
Ports and Harbours of Gwynedd



A Threat Related Assessment

GAT Project No. 1824

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DRAFT

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By

Andrew Davidson and John Roberts

Illustrations by Tanya Berks

Ymddiriedolaeth Archaeolegol Gwynedd

Gwynedd Archaeological Trust

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PORTS AND HARBOURS OF GWYNEDD (GI824)

A THREAT RELATED ASSESSMENT

Introduction

Recent research on coastal archaeology undertaken for Cadw by the Welsh Archaeological Trusts has highlighted the lack of archaeological knowledge of harbour locations and remains (Davidson A (ed), 2002 *The Coastal Archaeology of Wales*, 134-5). This includes both the archaeology of early landing places, the development of the medieval port, and the early post-medieval ports until they were superseded by the larger railway-linked ports of the later 19th century.

Aims of the Project

The aims of the project are to undertake an archaeological assessment of five ports in Gwynedd, and to recommend management proposals that clearly reflect the use and management of the port, and will be useable by those involved with the management of ports, including harbour masters and planners.

This project will contribute to our understanding of the development of ports and harbours within Gwynedd. The prime factors behind their existence will be examined, and an analysis of location will be undertaken, which will take into account the hinterland and corresponding ports.

Methodology

The first phase of this project has assessed the harbours of Penrhyn, Porthmadog, Caernarfon, Pwllheli and Barmouth. These all have development proposals or other pressures which either presently impact upon the archaeological resource, or have the potential to do so. A desk-based assessment has been undertaken for each. The regional Sites and Monuments Record formed the starting point, but the high number of standing buildings involved with the project meant that the records of Listed Buildings have also provided significant relevant information. Primary source material has included the OS County Series maps from the late 19th century (usually c. 1888-1890) to the early 1920's. County Tithe maps, and relevant estate maps, in particular the Penrhyn Estate maps, have also been used. Harbour Trust manuscript collections are available for Caernarfon and Barmouth. Coverage, however, has proved variable, for example there are significantly less maps available for Porthmadog and Barmouth than Caernarfon and Penrhyn.

Secondary sources, in particular railway histories by Boyd and Baughan, have been of particular use. Lewis Lloyd has provided histories of Caernarfon, Pwllheli and Barmouth, and Ellis-Evans has undertaken a similar task for Bangor (Lloyd 1989, 1991 and 1993; Ellis Williams 1988). Details of Porthmadog shipping is given in Hughes and Eames (1975). Various collections of archive prints and photographs have been collated and published, and these have been used throughout the study to avoid the need for lengthy and time-consuming archive searches through huge collections of photographs and prints. Examples of such studies include Rhyddech (1977) for Barmouth, Williams (1990) for Pwllheli, and Flynn-Hughes *et al* (1975) for Caernarfon and Morris (n.d.) for Porthmadog. Many of the other texts also contain large numbers of photographs and prints.

Background information

The archaeological study of ports and harbours remains very much in its infancy, in Wales and elsewhere in the world. Ports themselves resist easy classification. They are called into being by a variety of factors, of which topographical suitability is only one. Some reflect the economy of their immediate hinterland, others broader commercial, governmental or strategic issues, and most will have seen a wide variety of functions.

Within Gwynedd it is possible to classify the major ports into early ports, mineral harbours, packet harbours, fishing ports and general trade. Shipbuilding was undertaken alongside many of the

harbours. Most ports combined a mixture of functions, though usually one was dominant, and dictated the port facilities on offer. The mineral ports include Penrhyn, Dinorwic, Caernarfon, Porthmadog and Amlwch, the first four used primarily for slate, the latter for copper. However, a medieval quay was developed at Caernarfon as part of the formation of the borough and castle, and a strong tradition of general trade and shipbuilding continued there, with slate quay looking after the slate trade, and Victoria Dock the general trade. Penrhyn was developed specifically for the output of the Penrhyn Slate Quarries by the estate, though slate was being exported from there as early as the 16th century. Porthmadog is unusual in being a late development, arising from the construction of the cob across Traeth Mawr in the early 19th century.

