

## 15) The coast to Amlwch

Proceeding up the north east coast of the main island, the relevant items of interest are largely of an agricultural nature until the famous copper mining district centered on Amlwch is reached. Several old windmill towers will be noted, some derelict, some converted to residential uses, and there is also a number of watermills, which are worth a brief visit.

In the village of Pentraeth, the former Woollen Factory, "Pandy" (522785) has been converted to holiday accommodation (B&B available) but retains the 12 ft diameter overshot waterwheel (cast iron with wooden spokes) in derelict condition at the far end of the building. The mill dates from 1789, and the rest of the machinery was removed at about the time of the Great War. The local corn mill with adjoining granary (518781) is very derelict and overgrown but is now being restored. In the centre of the village itself an old warehouse is prominent amidst new housing, whilst beyond to the west an old railway embankment forms the skyline.

This was the route of a long-forgotten branch line running from a junction with the Anglesey Central line at Holland Arms near Gaerwen, down to the coast between Red Wharf Bay and Benllech. It was built only in 1907-8, but closed to passengers as early as September 1930 and became completely disused by 1950. Just before the next village of Llanbedrgoch, an apparently peculiarly situated brick arch denotes where an old alignment of the main road crossed the line. The platforms of Llanbedrgoch station survive amidst tourist caravans (520803).

The corn mill at Felin Esgob (Bishop's Mill), Maenaddwyn (451861) is of very ancient origin, being recorded as "Bodafon Mill" prior to 1425. Most unusually it derived its water supply not from a passing stream, but rather from the surface water of the surrounding pastures, and hence suffered as did most water-powered mills on Anglesey from severe supply problems during the summer months. Bishops Mill was superseded by another mill in the farm complex across the road (Felin Newydd), but has outlasted its successor as it still retains the 15 ft waterwheel (cast iron, wooden spokes), together with the crown and spur wheels. The building is presently undergoing reconstruction with retention of these remains. Another corn mill, Felin Dulas at City Dulas (470874) also has remains of a 12 ft waterwheel and some machinery, but the buildings are neglected and derelict. This mill closed in 1936 as the result of a broken axle.

Evidence of the one-time marine importance of this stretch of coastline, famous for its numerous wrecks in the days of sail, is to be seen in the tower on Ynys Dulas (502403), built in 1824 as a landmark and refuge for sailors. Remains of limekilns may be found on the beach at Traeth Dulas (480886). Kilns of this type were once numerous around the coast of Anglesey, since the soil is acid in nature and required heavy liming to be of agricultural value. Although the limestone as we have seen was to be found locally, the coal had to be imported, hence the usual seaward location of the kilns, most of which date from the early nineteenth century. Sometimes, the lime stones also came in by sea, as they were carried as return-load ballast in sailing ships engaged in the export of copper ore and slates.

Point Lynas Lighthouse, Llaneilian, was founded in 1781: the present light-tower and telegraph house date from 1835. The castellated buildings were commissioned by the Trustees of Liverpool Docks.

The town of Amlwch, though presently still the principal centre of habitation in the northern part of the island, was formerly of great importance in connection with the Anglesey copper trade. In 1800 the population was some 5000. This was double that of Beaumaris and two and a half times that of Holyhead, which had yet to assume dominance by its development as the port for Ireland. At this time Amlwch was noted as possessing amongst other things, sixty-five alehouses. We will find nothing like this number nowadays, and most evidence of the several breweries which served them has also gone. Of the one that stood at (451926) only the stables for the dray horses remain: it was closed in 1927, and afterwards an application was made for the premises to be used as a slaughterhouse! The last tobacco works has recently closed, the survivor of several such established to meet the needs of the mining community.

The district was served by a large corn mill at Melin Adda, Pentrefelin, just outside the town (440922). The site is derelict with the buildings partially converted, but the remains of no less than two watermills, one with a breast-shot and one overshot wheel, and a windmill may be examined. This

dual provision of power will be seen also in several other locations on the island, the purpose of course being to lessen dependence on the whims of the elements. Scarcity of water in the summer months led to the original establishment of the windmill on Anglesey (it being almost unknown in the more mountainous mainland areas of Gwynedd) as a replacement for, or supplement to water power.

