

28) Portmadoc

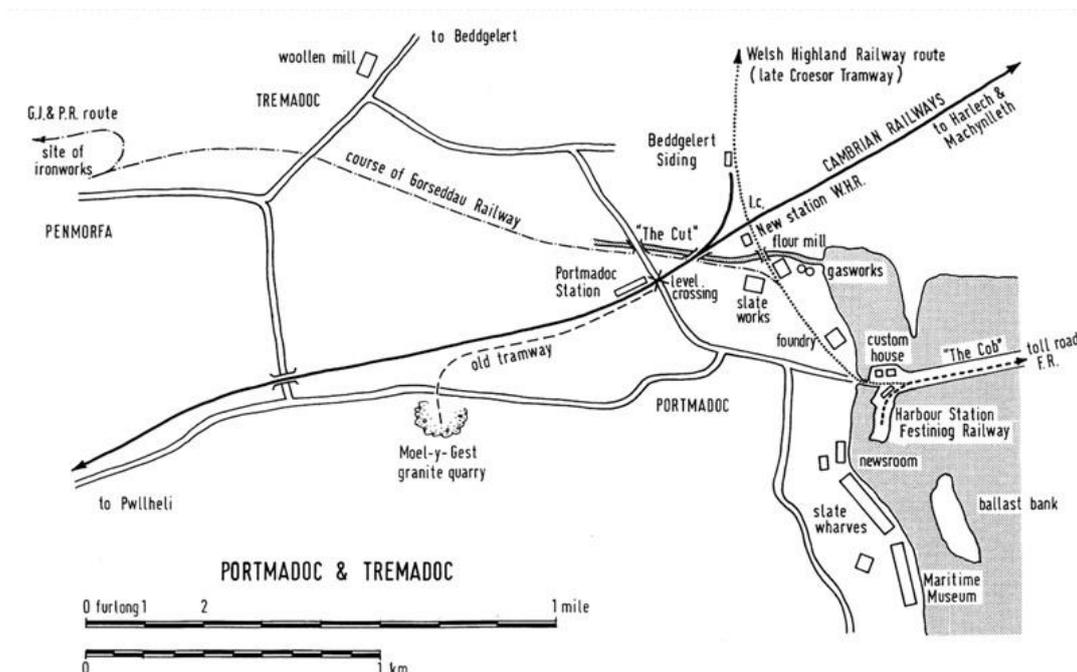
The town of Portmadoc is of particular interest to the industrial archaeologist. From virtually nothing at the beginning of the nineteenth century, it was developed into a town and harbour of considerable importance by the end of that century, only then to decline again to an unexceptional, somewhat parochially minded market town fifty years later.

At the turn of the nineteenth century, this area would have appeared vastly different. Not only was the town of Portmadoc non-existent, but also the site was a mere projection of rock and marsh on the edge of a large estuary extending as far inland as the Aberglaslyn Pass. It was at this time that William Alexander Maddocks, a local landowner, decided as a result of experiments in the Tremadoc area to construct a huge embankment across the estuary. By doing this Maddocks hoped to drain and cultivate this vast area, thereby adding about 2,000 acres to his estate.

The construction of the embankment was also to lead to greatly improved communications between Merioneth and south west Caernarfonshire, as previously a very lengthy detour around the estuary had been necessary. Maddocks' main interest in this aspect of the scheme was as part of a road link to his projected port at Porthdinllaen on the north coast of the Llyn peninsula. Work on the embankment was started in 1808 and completed in 1811 after overcoming many difficulties. It can still be seen crossing what remains of the estuary, now carrying the line of the Festiniog Railway. The lower part occupied by the present road was added in 1836 as a result of the construction of the railway. The building of the causeway and the siting of sluice gates at the northern end resulted, it was found, in a silt-free channel being scoured out on the seaward side, and it became apparent to Maddocks that this would make an ideal site for a deep-water harbour. By this time the slate quarries twelve miles inland at Blaenau Ffestiniog were being developed, and a nearby harbour capable of taking deep draught vessels was considered highly desirable, since most slate had to be shipped out by sea. Thus the town of Portmadoc was born.

The first parts of the harbour were finished in 1824, and from that date until late in the century the port and town of Portmadoc developed apace. The principal traffic handled was always roofing slates, but incoming coal, materials for the quarries and provisions for the local communities were also important cargoes from the earliest days. With its growth as a shipping centre Portmadoc boats came to trade all over the world; later in the century they were to dominate, amongst others, the Newfoundland salt fish and West Indies' phosphate trades. As a result of the two main activities of quarrying and shipping, numerous associated industries and trades were set up in the town to supply their many and varied needs. However, after the turn of the century Portmadoc shipping interests declined, mainly as a result of railway competition, and by the late 1940's the town could no longer be regarded as a port.

