

The present-day entrance to the tunnel is approached from the caravan park drive on the right after the bridge over the ECML. It is located in a hollow at the bottom of a recent flight of steps. In this 2016 view vegetation is beginning to mask the entrance and the protective grill has been partially removed. (Author)

Passengers travelling northwards along the East Coast Main Line after Berwick-upon-Tweed cannot fail to be impressed by this beautiful section of railway line which hugs the clifftop closely until geography forces it to curve inland just before the site of the former Burnmouth station. It has been necessary to divert this line away from the cliffs on at least two occasions as a result of continuing erosion of the rather friable sandstone. The first diversion, at Marshall Meadows, was planned by the North British Railway in the early years of the twentieth century; the second, of a more minor nature, took place between Lamberton (on the Anglo-Scottish border) and Burnmouth in more recent times.

Unknown to most travellers on the line there is, close-by, the remains of a railway tunnel linking the clifftop and the beach some 200ft beneath. This tunnel and its railway have received much local interest and comment over a period of years and have been the subject of much speculation regarding their function. John Logan Mack, in his book entitled *The Border Line, from the Solway Firth to the North Sea*, published by Oliver & Boyd in 1924, makes reference to the line: "The curious tunnel was constructed about a



# THE MARSHALL MEADOWS BERWICK-UPON-TWEED

BY ROGER JERMY

hundred years ago to enable seaweed to be transported from the shore to be spread as manure on the adjacent farms. It was laid with rails, the motive power required to haul up the

trucks being obtained from a stream, which, at a later date was diverted and the tunnel rendered useless for its original purpose."

Bearing a 1920s date there is a Sale Document, with accompanying Plan, which was drawn up for the sale of the Marshall Meadows Estate. It contains the following: "There is also a subterranean passage leading from the Headland down to the bay. Romantic legends are attached to this passage which is said to have been used by smugglers in olden days."

Francis Cowe (a Berwick historian and writer) mentioned it in his book *Berwick Upon Tweed: A short historical guide*, in 1975. This book was published locally by Bell's bookshop and quoted Mack's volume as a source. Raymond Lamont Brown mentioned the tunnel in another local guide in 1988. A discussion of the origins and purpose of the line appeared in the present author's book *Minor Railways of Northern Northumberland, Volume 1*, which was published in 2010 by The Oakwood Press. Subsequent to this book appearing, additional information has come to light and comment has appeared recently in the electronic media.

The tunnel was constructed through the sandstone rock a short time after the time of the building of the North British Railway's main line linking Edinburgh and Berwick-upon-Tweed in the 1840s. However, there is no reference to the line on the North British Railway's plans of 1839 and it appears for the first time on the First Edition Ordnance Maps of around 1860. The tunnel descends at an angle of between 30 and 40 degrees from the clifftop to the exposed shore beneath the cliffs. Originally the tunnel commenced on the landward side of the NBR main line but the diversion of this line some 30 metres inland, following successive collapses of the cliff face, resulted in the upper tunnel entrance today being located in a hollow between the main line and the top of the cliff. At its lower end





**ABOVE: This view shows the late twentieth century view of the lower tunnel arch. Successive cliff collapses have caused the lower tunnel entrance to be several metres above its original position. The original stone arch over the entrance has long since disappeared.**



**RIGHT: Inside the tunnel entrance is seen a ceiling recess and beam where the turbine-driven machinery for moving the wagons was located. (Author)**

## TUNNEL RAILWAY NEAR

the tunnel now emerges into daylight on to stone rubble from the collapsed cliff, several metres above high water mark. Formerly it continued at the same sharp angle on a short embankment towards a now long-disappeared jetty.

**S**o what was the real purpose of this line and its tunnel, the northernmost railway tunnel in England? Logan Mack referred to the line as being used to transport seaweed for use as manure. However, it would seem rather unlikely that such a line was constructed, at great expense, solely for this purpose. Other suggestions as to its use have been as a short cut to the shore for local fishermen, for upward movement of sandstone from the cliffs for use in local buildings or even (as mentioned in the 1920s Marshall Meadows Estate sale document) as a short cut to the shore for smugglers! None of these, on their own, appears to offer a satisfactory explanation, but the title of 'The Seaweed Railway' has been generally attached locally to the line which is the northernmost industrial railway in England if one excludes some temporary narrow gauge tramways used during the railway realignment.

It is as a result of the recent facility of being able to search the local and national newspapers via the internet that further information about the tunnel and its railway has come to light. Both *The Scotsman* and the local Berwick newspapers have contributed to producing here what is hoped is an accurate history, being based on the reported recollections and experiences of some local residents who recalled the line 'in action'.

