

= Talyllyn Railway =

The Talyllyn Railway (Welsh : Rheilffordd Talyllyn) is a narrow 2 ft 3 in gauge preserved railway in Wales running for 7 1/2 miles (11 1/2 km) from Tywyn on the Mid Wales coast to Nant Gwernol near the village of Abergynolwyn . The line was opened in 1866 to carry slate from the quarries at Bryn Eglwys to Tywyn , and was the first narrow gauge railway in Britain authorised by Act of Parliament to carry passengers using steam haulage . Despite severe under investment , the line remained open , and in 1951 it became the first railway in the world to be preserved as a heritage railway by volunteers .

Since preservation , the railway has operated as a tourist attraction , expanding its rolling stock through acquisition and an engineering programme to build new locomotives and carriages . In 1976 , an extension was opened along the former mineral line from Abergynolwyn to the new station at Nant Gwernol . In 2001 , the preservation society celebrated its 50th anniversary , and in 2005 a major rebuilding and extension of Tywyn Wharf station took place , including a much expanded facility for the Narrow Gauge Railway Museum .

The fictional Skarloey Railway , which formed part of The Railway Series of children 's books by The Rev. W. Awdry , was based on the Talyllyn Railway . The preservation of the line inspired the Ealing Comedy film The Titfield Thunderbolt .

= = Name and gauge = =

The origin of the railway 's name is uncertain : it may refer to the parish of Tal y Llyn , which contains its eastern terminus , or it may come from Tal y Llyn , a large glacial ribbon lake at the foot of Cadair Idris 3 miles (4 1/2 km) further east . The 2 ft 3 in (686 mm) gauge of the track is unusual , and was shared by only three other public railways in the United Kingdom : the nearby Corris Railway , and the subsequent Plynlimon and Hafan Tramway and Campbeltown and Machrihanish Light Railway .

= = History = =

= = = Origins and construction : up to 1866 = = =

Slate quarrying began in the hills above Tywyn in the 1830s , but although many small quarries and test levels were established , only one major quarry was developed in the region , at Bryn Eglwys , 7 miles (11 km) north east of the town . Underground working began in the early 1840s , and by 1847 the quarry was being worked by local landowner John Pughe . The finished slates were sent by packhorse to the wharf at Pennal , transferred to boats for a river trip to Aberdyfi (or the Anglicised Aberdovey still commonly used) , and then finally loaded into seagoing vessels , a complex and expensive transportation arrangement which limited the quarry 's output . In 1861 the outbreak of the American Civil War cut off supplies of cotton to the mills of the north west of England and as a result a number of prosperous mill owners looked for new business opportunities to diversify their interests . One such owner was William McConnel of Lancashire who , in 1859 , had purchased a house near Dolgellau , north of Tywyn . In January 1864 , McConnel formed the Aberdovey Slate Company , which leased the land including Bryn Eglwys from the landowner , Lewis Morris of Machynlleth .

McConnel set about improving Bryn Eglwys to increase its output and in 1865 his company earmarked money for the construction of a narrow gauge railway connecting the quarry with the port of Aberdyfi . The standard gauge Aberystwyth and Welsh Coast Railway was expanding rapidly from its base at Machynlleth , however , and in 1863 had reached Tywyn , so McConnel decided to build his line from the quarry to Tywyn , as the nearest point where slate could be transferred to the standard gauge railway . This was despite the line 's initial isolation from the rest of the system because of difficulties in bridging the estuary of the Afon Dyfi to the south . An Act of Parliament (28

and 29 Vict , cap cccxv) allowing the company to operate passenger trains as a public railway was given Royal Assent on 5 July 1865 , and the company appointed James Swinton Spooner as engineer for the construction . He laid out plans for a relatively straight line climbing steadily from Tywyn to the quarry and work quickly got underway . By September 1866 construction had advanced to the point where the Board of Trade inspector Captain Henry Tyler could make an initial inspection and report .

