

Granite Quarrying and the Haytor Granite Tramway

Dartmoor Poster

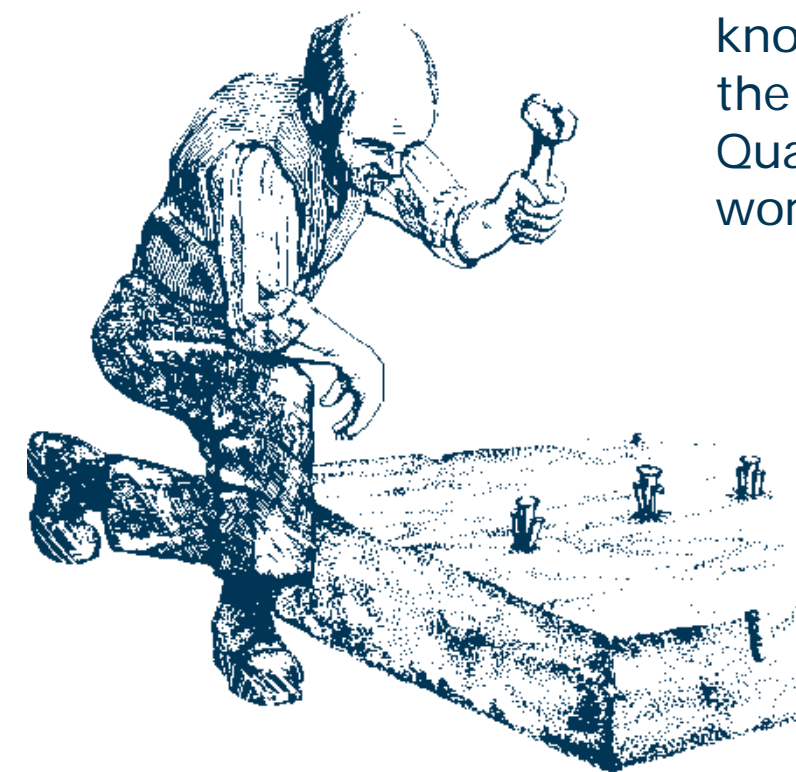


Dartmoor granite has been used by people for thousands of years. Prehistoric communities used it to build their houses and ritual monuments. In medieval times through to today farmers have used granite for their buildings (including medieval Dartmoor longhouses, many of which survive to the present day) and for banks and walls using surface stone cleared from the land.

However, it was not until the early 19th century that Dartmoor granite was quarried and became a commercial product, going further afield than Dartmoor. The Plymouth breakwater, though constructed of limestone, was faced with granite from Heckwood Quarry west of Princetown. The granite from there and other massive quarries in that area was transported on the Plymouth and Dartmoor Railway, built in 1823 using cast iron rails, granite sleepers and horsedrawn wagons.



1 Using a 'jumper' (a weighted, one-person operated drill), a line of holes was drilled approximately four inches deep and six inches apart.