The industrial importance of Amlwch derives from the discovery of rich deposits of copper ore on nearby Parys Mountain by Jonathan Roose on 2nd March 1768, which date was long afterwards celebrated as a miners' festival. The existence of the mineral in this locality had been known however for several centuries; the vitriolic waters have long since given away the secret of the mountain. It was mentioned by the cartographer John Speed when on his travels in 1610, and had probably been worked on a small scale in Roman times. There was a successful trial by Alexander Frazier in 1762, which was flooded before it could be worked. The landowner at the time of the principal find was Sir Nicholas Bayley, who had leased the Caernarfonshire mines of Penrhyn-Du to Charles Roe of Macclesfield, on condition (farsightedly) that Parys be prospected also, for 21 years from 1764. The so-called "Great Strike" of 1768 cannot have been entirely unexpected, since a smelter had been erected at Liverpool in readiness the previous year. Despite being of relatively low-quality ore, the discovery was soon to shake the well-established Cornish industry to its roots. For most of the ensuing thirty years the Parys mines, re-leased and from 1785 under the inspired management of Thomas Williams of Llanidan - the "Copper King", held control of world copper prices. The smelted ore was made principally into flat sheets, bolts and nails, for cladding the hulls of the wooden sailing ships of the period - it has indeed been said that Nelson's victories were founded upon Amlwch copper, which at that time provided three-quarters of Britain's total requirements.

In the early years of the nineteenth century James Treweek and other exiled Cornishmen introduced deep mining methods to Anglesey, but competition from more easily-won foreign sources spelt the downfall of the Parys empire from 1820, allowing the West Country mines to regain briefly their interrupted supremacy before they too collapsed. Some lead and zinc ore was raised in the mines from 1875, but the whole enterprise lapsed into inactivity in 1911, to be disturbed only infrequently by prospectors hoping to take advantage of modern technology and high world prices. The last such attempts were in 1955-7 and again in the late sixties.

In the early days the ore was calcined in open kilns on the mountainside adjacent to the mines, then shipped for smelting; but by the heyday of the 1770's and 1780's a flourishing community had become established around Amlwch Port, with a smelting works, chemical works and shipbuilding activities added to the Thomas Williams empire. Even the parish church was constructed by the mines company (1800) and the gravestones record the business of the town: miners, smelters, mine captains, seamen, coal merchants, brewers, and not forgetting the Marquess of Anglesey's assay master. Half and one penny copper tokens of the Parys Mines Company may still be found in the offerings of coin dealers, their mostly good condition testifying to excellent workmanship: the weight of copper contained is about seven times that of their modern decimal counterpart. Here is one example of the several penny designs, dated 1788.....



At Amlwch Port there are some interesting features dating from this period of intensive activity, although the harbour (450935) that was enlarged in 1793 is currently receiving a new lease of life as the site of an offshore oil pipeline terminal. It is to be hoped that such relics as the walled compounds with sloping floors forming the copper ore storage bins (shown at centre right in our picture) will be retained. These were all latterly roofed over and fed by wooden chutes (one is still intact) from carts unloading in the



lane above.