Tyler 's report led to an unusual alteration , as it was discovered that the loading gauge of the line was too small . The internal width of the overbridges was only 9 ft 1 in (277 cm) , but the railway 's passenger carriages were 5 ft 3 @. @ 5 in (161 @. @ 3 cm) wide , leaving less than 2 ft (61 cm) clearance on either side , less than the minimum required clearance of 2 ft 6 in (76 cm) . To alleviate this problem , McConnel proposed that the doors on one side of each carriage be permanently barred and the track slewed off @-@ centre beneath the bridges to allow adequate clearance at least on the side with doors , which would allow passengers to get out of the carriages if the train stopped underneath a bridge . Tyler agreed to this arrangement , and to this day all carriages on the Talyllyn have doors on one side only , an unusual feature for a public railway which is shared (albeit for different reasons) with the neighbouring Corris Railway . Tyler also required that improvements be made to the railway 's first two steam locomotives , as locomotive No. 1 suffered from excessive " vertical motion " and No. 2 was said to suffer from " horizontal oscillation " . No. 1 was returned to its manufacturer where a set of trailing wheels was added to reduce the rear overhang , and the springs on No. 2 were adjusted and the crank pins shortened to reduce its oscillation .

Tyler did not approve the opening until his listed improvements were completed . During the first half of 1866 , the various changes required were made and construction of the line was finished , and in October 1866 the railway began an unofficial passenger service , despite not being authorised by the Board of Trade . Passengers were carried " at their own risk " and possibly free of charge until the line was officially sanctioned . In November of that year , Tyler returned to Tywyn and re @-@ inspected the railway following which , subject to some further minor improvements , he approved its formal opening for passenger service . The first public passenger timetable was issued in December 1866 , and the first purpose @-@ built , steam @-@ worked , narrow gauge public railway in Britain opened for service .

= = = Prosperity under McConnel : 1866 ? 1880s = = =

The railway opened with two locomotives , one carriage and several goods vehicles in use and was operated under a " one engine in steam " policy to ensure that two trains could not collide . Initially the working locomotive was housed in a wooden shed at Ty Dwr on the mineral line above Abergynolwyn station , while the main engineering works at Pendre were constructed . The Pendre works opened on 17 February 1867 and from then on trains began working from Pendre instead of Abergynolwyn .

At the time of the line 's opening , stations were provided at Pendre and Abergynolwyn . In 1867 , the halt at Rhydyronen opened , followed by Brynglas and Dolgoch in 1873 . Some time shortly after the opening of the railway a branch to Abergynolwyn village was provided . A steep incline dropped from the mineral line east of Abergynolwyn station to the village below , where a series of tram lines radiated . Coal , building materials and general goods were delivered down the incline and the contents of the village cesspits were hauled back up for disposal along the lineside .

The railway used steam locomotives from the start , unlike its neighbour the horse @-@ drawn Corris Railway . The original two locomotives , although of entirely different design , were both purchased from Fletcher , Jennings & Co. of Whitehaven in Cumbria , and both are still in service , 150 years on , although so many of their parts have been replaced down the years that much of their present @-@ day component metal is not original . The Talyllyn 's rare gauge is thought to have been adopted to match that of the Corris Railway , and the line 's two original steam locomotives were among the earliest locomotives built for such a narrow gauge . No. 1 Talyllyn is an 0 @-@ 4 @-@ 2ST (saddle tank) and No. 2 Dolgoch is an 0 @-@ 4 @-@ 0WT (well tank) . The

line carried slate from the quarry to the wharf at Tywyn and general goods along its length . Public passenger trains initially ran between Abergynolwyn , Dolgoch and Pendre stations only ; quarrymen were carried on unofficial trains that continued on from Abergynolwyn to the foot of the Alltwyllt incline in Nant Gwernol gorge .

The line operated successfully during its early years , serving the quarry and the local district . By 1880 , Bryn Eglwys employed 300 workers and was producing 8 @, @ 000 long tons (8 @, @ 100 t) of finished slate per year , all shipped via the railway . Passenger traffic was substantial , rising from 11 @, @ 500 passengers carried in 1867 to over 23 @, @ 000 (roughly equivalent to 40 @, @ 000 passenger journeys) in 1877 .