Our plan shows the main features of interest.....



Strangely, we took very few photographs in this area, apart from on the Festiniog Railway!

Much of interest dating from the heyday between the 1860's and 1880's can still be seen around the harbour area. The long slate stacking quays are still prominent although modern building has encroached upon parts of them. Once they were covered in a criss-cross pattern of narrow gauge railway lines running between neatly stacked piles of slates. Some of these stacking and loading quays were under cover and several of the sheds can still be seen, now used mainly by boatyards and chandlers. In the shed now belonging to the Gwynedd Marine boat-yard in Lon Cei (568379) the roof timbers are supported on large iron pillars which were cast in Portmadoc by J.H. Williams & Sons. Just to the south the Portmadoc Maritime Museum has been established in part of one of the sheds, where a selection of photographs and other exhibits relating to Portmadoc shipping is on display. Visitors to this museum can also go aboard the ketch "Garlandstone" moored at the Oakley No 3 slate wharf. The "Garlandstone" was built at Calstock on the River Tamar in Cornwall between 1905 and 1909, the very last sailing vessel to be built on the south coast of England. She traded to Portmadoc on a number of occasions and evokes some idea of the late nineteenth century scene when dozens of vessels like her could be seen berthed in the harbour.

Portmadoc's involvement with ships also extended to their construction; the slipway opposite the museum marks the site of one of the several boatyards. Shipbuilding started soon after the establishment of the port in 1824, and from then until 1913 when the last was completed, 263 vessels of all types were turned out here. These included the "Western Ocean Yachts" which, built around the turn of the century, are still considered by many to be the finest development of the small merchant sailing vessel.

Towards the end of Lon Cei, space for the wharves had to be blasted out of the solid rock of the cliff-face. The large steel crane now standing here was erected fairly recently in connection with the handling of materials for the nuclear power station at Trawsfynydd. Going back towards the town centre, a two-story building overlooking the harbour may be seen on the right at the point where Lon Cei widens into Pen Cei. This is the Portmadoc Newsroom, whose upper floor is reached by an external flight of eleven stone steps. Here was posted news of Portmadoc ships from all over the world, and it thus became an important meeting-place for ship owners and managers. Across the road are two large general warehouses, now adapted for other uses. On the quay to the rear of the Harbourmaster's office is found a relic of an early gas lighting installation for the quays. This is an old cast-iron lamp standard with the cast lettering "Thomas & De Winton 1857", the suppliers being a precursor of the famous Caernarfon foundry of De Winton & Co.

At one time each major slate quarry in the Ffestiniog district had its registered office in Portmadoc, where they could conveniently deal with the shipments from the port and other business. One of these offices (No 7 High Street) remained occupied by the Maenofferen Slate Quarry Co. until as late as 1975, when that concern was taken over by the neighbouring Llechwedd Quarry.

Proceeding back across the High Street and into Madoc Street, one can see on the right-hand side the buildings of the Glaslyn foundry. This was one of several set up in the town to meet the constant demands of the shipbuilding and slate trades. These foundries supplied slate splitting and sawing machines as well as numerous other castings to many quarries and other industries, both local and further afield. Similar works were once to be found in many medium-sized towns all over the country from about 1810 and reflected the dramatic increase in demand for iron work and cast iron particularly at that time. Not only did technological development necessitate new machinery of all types, but much work formerly done in wood was now being adapted to the more durable material. The Glaslyn foundry buildings are still used by Chas. H. Williams, engineers.

The pathway running in front of the foundry was once the route of the Welsh Highland Railway, described previously. Trains to Beddgelert started out from the Festiniog Railway's Harbour station, they would cross the sluice bridge and curve across High Street to depart from the town northwards up this alley way.