The newspaper correspondence appears to have been stimulated by a narrative of Logan Mack which appeared in *The Scotsman* a couple of years before publication of his 1924 book. He expressed great surprise at the existence of the tunnel. A certain Mary A. Darling, a resident at Marshall Meadows, replied to Logan Mack by stating that the tunnel was originally the brainchild of a

Mr. Murray, who was at that time the Laird of Marshall Meadows. She said that the construction of the tunnel was accomplished in three years through the work of Welsh miners, though a subsequent commentator suggested that the men were either Welsh miners or workers from the lead mines of the Peak District of Derbyshire. Mrs. Darling referred to the channelling of water from the Marshall Meadows estate into a 'streamlet'. This water was used to power a water-wheel at the mouth of the tunnel for the purpose of drawing trucks up and down the inclined rails through the tunnel. According to her account, the water-wheel was attached to a huge timber beam in the roof at the upper end of the tunnel. The trucks were used to carry stone down the gradient to waiting boats, which shipped the stone to Berwick for the construction of the Royal Border railway

bridge. Other individuals had suggested that stone, obtained from the sandstone cliffs, had been hauled upwards through the tunnel. However, such red sandstone does not feature in the construction of the Border Bridge or in local buildings, for which its crumbly nature made it totally unsuitable. Stone from the Marshall Meadows quarry, further inland, is much stronger and not friable.

Mrs. Darling states that the stone for the Border Bridge was extracted from a large quarry located in the wooded 'dean' (dene or narrow valley) stretching between the main line railway towards the North Road (now the A1) to the west. A member of the Berwickshire Naturalists Club, James Hewat Craw, of West Foulden, Berwick, concurred with the above in a local newspaper letter dated 13th February 1922, stating that the owner of the Estate constructed the tunnel

**This photograph, taken in the 1920s, shows an early alignment of the ECML close to the friable sandstone cliffs. By this time the line had been realigned further inland for safety reasons and to make sure that vibrations from passing trains no longer caused the unstable cliffs to collapse. The parapets of this bridge are visible today but the railway is crossed by a new bridge closer to Marshall Meadows Farm. (The late Neil Mackichan)**





**This is a nineteenth century photograph was taken when Marshall Meadows House and its extensive grounds were in private ownership. The ladies posing in the photograph are all wearing elegant long dresses whilst one of the gentlemen is in military uniform whilst the other sports a top hat. (Marshall Meadows Hotel Collection)**

and line, realising the value of the bay beneath for the transport of the stone by vessels to Berwick. A second letter appearing in a later paper quoted evidence gained first hand from local residents and fishermen, confirming that the statements of Mrs. Darling and Mr. Craw were entirely correct. It referred to the Marshall Meadows tunnel being known locally as 'The Wham Tunnel' and being recognised as an engineering achievement, having been cut entirely by pick. It was said that on the south side of the tunnel was located a small 'aqueduct' (*sic*) cut into the rock sill from top to bottom.

At the top of the tunnel was a large water wheel which drove the winding gear which, in turn, raised or lowered the 'tubs'. The water came from the high ground above the nearby New Farm and passed through the grounds of Marshall Meadows house to power the wheel. Once having passed over the wheel it ran down the channel on the south side of the tunnel so as to drive a smaller water wheel at the lower end. This wheel drove a further set of winding gear which lowered and raised the tubs on a railed slipway from the foot of the tunnel to a small jetty on the beach. This jetty was constructed by Mr. Murray, the local Estate Laird, at the same time as the tunnel. In the rock face at the bottom of the tunnel, on its north wall, was a stone seat cut into the wall. This was for the 'level minder' who waited to unhitch the tubs (also referred to as 'trucks' or 'trolleys') coming up from the beach and hitch them to the 'big wheel tackle' which hauled them to the top of the tunnel.

A certain Mrs. Dowens, an old lady approaching her centenary and living in High Greens, remembered the wheels being in regular use. She recalled that the large wheel at the top of the tunnel was tended by a Mr. James Renton ("then a lad") who rose from these humble beginnings to become a successful farmer on the Corporation estate. He farmed at Camphill Farm and others nearby. James's cousin, also James Renton, remembered well "...when James used to tend the tunnel wheel...". The wheel at the lower end of the tunnel was said to have been attended by the father of a Berwick Councillor, Mr. Peter Edgar, who married James Renton's

daughter. Mrs. Dowens also recalled that after the cessation of the tunnel's operation the large wheel was removed and purchased by a well-known firm of estate fencers by the name of Wallace, of Grantshouse, Berwickshire, who reused it at a water-mill in that vicinity.