= = = Declining fortunes : 1880s ? 1910 = = =

From the 1880s onwards the " Grand Tour " was a popular option with tourists . This used charabancs to link the Tallylyn and Corris railways via Tal @-@ y @-@ llyn Lake and Cadair Idris , returning on Cambrian Railways trains . The last two decades of the 19th century saw a decline in the demand for slate and many smaller quarries fell on hard times , including Bryn Eglwys , where by 1890 production had halved to 4 @, @ 000 long tons (4 @, @ 100 t) a year . In 1896 , production at the Penrhyn Quarry in north Wales , one of the largest producers of slate , was stopped due to labour disputes , resulting in a temporary increase in demand at other quarries . McConnel expanded production at Bryn Eglwys to take advantage of the sudden demand , but only with the aim of maximising profits during the remainder of his lease , which was to expire in 1910 . He built new trial levels without proper provision for the removal of overburden and pushed the limits of safe working in the existing chambers . As McConnel 's lease drew to its close , there was no prospect of a further lessee coming forward and work began on dismantling the quarry 's equipment .

= = = Haydn Jones era : 1911 ? 1950 = = =

The Bryn Eglwys quarry was the primary employer in the Abergynolwyn district , so its closure caused significant distress . Local landowner Henry Haydn Jones purchased the company in 1910 , the same year he was elected the Liberal MP for Merioneth , and reopened the quarry in January 1911 . He did not have any capital to invest in the quarry , however , and the first workings reopened were on the " Broad Vein " , which yielded relatively hard slate that was less popular and harder to sell . The lack of an available market for this output forced the quarry to switch to extracting softer slate from the " Narrow Vein " but , because Haydn Jones could not afford to open new workings into the Narrow Vein , he resorted to the dangerous practice of narrowing the columns that supported the roofs of the underground chambers . This practice had begun under McConnel 's ownership and Haydn Jones continued it throughout his ownership of the quarry . A brief construction boom after the First World War saw production return to around 4 @, @ 000 long tons (4 @, @ 100 t) per year .

The 1920s also saw an upsurge in holiday traffic , as Britain recovered from the war and tourism gained in popularity . The Tallylyn saw summer passenger numbers grow significantly and regularly had to supplement its formal passenger stock with slate wagons fitted with planks as seats . An unusual tourist service offered by the railway was to hire a slate wagon , which would be left at Abergynolwyn . At the end of the day the tourists would return to Tywyn in the wagon , powered by gravity . This service was discontinued in the early 1930s . The additional income from the tourist trade defrayed some of the costs of operating the railway , but never enough for it to make a profit during Haydn Jones ' ownership .

The lease on Bryn Eglwys expired in 1942 , but was extended on an annual basis . The October 1942 Bradshaw 's Guide shows two return passenger trains operating only on Monday , Wednesday and Fridays , taking 45 minutes in each direction . No passenger service was provided on other days . In 1946 the weakened columns gave way in a significant collapse and the quarry was deemed unsafe and closed immediately . Haydn Jones had promised to continue operating the railway as long as he was alive and so , despite the closure of the quarry , the railway continued to

run trains on a shoestring budget . In 1947 the British railway system was nationalised and the Talyllyn was one of the few operating railways not included . The reasons for this are unclear , but it is significant that all official mention of the railway had ceased several decades before and it is likely that the line was simply forgotten by officialdom . Between 1947 and 1949 the railway ran a passenger service two days a week . On 2 July 1950 Haydn Jones died and closure of the railway seemed inevitable , but the line continued to operate for the remainder of the summer season , ending on 6 October .

= = Preservation = =

= = = Rescue : 1951 ? 1960 = = =

The author and biographer Tom Rolt , visited the line in 1949 , along with the locomotive engineer David Curwen . In the summer of 1950 , Rolt wrote a letter to the Birmingham Post newspaper suggesting that a rescue of the Talyllyn be undertaken . He received sufficient positive response for a meeting of interested enthusiasts to be held on 11 October 1950 at the Imperial Hotel in Birmingham . Around 70 people attended the meeting and Rolt proposed the formation of a committee to look into the acquisition of the railway . With the support of the meeting , the committee met for the first time on 23 October and immediately entered into negotiation with Haydn Jones ' executors .