Holyhead is the only packet harbour within the area. It was in use from the 16th century, though major construction of harbour facilities did not start until the early 19th century, when it was developed in conjunction with improvements to the London to Holyhead road and Howth harbour on the Irish shore.

General harbours using for importing and exporting goods, in particular coal, timber and foodstuffs, are typified by the two considered in this report at Pwllheli and Barmouth. Shipbuilding industries developed at both, and both were influenced by the increasing popularity of holiday resorts in the late 19th and early 20th centuries. Similar harbours existed at Nefyn and Aberdyfi.

Few improvements were made to the early harbours, though a timber quay, followed by a stone quay, is known to exist at Caernarfon in medieval tomes. The other harbours, though, were not developed until the rise in shipping associated with the industrial revolution at the end of the 18th century. The first quay at Penryn was developed after 1790, the first Act for improving the harbour at Caernarfon was passed in 1793, and at Barmouth in 1797. Pwllheli harbour was developed in conjunction with an enclosure scheme of 1811, and at Porthmadog the harbour was developed following a Parliamentary Act of 1821. The slate harbours at Penrhyn, Caernarfon and Porthmadog all developed significantly after tramways were built to carry slate from the quarries to the respective harbours. Prior to tramway construction it was possible to transport slates by road to other harbours, for example Aberogwen competed with Penryn (formerly Abercegin); many Caernarfon slates were formerly shipped from the Foryd, and Porthmadog was preceded by the sheltered bay off Ynys Cyngar. However once the Penrhyn, Nantlle and Festiniog railways were built (1800, 1828 and 1836 respectively) all slates for export and coastal trade were sent through the relevant port. This would change following the construction of the national railway (Chester to Holyhead in 1848, Cambrian Railway in 1867), though the changeover was not immediate, and the impact on shipping has been shown to be slighter than is often stated (see Lloyd 1989, 249-64). The general decline of the slate trade in the late 19th and early 20th centuries had a profound affect upon the harbours, and trade at all declined significantly. The late development of Pwllheli harbour in the early 20th century was an unsuccessful gamble, that never lived up to the developers' expectations. The development of marinas at Caernarfon, Pwllheli and Porthmadog have increased activity at these harbours. Penrhyn continues to operate as a business port, and retains the feel of an industrial harbour, though it is, of course, the only one not immediately associated with a town trying to develop its tourist potential.

PORT PENRHYN, BANGOR, GWYNEDD

Topographical description

Port Penrhyn lies in a wide sheltered bay at the east end of the Menai Strait that separates Anglesey from mainland Wales. It occurs at the point where the Strait narrows from the wide Beaumaris Bay into the narrower strait that runs through to Caernarfon. Two rivers enter the Bay, the Cegin and Adda. The Adda runs down a relatively narrow steep sided glacial valley parallel to the strait within which the town of Bangor lies. The Cegin enters from the south, and provided a broad river mouth (Abercegin) that formed an earlier harbour. This bay was sheltered from the prevailing westerly winds, and was considered a safe harbourage, though difficult to sail out of if the wind was coming from the east or north. The bay lies at the foot of Nant Ffrancon, down which flows the Afon Ogwen, one of the principal routes into the Snowdonia massif. Extensive mud flats, merging into Lavan Sands, lie to the east of the harbour. Peat and submerged forest remains have been found on the coast at Aber Ogwen, indicating the mudflats were formerly dry land in the early post-glacial period. A Neolithic chambered tomb is said to have formerly lain beyond the present coastline, but that it was destroyed by the sea. The two prime locations for harbours on the coast are Aber Ogwen and Abercegin. Both appear to have been equally used in earlier times, but improved land communications and harbour infrastructure following the choice to make Abercegin the principal slate export harbour in 1790 meant Aber Ogwen was little used in the 19th century. Closer to the town of Bangor lay the mouth of the Adda, and a third harbour would have lain here, later to become the maritime quarter of Hiraef, and now partially occupied by Dickie's boatyard. In the 19th century the town quay lay slightly further round the coast, towards the pier.