Further up Madoc Street, which at one time was also host to the tramway to the Gorseddau quarries, is the slate works belonging to Richard Williams & Co. This is one of the last surviving reminders of the original reason for Portmadoc's development: here slate slabs are still used to make such things as gravestones and billiard tables. The machinery employed is of the traditional type evolved during the last half of the nineteenth century, and much of it no doubt dates from that period. An interesting crane once used for unloading wagons and latterly lorries stands by the main entrance. Running alongside the works is what appears to be a ditch but is in fact a land drain, constructed by Maddocks circa 1800. A few years later it was upgraded to the status of "canal" (known locally as "y cyt" – the cut), when Maddocks decided he wanted ships to come right up to his model town of Tremadoc, but today it hardly seems conceivable

that this was possible. Maddocks' original trial embankment of 1800, enclosing the land around Tremadoc from the sea was in this vicinity. On the right of the canal stands a large building which was once a flourmill (570390), but none of the machinery survives. Opposite this mill are the remains of the original Portmadoc gas works, now derelict.

Sidings from the Welsh Highland Railway ran into both the flourmill yard and the slate works. The course of its main line passes the mill and the remains of its "New" Portmadoc station of 1923 can be seen on the embankment in the adjacent field. Parts of the brick "platform", water tower and corrugated iron refreshment room can be identified. This line then crossed the main Cambrian Railways track on the level, and just beyond were interchange sidings with a branch off the standard gauge coming in from the left, known, as the "Beddgelert siding". The trackbed of the latter is presently being developed as the first part of the Welsh Highland Railway restoration project, which has its workshops close by.

Returning to Portmadoc High Street, one can cross the Britannia Bridge onto the island occupied by the Festiniog Railway's Harbour station. The sluice gates for the enclosed estuary were formerly situated beneath this bridge, which was rebuilt in 1923 to carry the WHR line as well as the roadway.

The Festiniog Railway was opened from Blaenau Ffestiniog to Portmadoc in 1836, to carry the slate quarried at the former place directly to a point where it could be loaded aboard sea-going ships. Previously all the output had to be carried by horse and cart or packhorse down to small quays on the Afon Dwyryd at Maentwrog, from where it was brought round the coast in shallow-draught vessels for transfer to the deep-water ships (the people manning the small boats were known locally as Philistines). When the F.R. was opened it was as a horse-drawn tramway with no provision for the carriage of passengers; such services were inaugurated soon after the introduction of steam-locomotives in 1863. The first Harbour station dated from this time but the present building was erected in 1878; it was later enlarged and a second floor added in 1884. Recently the building has been further extended to join the older parts to the former goods shed. The station stands on a peninsula that had been built in 1842 in order to extend the length of wharfage available. With the recent revival of the harbour area as a pleasure-boating centre most of the wharves on this side have been built upon to provide holiday flats; the stark, severely angular designs of the new development contrast sharply with the traditional low-key stone properties opposite.

On the main road near the beginning of Maddocks' embankment, known locally as the "cob", the Britannia Foundry was in use until recently but sadly demolished in 1976. This foundry was established in 1832 by Thomas Jones of Caernarfon as the result of his being awarded the contract to supply 50,000 cast-iron chairs for the building of the Festiniog Railway. It also provided castings for David Williams, one of the major Portmadoc ship builders. The building adjacent to the site on its northern side was formerly the Portmadoc Custom House. Our pictures of the station throat in July 1966 show the foundry buildings in the background.....



At the further end of the mile long embankment lies Boston Lodge, named after Maddocks' Parliamentary constituency in Lincolnshire. A tollhouse for the cob road dating from 1847 is still in use and is the last to serve its original purpose in North Wales. Above it stands the Festiniog Railway's Boston Lodge workshops complex. The pair of white Georgian cottages seen at the front of the site are the original barracks built for the construction of the cob in 1808; the ground floor part served as stables for the horses used in the construction work. The railway works was begun in 1847 and the facilities were gradually extended throughout the nineteenth century. With the reduction in the variety of work done and general

modernization of recent years, some of the old buildings have been demolished and some new ones erected. Much remains however of the nineteenth-century establishment, where even complete engines have been built for the Festiniog line. The surviving buildings comprise most of the main part of the works including the machine shop, erecting bays and the stone built foundry stack. The picture below left is by David Mills, and the original 1863 locomotive "Prince" is seen again in the works yard (right).....



One interesting but derelict feature is the group of two gunpowder stores situated facing the sea at a safe distance from the other buildings: special iron covered wagons were used to carry this vital but dangerous commodity up to the quarries. Of the equipment used in the works, a few items of the original machinery survive, driven from line shafting, and several old wagon turntables are still in use in the top yard. Another old locomotive similar to Prince, the Palmerston, is stored derelict.....



Just east of Boston Lodge at Minffordd (597387), the Festiniog built an interchange yard with the Cambrian Railways Company, whose line passes beneath it here at right angles. The narrow-gauge sidings curve round almost in a complete circle to run alongside those of the standard gauge, whose little station is shown on the right, viewed from the FR overbridge.....