The transfer of ownership to the committee was legally complex , but both parties agreed that all shares in the railway company would be transferred from Haydn Jones ' estate to a new company called Talyllyn Holdings Ltd . , whose board consisted of two directors from the executors and two from the committee . The transfer took place on 8 February 1951 , at which point the newly formed Talyllyn Railway Preservation Society effectively took control of the railway . The Society immediately began to publicise its efforts , hoping to raise funds and find further volunteers to help reopen the railway , and by May nearly 650 members had joined the society . The railway re @-@ opened under the control of the Society for the first time on the Whit Monday bank holiday , 14 May 1951 , with trains running between Wharf and Rhydyronen stations . Regular trains began to run on 4 June and continued through the summer , with David Curwen acting as the first Chief Mechanical Engineer .

In the early years of preservation , the line struggled to operate using the original rolling stock . When the line was taken over in 1950 Dolgoch was the only operating locomotive and it was apparent that it was in need of a major overhaul . To enable operations to continue two further steam locomotives , Nos. 3 and 4 , were purchased from the recently closed Corris Railway in 1951 and named Sir Haydn and Edward Thomas respectively . Because both railways were built to the unusual gauge of 2 ft 3 in (686 mm) it was relatively easy to adapt the Corris locomotives to work on the Talyllyn . No. 3 became the first new locomotive to travel on the railway for over 80 years in 1951 , but it frequently derailed , and on inspection it turned out that the Talyllyn track was laid approximately half an inch (13 mm) wider than the official gauge , a deliberate policy by the old company to accommodate the long wheelbase of Talyllyn . Both Talyllyn and Dolgoch had unusually wide wheel treads that allowed them to stay on the wide @-@ of @-@ gauge track . This problem was eventually cured by relaying the railway to its correct gauge and altering Talyllyn 's trailing wheels to allow them to swivel horizontally , shortening the locomotive 's fixed wheelbase . No. 4 was unserviceable when it arrived , but John Alcock , the chairman of the Hunslet Engine Company , was a member of the Preservation Society and had No. 4 overhauled free of charge at his works . No. 4 then began service on the railway in 1952 and worked the majority of the trains that season .

Another early addition to the locomotive fleet was No. 6 Douglas , donated to the society by the Birmingham engineering firm Abelsons Ltd . This locomotive was built for the depot railway serving RAF Calshot where it worked until 1945 , and , after rebuilding from its original 2 ft (610 mm) gauge , it entered service in 1954 . Through the 1950s the volunteers and staff members of the TRPS rebuilt the line and rescued it from its state of decay , during a period characterised by a " Boy 's

Own comic spirit of adventure , involving enthusiasm , ingenuity and a fair degree of irresponsibility "

On 22 May 1957 the BBC produced a live outside broadcast from the railway , during which Wynford Vaughan Thomas and Huw Weldon commentated on a trip from Dolgoch to Abergynolwyn . The publicity from this broadcast drew substantial numbers of visitors to the railway that summer , with more than 57 @, @ 500 passengers carried , and this increase in revenue in turn enabled the railway to continue to improve its infrastructure and provide tourists with a better experience . The following year locomotive No. 1 Talyllyn returned to steam after an extensive overhaul .

An important development during this period was the establishment of the Narrow Gauge Railway Museum at Tywyn Wharf station . The first exhibit for what was to become the museum was a locomotive donated in 1952 by Guinness from their recently closed St. James 's Gate Brewery railway . In 1954 the Preservation Society agreed to start work on a formal museum and exhibits from around the United Kingdom were acquired to form the nucleus of the collection . In 1955 work started on converting the old gunpowder store at Wharf station into a temporary museum building , and in 1956 the first exhibit arrived at Tywyn .