General background

The relatively narrow and steep sided valley of the Adda, in which Deiniol is reputed to have founded a monastery in the 6th century, contains little evidence for prehistoric settlement, and it is the flatter plateau east of the Cegin and west of the Ogwen that contains substantial evidence for Neolithic and later settlement. Excavations in 1966-7 revealed a complex landscape of Late Neolithic ritual monuments comprising two henge monuments, a cremation circle and a cursus, occupied c. 3,100 BC to 2,700 BC. This complex had been preceded by an Early Neolithic house (c. 3900 BC). A settlement was established here in the later Prehistoric period, and in the early medieval period (5th to 7th centuries AD) a cemetery of some 57 graves was established over part of the earlier cursus.¹ Though the nature of the coast has changed since Neolithic times, the principal glacial valleys and higher plateau have remained the same, and the river mouths at Abercegin and Aberogwen, would have been the obvious locations for harbours. The latter is slightly the closer, and the route to and from would have largely followed that later used by the first of the quarry tramways.

Penrhyn, though now dominated by the Romanesque castle designed by Thomas Hopper (built 1822-38), was an important estate centre from medieval times onwards, and some of the late medieval house is incorporated into the present, having already survived the construction of a classical house designed by Samuel Wyatt (built c. 1780-1800). The house lies on the same plateau as that occupied by the earlier Prehistoric complex, though lies 1.3 Km to the north, on the headland that lies between Abercegin and Aberogwen. Importation of building materials, household and estate goods, and the exporting of agricultural produce and slate was through both harbours, though tradition states that it was to Abercegin that Piers Gruffydd brought his Spanish prize in 1600, having privately funded his own ship to fight in the Armada.²

Production of slates from the Cambrian slate belt of north-west Wales has been undertaken from Roman times onwards, and a number of references refer to the shipping of slates from Aberogwen in medieval times. For example, in 1525 1,000 slates were shipped from there to Conwy for the repair of tower roofs, and in 1580 Sion Tudur, Registrar of the Ecclesiastical Court at St Asaph, sent a poem to the Dean of Bangor asking for 3,000 slates to be shipped from Aberogwen to Rhyl. In 1544 David ap Thomas leased land in Llandegai, with permission to raise slates, and with the right to ship slates and other commodities from Aberogwen and Abercegin.³

¹ Lynch and Musson, 2004.

² For a history of the castle and grounds see Hague 1959, Cadw et al 1998 and National Trust 1992.

³ For these and other references see Lindsay 1974, 15-32.

In 1765 Richard Pennant inherited part of the estate, and in 1781 he gained control of the remainder. Slowly Pennant took direct control over the running of the quarries and land, aided by his quarry manager William Williams (appointed 1761) and agent Benjamin Wyatt (appointed 1785). Pennant had employed Benjamin's brother, Samuel, to rebuild the house at Penrhyn, and also to construct a new villa at Lime Grove, where Benjamin was to live. Samuel was impressed with slate as a building medium, and the influential Wyatt family were responsible for a number of the early contracts for roofing slates, and more importantly for raising overall awareness of the advantages of slate.⁴

By 1781 Richard Pennant (created Baron Penrhyn of Penrhyn in 1785) had gained direct control over the slate quarries at Braich y Cafn, and was employing quarrymen to work them. However, the transport infrastructure was crucial, as slates were heavy, bulky and fragile, and thus expensive and time consuming to carry from the quarries some 1.5 Km to the port. Once at the port, it was usually necessary to store the slates before loading onto the ship, so that orders could be accumulated. Transporting from the quarry to the port formed a bottle-neck. In 1783, for example, William Williams was writing that there were a good number of slates at the quarry, which were 'much wanted at Abercegin' where he was trying to raise a cargo of 15,000 Countesses for Liverpool.⁵ Improvements to the transport arrangements started with the road, possibly as early as 1782, the work designed and overseen by Benjamin Wyatt. Once the road was constructed it was possible to employ two-wheeled carts to replace the horse and pannier that were limited to carrying 64 slates each. However, a horse tax still made haulage expensive, and Pennant and Wyatt examined methods of improving transport, employing Thomas Dadford to report on the feasibility of a canal or railway. Whilst the steep terrain made the former unsuitable, Wyatt, partly incorporating Dadford's ideas, designed a 2' edge railway, incorporating three inclines, to run from the quarries to the port. Work started in 1800, and the route is clearly shown on a plan of 1803.⁶