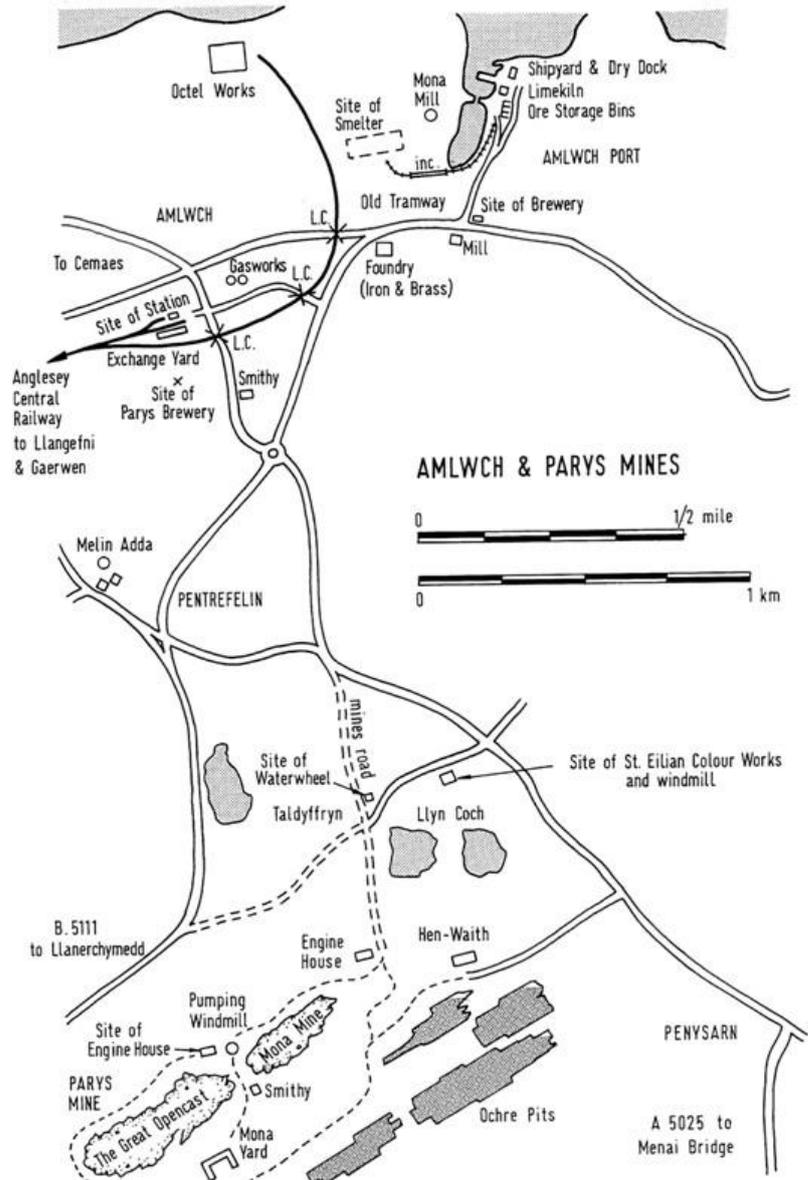
Adjacent is a large limekiln, with strengthening stay-rods held in place by fire bars removed from old ship's boilers! Not so fortunate has been the former shipbuilding yard of William Thomas and Co., finally closed down circa 1952, whose buildings have all been demolished save for two chimney stacks and the sail-loft (under restoration), and replaced by the oil company contractor's structures. These however being somewhat more substantial than the usual building site provisions are perhaps not too different in appearance from those that they replaced.

The dry dock, hewn out of solid rock, may still be examined: it retains its gates in disrepair and other items long rendered virtually unidentifiable by corrosion.

The harbour office with lookout and light tower (in the centre of our picture below right) dates from 1853, and replaced a primitive lighthouse of 1817: the stone quay upon which it stands was constructed in 1815. The inner harbour and the vessels within it could be protected from storm conditions by the insertion of wooden baulks into the slotted quay walls.

What is now the approach road to the quay is carried on brick arches, now very overgrown. These formed cellar storage for the row of quayside warehouses and the seamen's hostelries once adjacent but long since demolished. Between them and the dock lay a narrow-gauge tramway constructed in 1833 and running down from the Mona Smelting Works: its course is prominent even today on the opposite bank of the harbour as it breasts a short incline to the works site (now occupied by the council houses).

The smelter was in operation prior to 1786 but never assumed great importance due to the lack of local coal. In the peak year of 1787 output from the mines was made into 4,000 tons of pure copper. This required the use of 1,000 tons of coal a day, clearly well beyond the capabilities of Anglesey's small collieries at Malltraeth. Ore from the mines was sent away in large quantities by sea from the



port for smelting in other parts of the Williams empire: to Flintshire, Liverpool and Upper Bank (Swansea). Also atop the western side of the port will be seen the tower of Mona Mill, the largest windmill on the island, built in 1816.....