= = = Securing the infrastructure : 1960 ? 1969 = = =

The 1960s proved to be a decade of consolidation for the Talyllyn . Pendre works underwent several much @-@ needed expansions , adding additional covered storage for carriages and more workshop room . Modern machine tools , along with proper lighting and a new power supply were added . Substantial improvements to Tywyn Wharf station were also made , along with continued relaying and upgrading of the track to Abergynolwyn . Passenger numbers continued to climb after the 1957 BBC broadcast ; in 1960 , 67 @, @ 000 passenger journeys were made , increasing to 78 @, @ 500 in 1964 . In response to this growing popularity the railway undertook a programme of new rolling stock construction .

By the early 1960s Tywyn Wharf station was in need of major improvements . Before preservation , the station had contained only a fan of sidings , which meant that there was no way for the locomotive of an arriving train to run round the carriages . As a result , trains were pushed from behind as far as Pendre , where the locomotive could be moved past the carriages to the front of the train . A loop was installed at Wharf for the first time in August 1952 , to avoid having to propel trains to Pendre , but in the winter of 1964 / 65 a major upgrade of the station was carried out . This improved the track layout and extended the original office building to provide covered accommodation for passengers and a shop .

As passenger numbers continued to grow during the late 1960s it became clear that further motive power was needed , especially as the rebuilt No. 1 was not performing well . The Talyllyn 's unusual track gauge and restricted loading gauge meant that it was unlikely that a locomotive could be found that could work on the line unaltered , so in 1969 a 3 ft (914 mm) gauge steam locomotive was purchased from the Bord na Mona (Irish Peat Board) with a view to rebuilding it for use on the Talyllyn . This locomotive was unofficially known as Irish Pete , a nod to its original use .

= = = Extension to Nant Gwernol : 1969 ? 1980 = = =

The preservation society had long held ambitions to extend the railway along the former mineral extension from Abergynolwyn to the foot of the Alltwyllt incline , and as early as 1959 work had begun to trace the owners of the land that the extension traversed . Planning began in the mid @-@ 1960s , but construction did not start until 1968 when the winding house for the Abergynolwyn village incline was demolished . To bring the line up to passenger standards some of the curves needed to be eased , and this required blasting work , as the line runs on a narrow ledge on the hillside at this point . The extension and new station at Nant Gwernol were opened on 22 May 1976 by Wynford Vaughan Thomas who drove in the ceremonial " golden spike " to complete the extension . Despite this official opening ceremony , minor work still remained to bring the extension to the standard required to run regular passenger trains , but regular train services began on 29 May

1976 .

Although the extension of the railway was completed in 1976 , work in the vicinity continued with the creation of footpaths connecting to the new station . A new footbridge was built crossing the Nant Gwernol gorge and connecting the station with the existing path on the east side of the river . The bridge and paths were opened on 3 May 1980 by Lord Parry , the chairman of the Wales Tourist Board . By the mid 1970s , it had become clear that passenger numbers were no longer increasing . After 1973 , the peak year for passengers on the Talyllyn with 186 ,000 passenger journeys made , numbers were to decline consistently until the 1990s . Preliminary work on the conversion of Irish Pete for use on the Talyllyn , which had begun in the early 1970s , was put on hold in 1975 and the chassis and boiler were put into storage at Pendre .

= = = Consolidation : 1980 ? 2001 = = =

With passenger numbers falling and the line extended to Nant Gwernol , the railway entered a period of consolidation . By 1987 , the boiler on locomotive No. 6 Douglas was life expired and in need of replacement . Consideration was given to reviving the project to build a new locomotive from the components of Irish Pete instead of purchasing a new boiler for Douglas and in early 1988 work recommenced on the rebuilding of the ex 4-2 side tank locomotive . A new design for an 0-4-2 side tank locomotive was prepared by the railway 's Chief Engineer John Bate , which reused the chassis and boiler from the locomotive with a new superstructure and the addition of trailing wheels , and the new locomotive , officially named Tom Rolt after the Preservation Society 's first chairman , was put into service on 6 May 1991 . During this period further expansions of both Tywyn Wharf and Pendre stations were undertaken and Abergynolwyn station , which had been rebuilt as part of the Nant Gwernol extension in the 1970s , was expanded further to provide an additional attraction at the eastern end of the line .