A letter, appearing in the newspapers on 28th April 1922, was written by a Mr. William Wilson of Springbank Manse, in nearby Ayton. Wilson decided to see for himself the Marshall Meadows Tunnel and made a visit with a friend, Mr. William Fortune. The two gentlemen turned up at The Lodge of the Marshall Meadows estate and were given a guided tour by Mr. Blackwood, the head gardener. The lodge was 300 yards from the Mansion House according to Wilson. The House was at that time approached via a tree-lined avenue which was dead straight until it veered left just before the mansion. On the right-hand side of this avenue was the Dene, mentioned earlier, and along which a small stream trickled. The Dene was planted with hardwood trees, described by Wilson as being some 50 to 60 years of age. The party left the avenue for a small path which led past a small waterfall and it was from this point that the quarry extended down the Dene in a linear fashion. This was to ensure that it was within the "...proprietary boundary line". The Berwick Corporation had required that a wall be built along the boundary of the Dene and the fields of the nearby New Farm. When the quarry reached the boundary line it was "...faced up with the pick from bottom to top..." and hence had the appearance of a bare wall some 50 to 60 feet high and stretching down the Dene for "...some considerable distance..." and, according to Wilson, looking anything but attractive when viewed through the leafless trees. Spring must have arrived late that year!

The guide, Mr. Blackwood, took his charges down the Dene until they reached the main railway line and he then pointed out a small tunnel which Wilson reported as being large enough to admit any person provided that they crouched sufficiently. This tunnel took the stream under the railway to where it emptied into a small tunnel, known as the Horse Tunnel, before discharging into the bay

on its south side. The party was then taken to the mouth of Marshall Meadows Tunnel. Wilson then quoted Logan Mack who had clearly measured the tunnel quite accurately. According to Mack the dimensions of the tunnel varied at its upper end but, measured a few yards in from the entrance, it had a mean width of 6ft 10in and a height of 7ft. Mack estimated the tunnel to be 80 metres in length.

Blackwood, Wilson and Fortune scrambled down the tunnel at an angle which they quoted as 30 degrees, being helped by clutching hold of occasional rings set into the left side of the tunnel. At the foot of the tunnel they noted the seat for the wheel-minder. This seat was described as being commodious, with an ample ledge for the body and a handy ledge on which to rest the right arm plus a nice arch overhead with a notch in the centre for the resting of the head! Blackwood must have passed on information about the minding of the wheel for Wilson states that earlier published information was incorrect: James Renton, apparently, looked after the big water wheel at the top whilst a certain Thomas Darling looked after the one at the bottom. Of course it is quite possible that responsibilities changed during the working life of the tunnel and railway.

Of course the Marshall Meadows Quarry was not the sole source of the stone for the Royal Border Bridge. The contractors, Mackay and Blackstock, made use of stone from various other local quarries and obtained the lime, for the mortar, from limestone quarries to the south in Northumberland, whence it was carted to the Tweed.

The letters to the various newspapers also revealed some of the history of the tunnel after it ceased its primary function of transporting stone from the Marshall Meadows Quarry to the jetty. Mary Darling referred to the fact that at the time of writing her letter to the newspaper (1922) the tunnel was in use by local fishermen who carried their salmon, in baskets, up through the tunnel, making use of the rope which was threaded through the rings attached to the wall. She also quoted "old residents" (*sic*) who had assured her that seaweed manure had been drawn up to the clifftop in the same manner. Craw referred to 'seaware' being transported from the beach for agricultural purposes as well as the salmon. Many of the suggested uses of the tunnel thus appear to have been based in fact, related to different periods of the tunnel's existence!

Another tunnel, believed to be of an earlier date, had been constructed at a nearby point on the coast known as 'Mount Zion'. This tunnel was known as the 'Horse Walk' or 'Horse Tunnel'. The landward end had been blocked up by 1922 and was used solely for leading water away from New Barn Farm. Parts of this tunnel were supported by oak beams which had not been necessary in the railed tunnel. It had been stated that horses had once pulled up 'bogies' up through this tunnel. It was said that potatoes from nearby farms had been transported down through this tunnel to be loaded into 'smacks' at a small jetty and that coals were carted up this tunnel from a small outcrop of coal which was worked by the local fishermen and farmers to supply their domestic needs.

A book, written by Alexander Steven and published in 1933, *The Story of Lamberton*



*Toll*, contains a reference to a gruesome incident in the life of the Marshall Meadows Tunnel. An Edinburgh lady, who had been married at Lamberton, brought to mind the result of a rail disaster at Marshall Meadows. A long time after the accident the body of a gentleman, who had been travelling on the train, had not initially been found in early searches. It was discovered eventually in the tunnel at Marshall Meadows, covered with sand!