The yard was laid out to allow gravity slate trains to run right down to the wharves under their own momentum. This method of operation, while not unique to the Festiniog, was probably used more by them than any other railway. The technique originally employed was for the horses to pull the empty wagons up to the quarries; the loaded wagons then ran down to Portmadoc under the force of gravity, with men riding brake wagons and the horse traveling in a special "dandy" wagon at the rear. Even after the introduction of steam locomotives this gravity working continued, and the last through train to work in this way ran in 1940.

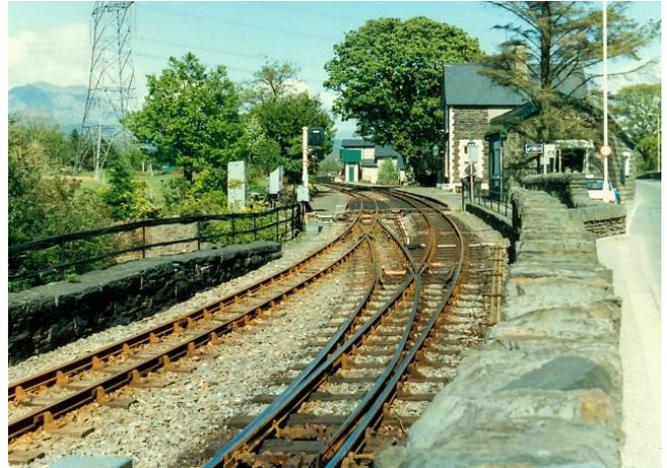


The interchange yard was constructed in 1872 and was designed by C. E. Spooner, the gifted and able proprietor of the Festiniog Railway. Although all the standard gauge sidings have now been removed, many of the narrow gauge ones are still in use as the site has become a permanent-way depot under the present administration. Extensive slate wharves remain, as well as a sunken narrow gauge line on which wagons were fed with coal and ballast from standard gauge wagons, formerly by a wagon tippler and

latterly by means of a chute. Still in position at the entrance to the yard from the F.R. main line are two wagon weighing machines, the machinery for both being housed in a stone hut. These machines were formerly used to check the contents of each slate wagon before it was allowed down into the yard.

The transhipment of slate at Minffordd was a laborious process, involving manually lifting the slates out of one wagon and placing them in another. When the slates were loaded at the quarry they were rammed in as tightly as possible using a special mallet, but the effect of the trip down in the unsprung wagons would be such that the slates would usually be loose enough to lift out easily at the end of their journey. Under-cover transhipment of other commodities was carried out in the goods shed, which still survives.

The F.R. Minffordd passenger station (1872, pictured right) has been finely restored to preserve much of its original appearance and atmosphere; as such it is now the best example remaining on the line. Just beyond it stands Bron-y-Garth hospital, which once served as the Ffestiniog Union workhouse. A small granite quarry on the hillside to the north of the station is still in operation. It was started some 60 years ago by Pwllheli Granite Co. and now supplies mainly graded chippings for road and other uses.



At the next village to the east, Penrhyndeudraeth, the present main industry represented by Cooks Explosives Ltd. (now part of ICI) was served by sidings from the Cambrian line, but now retains little of historical significance. The single-platform British Rail station survives in use (right).....

Nearby stands an interesting railway bridge, known as Pont Briwfad. Of similar construction to the more famous example crossing the Mawddach estuary near Barmouth, this structure is built entirely of wood. Still in use, it was erected by the Cambrian Railways Co. to



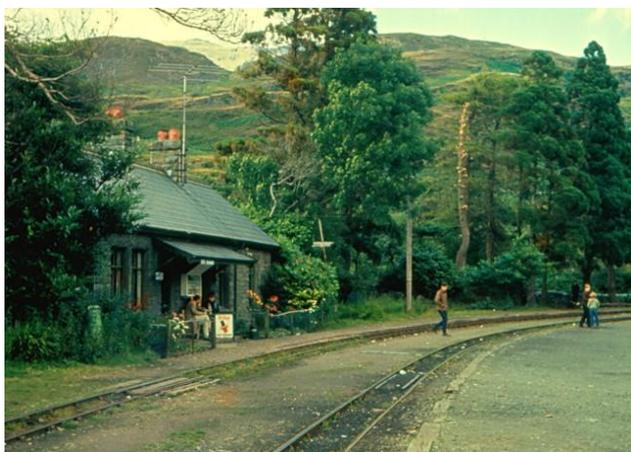
cross the Dwyryd estuary and was opened in 1867. Alongside the single track line it carries a railway-owned toll road. Such timber bridges were often used to save money in the construction of railways, particularly on lines where much other expensive work was necessary; on this coastal route of the Cambrian Railways a costly cliffside section further south had caused the directors to economize in this way. Most such bridges were later rebuilt in masonry or steel, requiring less maintenance, but this and others on the line have survived largely unaltered to the present day.