One major anomaly remained in the railway 's operations : the 1889 Regulation of Railways Act had required , amongst other measures , that all British passenger trains be fitted with continuous brakes . McConnel had secured an exemption for the Talyllyn Railway , on the basis that the low speed of operation meant they were unnecessary and that the cost of compliance would bankrupt the enterprise , but by the end of the 1990s the Railway Inspectorate was insisting that the Talyllyn be brought into compliance with the act , a little over 100 years after it had passed . By 2001 , the railway had fitted its entire passenger fleet with the necessary equipment , operated by air brake pumps mounted on the locomotives .

= = = New museum : 2001 ? present = = =

The Preservation Society celebrated its 50th anniversary in 2001 , and as part of the year of celebrations a major new project was launched to once more extend and improve facilities at Tywyn Wharf station . For many years the station had been home to semi permanent buildings housing the Narrow Gauge Railway Museum , but the new plans for the station included the construction of a new two storey building to house the museum and the extension of the existing station building to house a new cafe and booking office . Work began on the first phase of the project in January 2002 . In 2003 the railway received a £ 682 ,500 Heritage Lottery grant towards the £ 1 ,170 ,000 cost of redeveloping Wharf station , and the new station and museum were officially opened by Prince Charles and The Duchess of Cornwall on 13 July 2005 . The railway has seen a steady increase in passengers carried since the turn of the millennium , with nearly 51 ,000 passenger bookings and 95 ,500 passenger journeys recorded in 2006 , although this figure is still only around half the peak figure carried in 1973 . In 2011 , the railway celebrated 60 years of preservation , and received an Engineering Heritage Award from the Institute of Mechanical Engineers in recognition of its importance in Welsh industrial heritage . In April 2012 , locomotive No.2 Dolgoch appeared at the Steel Steam and Stars Gala at the Llangollen Railway , running on a temporary section of narrow gauge track . This was the first time that that Dolgoch had operated away from its home railway in 146 years . In June 2013 the railway was awarded the

Queen 's Award for Voluntary Service .

= = Today = =

The Talyllyn Railway remains a successful and popular tourist attraction . The original 1860s locomotives and passenger stock still run regularly alongside the roster of more modern rolling stock . The railway is promoted as one of The Great Little Trains of Wales , a joint marketing scheme launched in 1970 that encompasses ten narrow gauge railways in the country , mostly found in north and mid Wales .

In 2003 the railway employed 13 full @-@ time staff , plus the equivalent of an extra six part @-@ time staff in the summer and some 350 volunteers .

= = = Special events = = =

The railway operates a programme of special events throughout the year . These include the Have @-@ A @-@ Go Gala , Tom Rolt Steam and Vintage Rally , children 's Duncan Days and Tywyn Victorian week . Since 1984 there has been an annual running event called Race the Train , which follows the railway track 7 1 ? 4 miles (11 @.@ 7 km) from Tywyn to Abergynolwyn and back again . The challenge is for runners to complete the 14 ½ -mile (23 @.@ 3 km) cross country route faster than the train , which takes around 1 hour 45 minutes .

= = = Young Members Group = = =

The Young Members Group (YMG) are members and volunteers of the Talyllyn Railway Preservation Society who are between the ages of 14 and 25 . On occasions during the peak season , the Railway has held Young Members Days in which the youngest qualified people available that day run the railway .

= = Route = =

= = = Original passenger line = = =

The main terminus of the line is at Tywyn Wharf (originally known as King 's Station , after a local landowner) , where the railway 's administrative headquarters and the Narrow Gauge Railway Museum are located . When the line carried traffic from the quarry , slates were transferred to the Cambrian Railways on the transshipment sidings . Leaving Wharf station , which stands at an elevation of 40 ft (12 m) above sea level , the line passes immediately under the A493 Machynlleth to Dolgellau road and enters a long cutting that climbs towards Pendre , at a maximum gradient of 1 in 60 . On the left (north) side of the cutting there was once a long siding used for gravity shunting of wagons into the sidings at Wharf station . The railway runs through the cutting for about 0 @.@ 5 miles (800 m) , before passing under another road bridge and passing the locomotive and carriage sheds and works at Pendre .

