

## West Somerset Railway Brendon Hill Incline

The West Somerset Mineral Railway, constructed under an Act of 1855, was one of the more unusual of Britain's minor railways. Iron ore has been mined intermittently on the Brendon Hills for the past two thousand years, but it was not until the 1850s that the iron mines became part of a significant industrial enterprise. This was as a result of the Ebbw Vale Company, established sixty years earlier, developing the mines. The line was opened in stages from Watchet on the Somerset coast to Comberow, a hamlet some six miles to the south at the foot of the Brendon Hills. In order to reach the ironstone mines at the top of the hill, an incline was constructed. The incline is a spectacular example of Victorian engineering lifting the railway 800ft to the top of the hill. It was constructed between 1857 and 1861 to provide a vital link between the iron mines of the Brendon Hills and the harbour of Watchet. It was a uniform gradient of 1 in 4 and was just over one kilometre in length. The Winding House at the top of the Incline contained winding drums which lowered wagons of iron ore down the slope, at the same time hauling empty wagons back to the top. Although not completed until 1861, the haste to despatch iron ore along the railway was such that the incline was opened to traffic in May 1858.



*Above left: a wagon load of ore being discharged by hand into a waiting vessel at Watchet harbour in 1862. (photo ID 1855). Above right: The Incline, c. 1870. The fireman fills Pontypool's tank from the water crane. Passengers waiting to ascend have climbed aboard a lightly loaded three plank wagon. Photograph courtesy of Mike Jones and WSM.*

Ore was sent over the Bristol Channel to the Ebbw Vale Ironworks in South Wales. The ore found in the Brendon Hills was low in sulphur and phosphorus, but rich in manganese, which meant it was valuable for making Bessemer steel. By the 1870s, more than two hundred men from Wales, Somerset and Cornwall were employed in the mines and on the railway, and they formed new communities along the 'Old Mineral Line'.



