The transformation of the bulk coal-carrying ship (collier) *Earl of Pembroke*, built at the industrial port of Whitby, England, into the exploration vessel *HM Bark Endeavour* was a costly, and some thought unwise choice when the ship was chosen to make a scientific journey to Tahiti in order to observe the Transit of the planet Venus across the Sun in June 1769. The *Earl of Pembroke* was purchased at a cost of £2800 and a further £5394 was spent on the hull, masts, yards, furniture and stores.

The ship had been built by traditional methods. The hull was designed to ‘take the ground’ – support its weight when the tide fell to allow loading and unloading or repairs below the waterline. Hard, durable oak was used for the frames, planks and deck beams. Pine was used for the decks and masts and the keel was made of elm. There was no glue or screws and few nuts and bolts. Much of the ship was held together with tree-nails (pronounced trunnels). Below the waterline was a sacrificial skin of thin planks fastened with large headed nails covered with oak planks. Between these two layers of wood a paste of old rope, animal hair and tar slowed the damage of wood eating shipworms which attacked a ship during long ocean voyages.

When the ship was purchased by the British Admiralty and converted to *HMB Endeavour*, a mess deck was needed to house the crew and it was placed on the original beams of the cargo hold – the only place that a deck could be placed. This area was re-organised again when Joseph Banks and his eight men and servants came aboard with their stores, furniture and equipment. After paying £10000 for the adventure, Banks and his men took over the Great Cabin - by rights the private area of the captain – and the officers’ cabins, for their study, work and eating area.

The officers were then moved to much smaller cabins on the lower deck. Despite these renovations, the ship was described as a cargo ship or box with sails and in Rio de Janeiro, Cook had trouble convincing the Portuguese officials of his British Navy status.
The ship was victualled (supplied with food and other stores), for 18 months. Cook took on fresh food and water at every port. He also replaced the crew members lost when accident or illness reduced their number.

The newly named *HM Bark Endeavour* was carrying the newest technology, experienced navigators, one of the wealthiest men in Britain, scientists and artists, marines and servants. 94 men and boys set forth from Tahiti to look for the *Terra Australis Incognita*, or unknown southern land. This large landmass was supposed to exist in the southern oceans between the latitudes of 40°S and 60°S. Finding it was a matter of prestige for the British because the French, their colonial rival, were expanding their exploration and interests in the Pacific.

Almost three years later, on 12th July, 1771 this 32m long, 8.92m wide wooden ship dropped anchor in London. While Lieutenant Cook was promoted to Captain and Joseph Banks and Dr Solander were feted as celebrities; within a week of her return to England, the *HM Bark Endeavour* was refitted as a naval transport. She was then sold in 1775 and renamed the *Lord Sandwich*. After extensive repairs, in February 1776 the ship became a troop transport to carry soldiers to North America to help defeat the rebels during the American Revolution. Between 3 and 6 August, 1778 the *Lord Sandwich*, along with a fleet of old and surplus vessels, was scuttled in Newport Harbour in an attempt to blockade the harbour from the French ships carrying support for the revolutionaries.

Maritime archaeologists are currently working to identify the timbers of a wreck which could be the *HM Bark Endeavour* – the small ship that played such a significant role in the exploration of the Southern Hemisphere.