From Pendre , the railway passes over a gated level crossing and runs beside an industrial estate before climbing up to Ty Mawr bridge and on to Hendy , the first of five minor halts , which serves the adjacent farm . The railway runs in an approximately north @-@ easterly direction along the Fathew valley , mainly through fields of local farms on the valley floor , although this is where some of the steepest gradients on the line are to be found . The ruling gradient of the line is 1 in 60 .

More local halts follow at Fach Goch , and Cynfal , the latter having a small platform . The section from Cynfal to Rhydyronen was relaid in 1951 using rail purchased from the Corris Railway after the latter line 's closure in 1948 . Rhydyronen , a request stop , was the first intermediate station built on the line , opening in 1867 . A siding at the station was shortened in 1957 and removed completely circa 1975 . A short steep climb under a road bridge follows the station , followed by a slight downhill

gradient . Unlike the Ffestiniog Railway , the Talyllyn was not designed to be worked as a gravity line , however this is the only downhill section between Pendre and Nant Gwernol . Another minor halt follows at Tynllwynhen , before the passing loop and request stop at Brynglas .

Above Brynglas , the line crosses the Cwm Pandy stream and enters a shallow cutting , climbing as it goes . The cutting ends at a road overbridge after which the line runs through open countryside as it starts to ascend the valley side on a ledge . After approximately 0 @. @ 75 miles (1 @. @ 210 m) it enters woodlands west of Dolgoch , climbing steadily , then curves to the south east and crosses the Dolgoch gorge on the Dolgoch viaduct , which carries the line 51 ft (16 m) above the Dolgoch ravine . Dolgoch station is immediately east of the viaduct , situated on a left @- @ hand curve at 187 ft (57 m) above sea level , and is the main intermediate station on the line , being popular with tourists visiting the nearby falls . The railway continues in a north easterly direction , curving through the woods and climbing the valley side . It shortly passes Quarry Siding , where a halt and passing loop are located ; this is the site of a small old shale quarry , the rock from which was used for ballasting on the railway . A large permanent way and storage shed opened on the site in 2013 . The line continues its ascent towards Abergynolwyn station , situated on a ledge cut into the hillside .

= = = Abergynolwyn to Nant Gwernol = = =

The original terminus of the statutory railway was Abergynolwyn , beyond which the railway continued as a 0 @. @ 75 @- @ mile (1 @. @ 21 km) long mineral extension , now converted for passenger use . The extension was originally sharply curved , as the line turns south east into the steeply sided Nant Gwernol gorge but these curves were eased when conversion for passenger use took place in 1976 . The whole section is within woods , now owned by the Forestry Commission . Shortly after crossing over the forestry road the line reaches Ty Dwr , where the original locomotive shed stood from 1865 until it was demolished after Pendre works opened in 1867 , although the slate water tower continued in use into the 1950s .

After passing the site of Ty Dwr the railway bends around ' Amen ' corner and soon after the Village Incline is reached . From here the line runs into the gorge , high above the river on a narrow ledge , ending at the foot of the first incline leading to the Bryn Eglwys quarry . The original line fanned out into a set of three sidings , used to marshal trains of loaded slate wagons coming down from the quarry and empty wagons waiting to ascend . Nant Gwernol station , the eastern terminus of the line , was built on the site of the sidings .

The village of Abergynolwyn was built to house the quarrymen of Bryn Eglwys and their families , and to serve the village an incline with winding house was laid three quarters of the way along the mineral extension . The winding house for the incline stood on the narrow ledge , with the mineral line passing through it . The two @- @ track incline dropped 150 ft (46 m) over a distance of 363 ft (111 m) . At its foot , the line crossed the Nant Gwernol on a girder bridge . Immediately after the bridge , short lines branched off to the east from a wagon turntable to the coal yard and smithy of Pandy Farm and west to a writing slate factory (later a carpenter 's yard) . The main branch then split to form a storage loop , with a further wagon turntable and a longer branch serving the houses and school to the north east . The main branch continued north , crossing the main road then passing between the two main terraces in the village before ending in a turntable and a final short line connecting to the Capel Jerusalem chapel . The village incline was lifted during the early years of preservation , to provide much needed rail to replace the existing track . The winding house was demolished in 1968 to allow realignment of the railway to form the extension to Nant Gwernol .