The first harbour lay within a pool at the mouth of the Cegin, and though the harbour of Abercegin had been used regularly for shipping slates, as well as fish from the nearby weirs, no structural remains are known. A plan of 1768 shows a wide river mouth, with a road from Penrhyn approaching from the west, and widening out at the creek, with a possible quay alongside, however this area is now overlain by the tramway, and any remains removed. Abercegin farm is shown at the head of the creek, and two buildings lie close to the waterfront that may be warehouses. All this was to change in 1790 when Wyatt designed new harbour facilities to deal with the increased throughput of slates. New stone quays with a small stone pier and a warehouse for storage were constructed.⁷ The name of the port changed from Abercegin to Port Penrhyn, to reflect its new status as a slate port controlled by the Pennant family. Usage of the port was also increased by the establishment of a flint grinding mill that imported flints from Suffolk and Ireland, and exported them to Toxteth, and by establishing a factory for the production of writing slates that became the World's largest supplier of slates. The development of these industries was largely the influence of Samuel Worthington, encouraged by Pennant.⁸

The exact nature of the first quay is not known with certainty, though Boyd says that because the new quay dried out at low tide, the pool was still used, and the water held in by lockgates to allow boats to moor afloat.⁹ However the construction of a bridge across the mouth of the river would have limited access, and certainly by 1828, when a second bridge was built, the inner harbour would have gone out of use. The pool is now silted up, and no masonry remains or archaeological features are visible to suggest its former use, though the potential for archaeological survival of boats and timber structures within the silts must be good.

Further works were undertaken, and a small pier was constructed by 1803 that allowed additional space for mooring. A map dated 1803 clearly shows the import warehouse on the west bank of the river, the

⁴ See Jones 1981 for a history of the Wyatt family in north Wales.

⁵ Quoted in Lindsay 1974, 46-47

⁶ See Boyd 1985 for a history of the tramway.

⁷ In 1786 Pennant agreed to lease part of the foreshore from the Bishop of Bangor for the creation of a quay (UWB Penrhyn Castle 811-815)

⁸ See Lindsay 1974, National Trust 1992 and Boyd 1985.

⁹ Boyd 1985, 6

extended pier with a tramway running around the outer edge, and a single kiln on the southern side of the quay. A bridge crosses the river, and the first tramway is clearly shown.¹⁰

The pier was lengthened by 1828, according to a map of that date, though Boyd says 1829-30.¹¹ Waste was being tipped here on a regular basis, and the quay was extended to the north, possibly to serve two new kilns built closer to the coast, replacing the earlier single one. In 1855 further construction took place, resulting in the pier and quay that is still there today. This involved further extension of the main pier, and construction of a second pier built to the east of it and curving around the north end, thus forming an entrance into a new dock. The new work was faced with Anglesey limestone.

Though the new harbour was now just sufficient to cope with demand, transport technology had moved on, and the horse drawn tramway that delivered slates from the quarry to the port was barely sufficient to cope. Nonetheless, the first transport change was the construction of a branch line off the Chester & Holyhead railway, which enabled slates to be distributed through the national rail network. The C&H was officially opened to Bangor on 1 May, 1848. In 1852 a branch line was opened from the Bethesda junction to the port, running parallel to the Penrhyn Railroad for the final section of the route, passing under the road that led from the Holyhead Road to the Port Lodge. The line was owned by the estate, though constructed by C&H. Eventually, in 1876, a new railway to a gauge of 1 ft 11" was constructed from the quarries to the port that would allow steam powered locomotives to be employed. Though in part following the earlier railroad route, much of it was new, designed largely by Charles Spooner (engineer of the Festiniog Railway), though it was the Penrhyn agent Arthur Wyatt, aided by the surveyor Robert Algeo, who put the scheme into practice, cutting many of Spooner's ideas in the process.

