

## 2-4 The Great Little Trains of Wales

### Penrhyn Quarry Railway

The original railway was built in 1798-1801 for horse-drawn wagons and included three inclines (steep cable-drawn railways to lower trucks down from the quarry). Trains of up to 24 wagons, each carrying a ton of slates, were hauled along the railway by teams of two or three horses. The construction of a standard gauge branch from Bangor to Bethesda threatened to offer minor quarries in the Ogwen valley cheaper transport for their slates, so Baron Penrhyn was forced to improve his transport route and the 1 ft 11 in gauge line was upgraded to allow steam powered trains in 1879. The line closed in 1962.



*Locomotive Charles at Penrhyn Castle*

### Dinorwig and Padarn Railways

While the Penrhyn quarry tramway began operation in 1801, slate from Dinorwig was being hauled down by sledge to Llyn Padarn and transferred to horse-drawn carts at the end of the lake. In 1809 Thomas Assherton-Smith took control of the quarry, with the business expanding rapidly. However, it was 1821 before a horse-drawn tramway was constructed to carry slates to Port Dinorwig on the Menai Straits. With a difference of 1000 feet between the quarry and the port, nearly twice that at Penrhyn quarry, the tramway required significant inclines.

This route started high up in the quarry, but became redundant when Assherton-Smith built the Padarn Railway. This four-foot gauge line was initially horse-drawn with wagons being lowered the last 300 feet to the dockside down an incline. Steam locomotives were introduced in 1848. Passengers were never carried, but quarrymen travelled the line using human-powered vehicles. An example of one of these can be seen at the National Slate Museum. The line closed in 1961.

Ten years later, a short length re-opened alongside the lake for tourists, extending into Llanberis in 2003. Once again, the three original Dinorwig quarry locomotives – Dolbadarn, Elidir and Thomas Bach – steam through the preserved quarry workings of Gilfach Ddu and the visitor can enjoy a five-mile trip beside the lake.

### Snowdon Mountain Railway

When plans were put forward for a railway to the top of Snowdon from Rhyd Ddu, there were fears that Llanberis would lose its tourist trade. Local landowner George William Duff Assherton-Smith, who owned Dinorwig quarry, allowed his land to be used for a competing proposal: on 16 November 1894 the Snowdon Mountain Tramroad and Hotels Co Ltd was formed.

*Snowdon Mountain Railway*

The railway used a rack and pinion system patented by a German engineer, Dr Roman Abt. Five steam engines were bought from Switzerland and four of these original locomotives are still at work: Enid, Wyddfa (Welsh for Snowdon), Snowdon and Moel Siabod.

## Welsh Highland Railway

Owners of slate workings near Beddgelert had high hopes, even though their businesses were dwarfed by mighty Penrhyn and Dinorwig. Many companies built short sections of railway, or aspired to do so, but it was the Portmadoc, Beddgelert and South Snowdon Railway that gained most momentum. In 1903, this company purchased the North Wales Power & Electric Traction Company with the aim of using electric traction on their steep inclines.



*Welsh Highland Railway*

By 1906 much of the trackbed and tunnels had been prepared with hopes of linking Porthmadog with Caernarfon. This project became the Welsh Highland Railway, which opened fully in 1923, and ran using 50-year old rolling stock serving a sparse population and a dwindling slate industry. The railway limped from crisis to crisis, eventually going into receivership in 1933 and liquidation in 1941.

In the meantime, the line lay in the hands of the receiver and the trackbed was never undesignated as a railway. In 1998, the Ffestiniog Railway Company (FRC) commenced restoration. The completed line now extends from Caernarfon to FRC's Porthmadog station making it possible to travel all the way from Caernarfon to Blaenau Ffestiniog by narrow-gauge railway. The restoration project was a massive endeavour involving professionals and volunteers, with rail purchased from India and huge Beyer-Garrett steam engines from South Africa.



## Ffestiniog Railway

This railway opened in 1835 as a horse-drawn tramway. The wagons were taken up and over the hill west of Tanygrisiau lake on two inclines. These were superseded by the Moelwyn tunnel which bore straight through the hill in 1842. This gave the railway a downward gradient all the way from Blaenau Ffestiniog to the Cob, a narrow causeway across the Glaslyn estuary in Porthmadog. Trains of up to 100 wagons rolled down the line under gravity, carrying horses to take the train over the Cob and to haul the empty wagons back up to Blaenau Ffestiniog.

The Ffestiniog Railway allowed the remote village of Blaenau Ffestiniog to become a major international supplier of slate and let Porthmadog develop as an important regional port. With the construction of a standard-gauge line to Porthmadog from the south, the Ffestiniog Railway saw the potential and adapted the line for steam passenger services. By 1865, the slogan was 'Breakfast in Blaenau – Tea in London'. 1863 saw the introduction of the unusual Double Fairlie locomotives, of which Myrddin Emrys (built in 1879 in Boston Lodge, Porthmadog) is a fine example.

The line closed in 1946 but was re-opened over the following 10 years and in 1958 it reached Tan y Bwlch. In the mid-1950s, Tanygrisiau reservoir was extended as part of a pumped storage hydro-electricity scheme, flooding the railway and its tunnel. Not to be thwarted, in the early 1970s volunteers constructed a spiral section of track near Dduallt to gain height, and built a diversion above the lake to re-join the original line at Tanygrisiau near the Lakeside Café.

*Ffestiniog Railway*