At the top of, and overlooking Penrhyndeudraeth village stands the Festiniog Railway station (613395); this is possibly the original timber Portmadoc Harbour building, re-erected here in 1879. Some of the adjacent sheds were once used by a local bakery in connection with rail-borne flour traffic. About a quarter of a mile above the road level crossing there is an interesting survivor of an early type of railway disc signal. The disc is mounted on a post and punched with holes to reduce wind resistance: when turned parallel to the track it signified “line clear”, and when facing the driver it indicated danger. The disc signals were introduced as distant signals for the stations in 1864. This one is still in use, but only as a warning and is not turned; the remains of another exists below Minffordd level crossing.

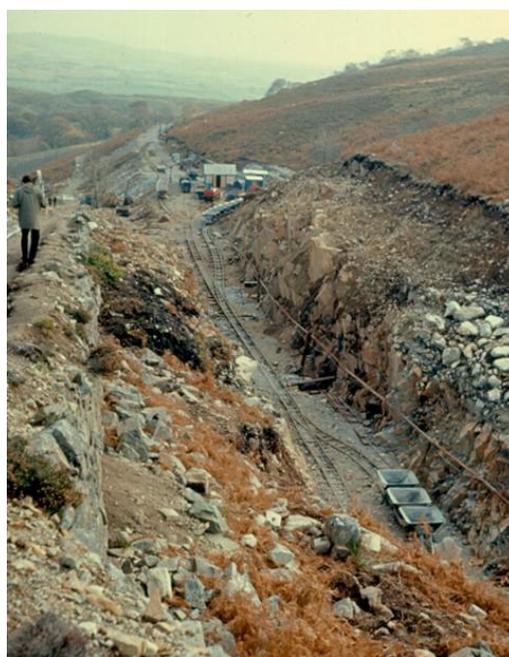
Proceeding further up the line, the railway crosses the road near Tan-y-Bwlch station on a cast iron girder bridge, whose ornamental girders have cast into them the words “Boston Lodge Foundry 1854”. The

present ones were however made in 1923 using the original patterns. At the station itself stands an old wooden structure, reputed to be the original station building from Hafod-y-Llyn which was situated a third of a mile back down the line and was the only intermediate station when the line was first opened to passengers.

Tan-y-Bwlch station now bustles with life in the summer (although this may diminish with the opening of a new temporary terminus at Tan-y-Grisiau, with easier vehicular access) but 25 years ago it was deserted and grass-grown. The original slate railway was closed down in 1946, but after reopening in 1954 by volunteers the line's principal traffic has changed from mineral to people and it has since gone from strength to strength to become a major tourist attraction. Such success has however inevitably meant that modernization has too often been preferred to preservation. Our pictures show the station as it was in 1966....



The next station up the line is located at Dduallt, 3 miles above Tan-y-Bwlch. From here eastwards the railway company has built a completely new line mainly with volunteer labour, departing from the original course, eventually to rejoin it at Tan-y-Grisiau station (684450) some two miles further on. The reason for this diversion is that the original route was flooded upon the creation of the lower Reservoir for the CEGB Ffestiniog pumped-storage power station scheme. The new line gains height by means of a spiral section crossing over itself, then passing through a new 250-yard tunnel to emerge above the lake. Our pictures show the construction work on this section.....



The original course surviving in part as a siding continues straight ahead at Dduallt and passed through the half-mile long Moelwyn tunnel, the northern end of which is partially submerged below the new lake. The entrances can still be seen at (680428) and (678435). The bore of this tunnel was very small which placed a severe restriction on the development of rolling stock for the line. Before the tunnel was opened in 1844, the horse tramway was carried over the hill using an incline on either side, the one to the north being driven by a waterwheel which hauled up the loaded slate wagons; some of this alignment may also still be seen. Much of the southern incline has however been removed as a result of the new deviation work. In places, stone sleeper-blocks can be seen in situ, while many others from the original track are used in walling along the length of the present line. The Moelwyn tunnel was originally built to replace the inclines, and so allow gravity working of the trains throughout. These pictures show the old line above Dduallt.....