The copper mines themselves consisted principally of three distinct concerns, the Parys, Mona and Morfa-Du mines, with interconnected and nowadays largely inseparable workings. A total of 1200 miners were employed in 1796 along with 90 smelters at the port. From Amlwch the workings may be approached directly along the old mines road, a fine well-preserved straight and level highway constructed of slag blocks. Most of the interesting remains date from the second half of the nineteenth century, long past the peak of activity, and are connected with the complex pumping arrangements which were required when deep mining techniques were in use.

From Llyn Coch (448912) water was raised by means of a waterwheel and plunger pumps adjacent to the mines road at Taldyffryn cottage, to feed the boilers of the prominent ivy-covered engine house and supply a further reservoir beyond it. The Cornish beam engine that was formerly within, besides working the “Pearl” shaft, also pumped water to the very summit of the mountain. It was finally used here in the boilers of the “Cairns” engine, after a total lift of some 200 feet from the lake.



From the “Pearl” engine house (pictured above) we pass by numerous sites of shafts to reach the summit beside the stone tower of a windmill (right), built as late as 1878 to assist the pumping engine on windy days: unusually it had five sails. The remains of the steam engine itself may be seen some 200 feet to the west: its crank was connected by wooden rodding to the windmill drive-shaft. On most days, weather conditions at the summit make it easy to visualize the contribution of the windmill to the pumping effort.

Descending from the summit in a southerly direction, we pass between two great chasms which formed the opencast workings of the Mona and Parys mines, and come to a group of buildings comprising the Mona Mine yard (office, stores, workshops, counting house and mortuary) which offers interesting exploration. The spectacular multi-coloured “Great Opencast” may be entered with due care by means of the graded trackway leading down hereabouts.....





The vast pit is said to have been created by collapse following indiscriminate thinning of columns of rock left as roof supports, a relatively common practice just prior to the expiry of a mining lease. It was worked during the mines' busiest period by lowering men, and raising buckets, on ropes suspended from frail wooden structures cantilevered out from the top of the cliff and wound by adjacent horse whims. These dangerous procedures are depicted in several contemporary prints, as in this example.....



While it is still also possible to explore a little of the extensive underground workings, this is not recommended for obvious reasons. The surface workings may be circumnavigated in safety and without effort by means of the well-defined trackways bordering the upper edge of the pit, affording a good view of the vivid multi-coloured rock strata and bounded on the outer side by numerous rectangular pools brimming with deep blue water. These are precipitation pits (e.g. at 450907) still in use for the recovery of metallic copper from the enriched waters draining into them from the old workings. By a process attributed to Medley (1579), copper is plated out on iron bars immersed in the ponds, which themselves become enriched with ochre (Ferrous Sulphate). Over 70% of the copper content of the water is recovered by this small scale but very economical process, and the ochre also had commercial use as a pigment - the St. Eilian Colour Works once operated on site here.

In completing the circuit to the start of our tour, evidence of the 1955 trials will be noted in the form of concrete structures and fresh spoil tips. One wonders what the future may yet hold for such much-exploited lands in these days of high world prices and threatened raw material shortages.

For a more extensive account of the workings and their history the reader is referred to "The Copper King", a biography of Thomas Williams of Llanidan by J. R. Harris (Liverpool University Press 1964); to "Copper Mountain" by John Rowlands MA (Anglesey Antiquarian Society 1966) and to the excellent descriptive article by E. Cockshutt in the Transactions of the Anglesey Antiquarian Society, 1960.

## Updates – January 2012

The **Woollen Factory** building in Pentraeth village has been renovated and converted into a recording studio, “Stiwedio Pandy”; it is not known if the waterwheel survives. The adjacent **corn mill** structure has become a private residence. The old **warehouse** has long been demolished.

