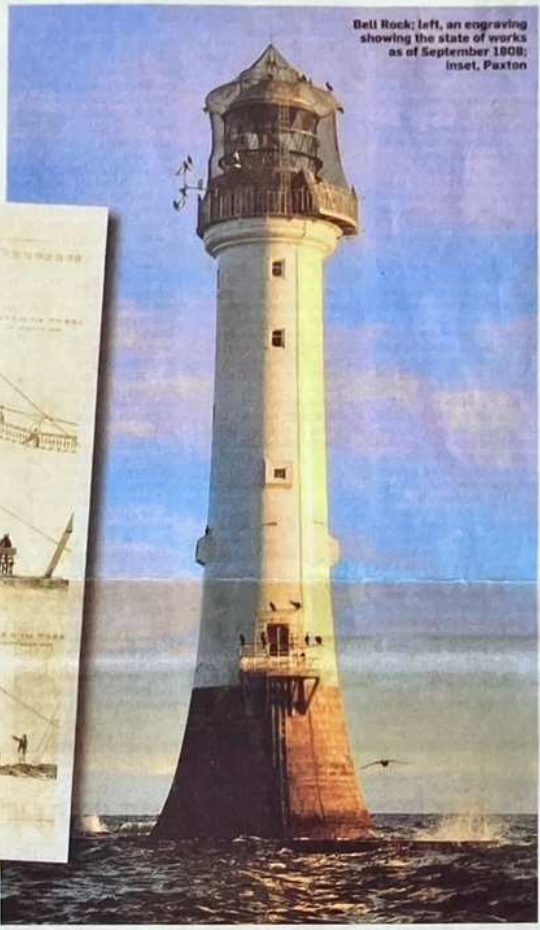
Before the lighthouse was built, Bell Rock wrecked many ships and claimed thousands of lives. Monks from Arbroath tried to raise a warning bell but nothing survived on the rock.

Construction on the lighthouse started in 1807 and it took four years to build. The lighthouse claimed five lives during its construction.

Last week, the bicentenary of Bell Rock was celebrated at a function at Holyrood Palace in Edinburgh, attended by the Princess Royal.



Bell Rock; left, an engraving showing the state of works as of September 1808; inset, Paxton



“**BOTH PLAYED THEIR PART IN CREATING A WONDER OF THE MODERN WORLD**”