And this one (right) shows the new line approaching completion, with the old incline route serving as a footpath and access road towards the left of it.....



Our last two images are in the vicinity of Tan y Grisiau station, by David Mills. In the right hand view below, the track branching off left from the point to the east of the station area leads round to the Cwmorthin Quarry incline.....



Updates – March 2012

The areas of the former Portmadoc **slate quays** not occupied by apartment buildings are now mainly used for car parking and boat storage, with no railway tracks remaining. The **Newsroom**, Oakeley **wharf shed** and **Maritime Museum** can still be seen, though the wharf crane and old lamp-posts have all gone. The vessel “**Garlandstone**” was sailed a new home at Morwellham Quay near Tavistock in Devon in 1987, and has been displayed there since. The **warehouses** at Pen Cei have been converted to residential apartments and the adjacent **Harbourmaster’s house** is occupied by Madoc Yacht Club.

The former slate company offices on **High Street** are now in alternative commercial use; most buildings along here are listed structures. Only a fragment of the **Glaslyn Foundry** buildings survives, incorporated into the frontage of the former Co-op supermarket (now Wilkinson’s), by the entrance road leading to the car park.

The **Welsh Highland Railway** has been rebuilt through the town, this section opening fully to passengers during 2011. Although the track still crosses Britannia Bridge set into the roadway, it has been rerouted to pass on the east side of the supermarket, about 50 yards from its former course along Madoc Street. Further along, Richard Williams’ **slate works**, formerly the Union Foundry, has gone. The **Cut** canal and course of the Gorseddau Tramway may still be seen on the NE side towards the top end of Madoc Street. The Welsh Highland trains run once more past the old **Flour Mill** building in Snowdon Street, which is being converted to apartments. Nearby, two buildings of the old **gasworks** survive beside the road, in commercial use.

The only surviving relic of the former WHR **Portmadoc New station** is the concrete pillar support for the water tank. The area, once in open fields, is now surrounded by commercial properties. The unique standard – narrow gauge right-angled crossing has been reinstated with modern signalling, and the WHR line then passes the former Beddgelert Siding area, developed as the **Welsh Highland Heritage Railway**, with a short running line and interesting museum at its Gelert’s Farm workshops here.

Back at the Festiniog Railway’s **Harbour station**, this too has been developed considerably over the years into a major tourist venue, with shop, cafe, bar and museum in addition to the usual railway offices. The area around the station throat out onto the Cob is currently being widened to safely accommodate the WHR trains now also terminating here. Over on the far side, **Boston Lodge** continues to thrive as the main Festiniog Railway engineering workshops, also carrying out much contract work for other railways. All of the old buildings survive in use, with several new ones erected on the southern parts of the yard area. Below on the main road, the toll was removed in 2003; the former **Rebecca toll cottage** remains, boarded up.

Both **Minffordd stations** and the exchange yard complex remain in use, although the Cambrian Coast line platform now carries just a plain modern waiting shelter. In the yard, the former Maenofferen Slate Quarry Co. tranship warehouse carries that company’s name prominently once more, and the FR goods shed is also fully restored. The Festiniog Union **workhouse** building continued in use as Bron y Garth Hospital until 2009, but is currently standing empty and awaiting a sympathetic new occupancy. **Garth Granite Quarry** at Minffordd continues in operation with Tarmac Western Ltd, producing roadstone and railway ballast. The new Porthmadog bypass road route passes close by.

The **Cookes Explosives** site at Penrhyndeudraeth (latterly ICI) was closed down and cleared by 1998. The Cambrian Coast **railway station** here continues in use as an unstaffed halt; the former station house is now a private residence. The timber railway bridge **Pont Briwfad** (which modern maps show as Pont Briwet) is scheduled to be supplemented by a new combined rail/road bridge, free from toll, built during 2012–14; the old bridge being retained as a footpath. The **Festiniog Railway** station above Penrhyndeudraeth village continues in use. Its **road overbridge** near Tan y Bwlch station was rebuilt using the same cast-iron outer beams, but there is some doubt as to whether these are the 1850s originals, or newer castings from the same patterns.

Both entrances to the old **Moelwyn Tunnel** may still be seen. The tunnel bore has been plugged internally towards the north end so it is no longer possible to walk through, but a network of footpaths goes over the top, including along the original **incline** routes.