The old **railway embankment** is nowadays overgrown with mature trees. The former Pentraeth station approach road alongside it is now named Hendre Hywel and leads instead to a small development of new houses.

Leaving the village northwards along the main Amlwch road, the old railway route is still discernable in several places on the west side. A high embankment crosses the fields between and provides a magnificent view of Red Wharf Bay; it is accessible via a public footpath through Clai Caravan park. The long-bypassed brick **bridge** just before Llanbedrgoch is now completely obscured by trees and undergrowth, the cutting filled in with rubble waste. The track bed between here and the old **station** at Llanbedrgoch is used as a private road serving a linear array of large static caravans. The railway overbridge by the station, on School Lane, is still intact. The next large windmill-like structure on your right is now a private house, but was originally the local limekiln.

Continuing northwards, on the left of the road was the railway branch terminus named ‘Red Wharf Bay & Benllech’ where only the station-master’s house now survives, as a private residence. For a brief description and many pictures of the former Red Wharf Bay Railway see [www.mprints.co.uk](http://www.mprints.co.uk)

A thorough and splendid restoration of **Maenaddwyn Mill** and its waterwheel was completed by the owners during 2011; self-catering holiday accommodation is available on site here. However at **Felin Dulas** the main buildings were converted and extended to form a dwelling in the 1990s, but the waterwheel and internal machinery were left to deteriorate; everything was removed for safety reasons and scrapped during 2008. The property was recently offered for sale.

The tower on **Ynys Dulas** is a listed and well-maintained structure. The remains of the **limekilns** at Traeth Dulas may be found with difficulty from the beach at low tide; they are about 70 yards south of the former Dulas Storehouse, which lies at the end of the nearest road access point. The **Point Lynas lighthouse** structure and ancillary buildings were renovated and converted from 2001 and now comprise a private residence with self-catering holiday accommodation also available.

The site of **Amlwch Brewery** is now a recreation area opposite the Liverpool Arms Hotel. At **Melin Adda** the windmill tower and miller’s cottages have been renovated as dwellings, the tower now with a smart cap roof, but just two slender crossed sticks are evidently intended to symbolise the former sails. The watermill structures behind appear to have been cleared away and a new building erected in their place. The former quite rural aspect of this site has now also changed; there is a large modern school adjacent!

The history and conservation of the former copper-mining and port activities of the town and district are now overseen by the **Amlwch Industrial Heritage Trust**, based in the restored **Sail Loft** building at the far end of the quays at Amlwch Port. This is open during the summer months as a visitor centre, with a permanent exhibition of artefacts and pictures. It is pleasing to report that most of the structures around the port that we described over 30 years ago are still in existence, but the **dry dock** behind the visitor centre has long since lost its gates and has become completely silted up. Part of the ore stores on the quayside are being converted to a tourist heritage centre, opening Easter 2012. The **tramway incline** up to the smelting works site is now much less evident, being heavily overgrown with trees and vegetation. The **windmill tower** still looks much the same as in our 1970s photograph above, even retaining the timbers of the old turning mechanism at the top.

The **Parys Mountain** copper mines site has been the subject of several reworking activities over the years, the latest and current proposals for the western half of the complex under the auspices of **Anglesey Mining plc** being carried out as a direct result of the recent worldwide escalation of metal prices. Extensive controlled drainage of the old workings has been successfully undertaken, as the weakness of an underground dam structure was threatening to inundate the town of Amlwch and the surrounding area. The heritage of this important site has not been forgotten however; most of the surface remains are easily accessible to the public. The **Mona Mine yard buildings**, summit **windmill**

tower and the **Pearl Engine House** survive, but the latter's adjacent chimney stack collapsed in a storm some years ago. A waymarked **exploration trail** has been created all around the "Great Opencast" pit, and an elevated stone **viewing platform** erected giving a good panorama of the whole of the workings. The **Parys Underground Group** are carrying out extensive exploration and charting of the sub-surface remains, including the newly-accessible dewatered levels. This group can also organise **underground tours** for interested parties, providing suitable equipment and professional supervision.