The mineral railway line at Watchet harbour Image from Peter Dale

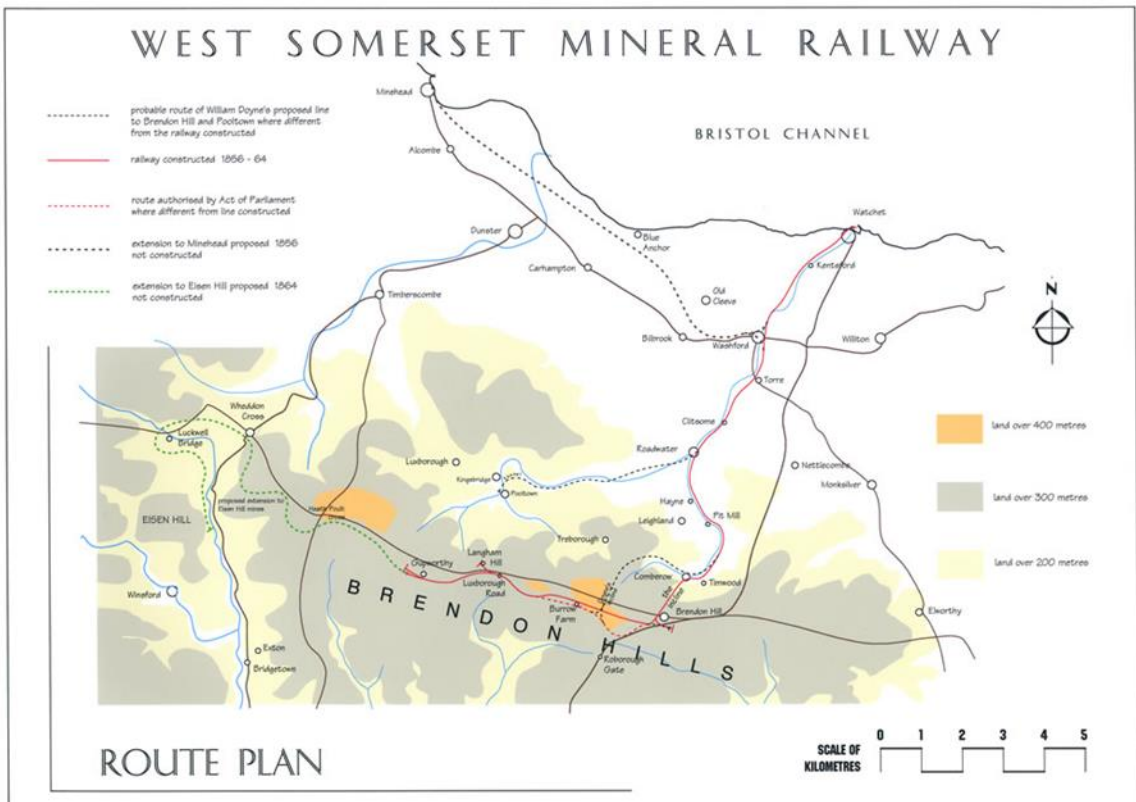
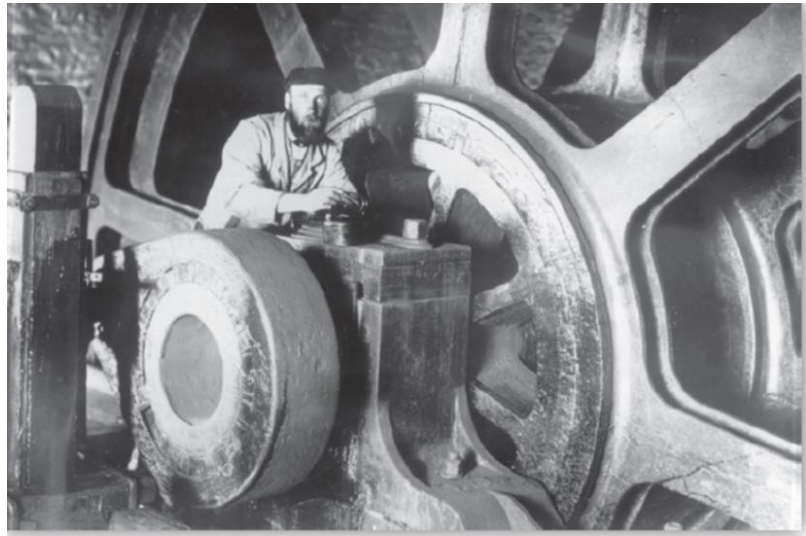
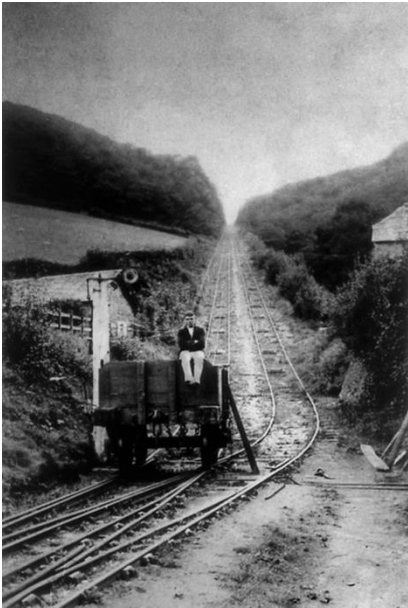


Image courtesy WSMMLA

From the top of the incline, the railway was extended westwards in 1864 to serve other ironstone mines. Although built specifically to transport ore, the railway was opened to passengers in 1865 with four trains daily between Watchet and Combe Row. Stations were opened above the incline westwards to Gupworthy. However, operation of passenger trains was not allowed on the incline so passengers were carried unofficially up the hill at their own risk.



*Above left: A passenger on a three plank wagon waits to be hauled up the incline, probably in 1897. The trackbed is once more overgrown. (photo ID 1745) Above right: In the 1890s, the machinery was operated by the winding engine driver Jimmy Hoil. The triangular crank you can see in the photograph attached to the eastern end of the drum's axle meant that as the drums turned, the water was supplied to the locomotive and stationary pumping engine.*

However, recessions in the demand for iron ore, due to imports of cheaper foreign ore and a general fall in production of the industry, caused a reduction in the activity on the railway after 1883. In 1898 the railway was closed although there was a brief reopening of the mines by a syndicate between 1907 and 1910, using the lower section of the railway, the incline and a yard close to the head of the incline.