= = = Galtymoelfre Tramway = = =

Until the closure of the quarries in 1946 , the line east from Abergynolwyn was worked as a mineral tramway ? only slate and goods trains serving Bryn Eglwys ran on this section . The quarry lay about a mile (1 @. @ 6 km) south @- @ east of Nant Gwernol station and 300 ft (91 m) above it , with a further mineral tramway connecting the quarry with the railway . What is now Nant Gwernol

station was the terminus of the Talyllyn Railway proper . Here the line fanned out into a set of sidings where inbound trains were left and outbound slate trains assembled . The sidings were located on a narrow ledge in the side of the Nant Gwernol gorge .

Rising south @-@ east from the end of the sidings was the 633 ft (193 m) long , double track gravity operated , Alltwyllt incline , from the top of which the Galltymoelfre Tramway ran south @-@ east towards the quarry for about 0 @. @ 5 miles (800 m) . The tramway was laid in light bridge rail and worked for its entire existence using horses . The tramway ended at the foot of the Cantrybedd Incline , a 440 ft (130 m) long double track , gravity operated incline . This final incline rose to the north edge of Bryn Eglwys quarry , reaching a height of 612 ft (187 m) above sea level .

= = Operation = =

The line has six steam locomotives for passenger trains and five diesel locomotives , which are primarily used for shunting and to haul works trains . It is unusual for all steam locomotives to be operable at the same time , as at least one is normally scheduled for overhaul . The railway also owns 23 carriages and vans , including all of the original carriages and the brake van built for the railway .

The railway is single track , so special measures have to be taken to prevent collisions . Before preservation , the railway operated a " one engine in steam " policy , but with growing passenger numbers it became necessary to install passing loops and a more stringent method of single line control was introduced . The line is worked by Electric Key tokens , which authorise the driver to enter a section of single line , and these are interlocked to prevent more than one token being withdrawn for a section at any one time . There is a loop at Pendre , which was used from the opening of the railway for shunting purposes , and further loops were installed at Brynglas in 1953 and Quarry Siding in 1963 . When the Nant Gwernol extension opened in 1976 , Abergynolwyn also became a passing loop . Between Abergynolwyn and Nant Gwernol the line is controlled by staff and ticket operation , which is controlled by the Abergynolwyn Blockman when on Duty

Each passing loop is controlled by a small signal box , known as a block @-@ post . These house the lever frames that control the points , the token equipment and telephones . The railway has few signals ; instead it has stop boards at Pendre , Brynglas , Quarry Siding and Nant Gwernol , and the blockman allows trains to proceed by use of flags . There are colour light signals located at Tywyn Wharf , operated from the Control Office and disc signals controlled from the ground frame . Abergynolwyn has colour light signals , which are operated from the blockpost . When the block @-@ post is unmanned , it is the responsibility of the locomotive crew to change the token before proceeding .

= = In fiction = =

The Talyllyn Railway is represented in The Railway Series books by the Reverend W. Awdry and the spin @-@ off TV series Thomas & Friends as the Skarloey Railway ; most of the fictional locomotives are based on real @-@ life equivalents . Awdry visited the line on a family holiday in the early days of preservation and became involved as a volunteer soon afterwards . Several of the stories in The Railway Series come from his real @-@ life experiences at the Talyllyn , and some of the books contain full @-@ page illustrations of Talyllyn locomotives .

The preservation of the Talyllyn Railway by volunteers was the inspiration for the 1953 film The Titfield Thunderbolt , an Ealing Studios comedy about a group of villagers attempting to run a service on a disused branch line after closure . T. E. B. Clarke , the script writer for the film , had heard about the preservation of the Talyllyn and spent a day on the railway in 1951 , and some of the early incidents in preservation were incorporated into the film . In the book Railway Adventure Tom Rolt recalled that he had hoped the film might be produced on the Talyllyn , but it was eventually filmed on the recently closed Camerton branch of the Bristol and North Somerset Railway branch line along the Cam Brook valley in Somerset .