**A**t the present time the tunnel is still in existence though its upper entrance lies on private ground which is now part of the large Marshall Meadows caravan site. To make an inspection it is necessary to obtain permission of the owners. It is important to park at the farm before the entrance to the site as beyond this there is a barrier which controls entry and exit of vehicles. The upper tunnel entrance, which was until a few years ago covered by a protective metal mesh, is located some seven metres below the current ground level. A flight of steps leads down to this point where the mesh, now in a very rusty state, covers just part of the opening. The upper 'chamber', which formerly housed the water-wheel, can be seen to be partly lined with sandstone blocks but the remainder of the tunnel has no lining. Timbers, which supported the wheel and winding mechanism, and wall recesses for other timbers, can be identified in the upper chamber. The lower entrance to the tunnel is now well over ten metres above the shore level though a slope, with a recently made flight of steps, leads down towards the site of the former jetty of which there is no trace. Some local residents recall its remains in the early 1960s. Mack certainly referred to it

**The presence of railings and the very marshy ground make the taking of a photograph of the brick-lined burn culvert rather difficult. This was the view in January 2017. (Author)**



**The Marshall Meadows Burn was the original power source for the tunnel railway or wagonway. Network Rail's Bridge ECM77/201 dates back to the realignment of the ECML. A platform to the left of this picture possibly carried the rails from the quarry leading to the tunnel whilst the burn lies in a brick-lined culvert on the right-hand side. Today the burn is almost dry at this point, having been diverted onto a new course further up the Dene. (Author)**

as 'disused' in the 1920s and Sanderson's Sale Plan of the vicinity, surveyed in the 1920s, makes no mention of it. Erosion at the lower end of the tunnel has eliminated the remains of the wheel housing and the former operator's seat. All nearby traces of the water supply to power the wheels on this side of the East Coast Main Line have been obliterated by the new railway cutting and the infill which has been used to raise and level the site.

This stretch of the main line has been the location of various railway accidents, some serious. It was reported in the early 1960s that a local railwayman was 'filling in time' between the various phases of his work associated with some track relaying. He visited the beach using the tunnel to gain access. On walking a short distance to the north he came across the damaged wooden frame of a goods wagon which at some stage had either fallen, or been pushed, over the cliff edge!

The original alignment of the East Coast Main Line now lies just a few metres to the east of the tunnel entrance, though taking photographs of this route infringes the privacy rights of those associated with the caravans and is inadvisable without their express permission.

From the car park in front of the Marshall Meadows Hotel and, with permission, it is possible to follow a somewhat steep, winding and slippery path down into the Dene. At the lower end of the path the face of the former Marshall Meadows quarry comes into view, especially on the south side of the Dene, though this view is somewhat restricted when the trees are in leaf. The valley floor is very boggy at this point. If the valley is followed eastwards for a short distance the Network Rail bridge (ECML7/201) comes into full view. Beneath the bridge and on the north side there is a raised area or platform along which the stone may have been taken from the quarry faces to the tunnel. It is not known whether the tunnel rails extended towards the quarry or whether the stone was loaded from carts on to the rail wagons close to the tunnel. The former might appear likelier though no on-the-

ground evidence can be seen. To the south side of the arch beneath the rail bridge is a brick-lined culvert which formerly carried the water of the Marshall Meadows Burn towards the water-wheel or 'turbine' as it was sometimes known. In January 2017 this culvert was almost dry. From the top of the path, close to the car park, it is possible to hear the sound of rushing water indicating that the burn now flows along a new route, though the boggy nature of the floor of the Dene precluded a more detailed search.

Hopefully this article resolves the arguments about the tunnel and the function of its rail line. However, it must be emphasised that accessing and traversing the Marshall Meadows Tunnel is somewhat inadvisable today. It is a potentially hazardous or dangerous exercise in view of the steep gradients involved and the inherent instability of the overlying sandstone rock. Water seepage causes the floor and steps to become slippery at times and, for some, the claustrophobic nature of the tunnel itself makes the experience unpleasant. Finally, on the beach below the tunnel, there is the risk of falling material from the unstable cliff face.

All the adjacent land, and the tunnel itself, lie on private ground and express permission must be obtained from the Hotel or the nearby farm to make a visit or to take photographs. Just a fleeting glimpse of the Marshall Meadows Dene, to the west of the main railway line, can be obtained from the windows of a passing train.

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