*The reopening of the West Somerset Mineral Railway July 1907. Image from Peter Dale*

The westward extension was not reopened. The railway was last used between 1912 and 1914, and after this the railway was abandoned, the track being lifted in 1917-1918. The winding drums were dynamited in 1917, which destroyed the east and west walls of the Winding House. They were rebuilt and secondhand windows put in during the Second World War as part of a scheme to convert the building to agricultural use.



*Above left: The repaired West Somerset Mineral Railway Incline Winding House in June 2009 seen from the east. (photo ID 1721). Above right: Bearland Wood Ventilation Chimney. The Bearland Ventilation Flue is the only one of its type in south west England. It was used to remove foul and poisonous gases from the mines. Photograph courtesy ENPA*

Elements of the line are still visible, although some of it is private property. All that can be seen in Watchet itself is the old station house, goods shed and water tower as the rest has been redeveloped. The line runs parallel to the West Somerset Railway from Watchet to Washford, then curves south west, partly in the form of a road, past Cleeve Abbey and Roadwater village to Combe Row. The yard that was at the foot of the incline can be identified at Comberow, to the west of the bridge that carried the incline. Currently, many traces of the line remain, the old track being easily passable for much of its distance. At Lower Roadwater another crossing keeper's hut survives and is still lived in. The station building is now a house while the goods shed is used as a garage; the station platform is intact, while the girders of a third bridge over the river still exist at the southern end of the station. For the rest of the way to Comberow, the track is quite clear, being used for forestry and farm access. Although the foot of the incline is densely overgrown, it can be bypassed and the track bed regained. At the top of the incline the line emerges on to an embankment and levels off some 20ft higher than the surrounding fields. All the bridges have been removed on the four mile upper section. The course of the line to Gupworthy is easy to discern, though badly overgrown in many places. The buildings of two of the ironstone mines, at Burrow Farm and Langham Hill, still stand. Luxborough Road station is a ruin. At Gupworthy there is a chapel erected for the miners and a short distance further on is the terminus, now a farm.

Between 2001 and 2003 the Exmoor Mines Research Group undertook an excavation of the floor of the Winding House to investigate how the Incline had operated and what equipment had been installed in the building. The group exposed the drum anchor bolt holes, which can now be seen on the floor of the Winding House. In 1998 Exmoor National Park Authority purchased the track bed of the incline, and it was scheduled as an Ancient Monument. In 2009 the award of a Heritage Lottery grant enabled conservation work to be undertaken on the Incline and Winding House to protect the archaeology of this Victorian engineering. Watchet Market House Museum has a working model of the Incline, as well as a model of the Lizzie, which transported iron ore to Wales.

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**Many of the images in this article and most of the information have been used courtesy of the West Somerset Mineral Line Association.** The Middleton incline engine house in the Peak District still has a working engine, if you're interested to see one in operation. Further information can be found using the links and literature below.

**Links:**

<http://www.wsmr.org.uk/index.php> <http://www.westsomersetmineralrailway.org.uk/>  
<https://www.nationaltransporttrust.org.uk/heritage-sites/heritage-detail/west-somerset-mineral-railway>  
<https://www.exmoorher.co.uk/Monument/MSO9229>  
<http://www.hows.org.uk/personal/rail/incline/hop.htm>

**Further reading:**

Sellick, R.. 1970. The West Somerset Mineral Railway and the Story of the Brendon Hills Iron Mines. David and Charles Limited.

Report: Jones, M.H.. 1995. Notes on some of the Brendon Hills Iron Mines and the West Somerset Mineral Railway.

Atkinson, M (ed), Exmoor's Industrial Archaeology, (1997), 150-2

Dale, Peter: Somerset's lost Railways. Stenlake Publishing 2001.