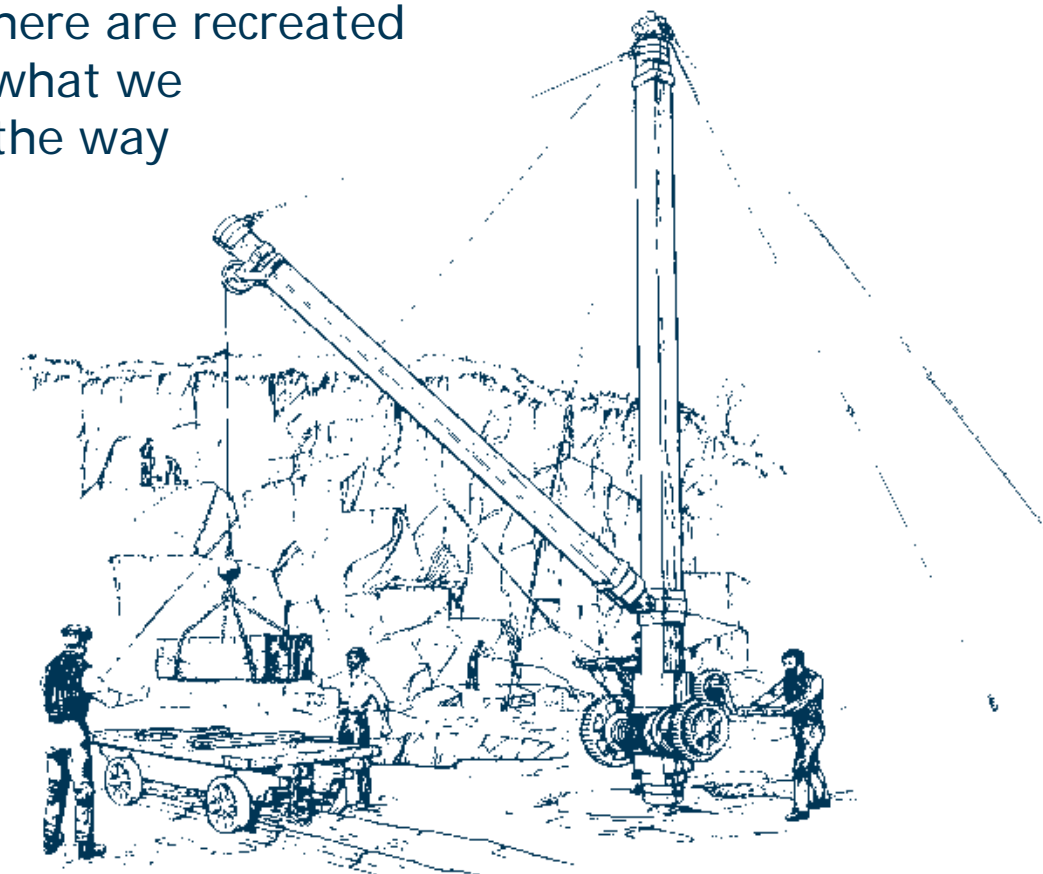


2 Once the line of holes was drilled, a tapered plug called a *tare* was driven into each hole between two curved slivers of metal known as feathers. By tapping on each of the tares in turn a line of stress was formed causing the block to split along that line.

On the eastern side of the moor was another large quarrying complex at Haytor. From here granite was transported on a granite tramway to the canal at Stover and thence to Teignmouth. Most of this granite went to London for the construction of some famous buildings, the best known of which was London Bridge. This old bridge now stands as a tourist attraction in the Arizona Desert!

The 1830s and 1840s were a boom time for the Haytor Quarries but in the latter half of the 19th century the market was captured by the western quarries such as Swell Tor and Foggintor. The last quarrying at Haytor was in 1919 when it was reopened to build the Exeter War Memorial. Merrivale was the last of the larger working granite quarries on Dartmoor and granite from here was used to construct the Falklands Memorial.

The pictures here are recreated mostly from what we know about the way the Haytor Quarries worked.

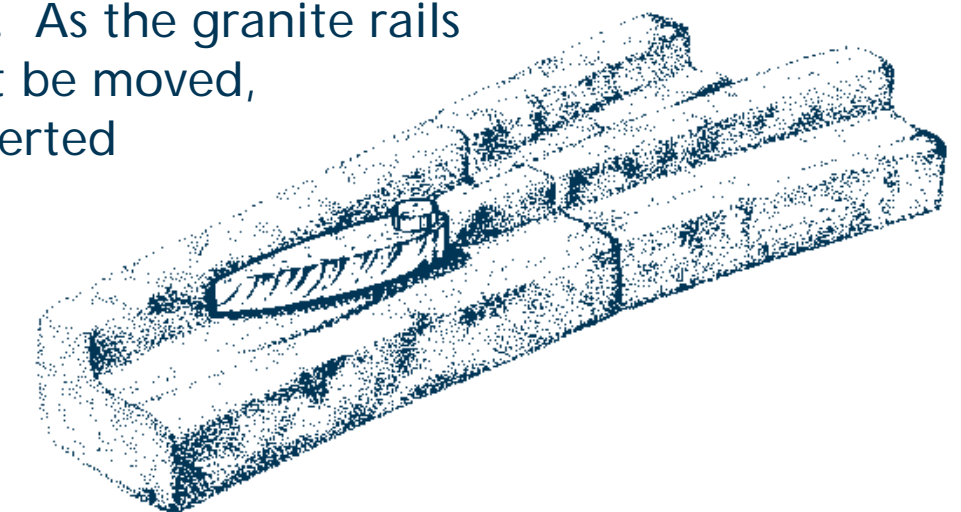


3 The large blocks of granite were lifted onto flat-topped trucks by means of a derrick (remains of the derrick illustrated can be seen at Haytor Quarry). This was operated by hand and had two gear trains. The whole unit pivoted on a metal bearing sunk into the granite (still visible), the top being held vertical by metal rods which were joined to allow flexing under the load.



4 The loaded trucks ran downhill from Haytor to Ventiford on the Stover Canal, but they had to be brought uphill from Holwell Quarry. Teams of horses were used to pull trains the short distance up from Holwell to the point where gravity could take over. The trucks had no brakes but braking was carried out by levering long poles against the wheels.

5 At various places along the line there were sets of points. As the granite rails could obviously not be moved, the trucks were diverted using a metal shoe which levered the wheels over to the desired direction.



6 On reaching the canal, the granite blocks were transferred to barges using a wooden derrick. Whenever possible, sails were used to power the barges. The barges transported the granite to Teignmouth where it was transferred to cargo ships for the journey to London and elsewhere.

For further information, and a list of other Dartmoor Posters and Fact Sheets available, contact the:
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