By this stage, the harbour had essentially developed to its fullest extent, and no other major additions would be made to the infrastructure. The twentieth century witnessed a steady decline in the demand for slate, and though Penrhyn quarries is one of the very few to remain open today, their contact with the port is now far less. The branch line from Bethesda closed officially in 1965, and the track was lifted during 1965-6, as also was the track from the Penrhyn Railway, and slates were now transported by road. The writing slate factory closed in the 1920's, to become a foundry in later years, though nothing now remains of this building. The import warehouses were converted to an outdoor training centre, and now have two uses as a Scout residential centre, and as a sheltered residential centre.

MANAGEMENT

Harbour management

The harbour at Penrhyn is privately owned by Penrhyn Estate. The Estate employs a Harbour Master, though moorings and marine issues are dealt with by Dickie's Boatyard. Several companies occupy various parts of the dock, and these are managed by the agents of Penrhyn Estate, Carter Jonas, who have their offices at the port. No major new developments are projected, though the old quay wall will require maintenance in the near future.

In order to maintain a working harbour, minor changes are required on a regular basis. However, the majority of the buildings are Listed, and the changes required rarely have a significant impact upon the overall character and historic environment.

Archaeological potential

Archaeological potential exists within the former Cegin pool, the site of the medieval harbour, where waterlogged silts could preserve wooden and other organic artefacts, as well as remains of stone quays

Many of the upstanding buildings are already listed, though a small number, for example the two limekilns, and the carriage shed and adjacent fitting house, are not protected. Neither are the former import warehouses.

¹⁰ UWB Penrhyn: not catalogued, but numbered 40.

¹¹ Boyd 1985, 65; UWB Penrhyn: not catalogued but numbered 26.

Our understanding of the chronological development of the quays and piers is not complete, nor is our knowledge of the method of construction of the piers. Several former buildings, in particular the slate mill/foundry, have been removed, and relict archaeology may exist underground, though there are no surface remains.

Recommendations

Developments within the Cegin Pool would require an archaeological response, and also developments that may reveal evidence relating to the construction of the existing quays and piers.

The standing buildings that form the historic character of the port are nearly all listed, though consideration should be given to protection of the two limekilns, the carriage shed and adjacent fitting shop, and the import warehouses.

CAERNARFON HARBOUR

Location and topography

Caernarfon lies on the south side of the Menai Strait, strategically placed to reach the inner regions of Snowdonia, the Llŷn Peninsula and Anglesey. This central location was appreciated by Gruffydd ap Cynan, though it was to the adjacent harbour of Abermenai, on the north side of the Strait, that he made his way in 1075 when, arriving from Ireland, he sent messengers to Anglesey, Arfon and Llŷn to gain support for his claim to overlordship. Though access to the harbour is made difficult by the bar at the mouth of the Strait – the channel moves with every storm – once inside the Strait the waters are relatively sheltered and deep enough for mooring at both Abermenai and Caernarfon. Out going ships heading towards Liverpool had the option of sailing through the Strait past Beaumaris, though it wasn't an easy option, and could only be done at high water slack, usually with the aid of a pilot. The alternative was to sail back through the bar, though here again it was not straightforward, and ships often had to wait several weeks to get the correct combination of tide and wind.

All successful ports depend for their existence on both a safe and convenient harbour and good land communications to encourage settlement. Caernarfon lies at the junction of several mountain passes, and on the line of the main transport route that followed the coastal plateau around the Snowdonia massif. The site is well defended by the tidal estuary of the Seiont to the west, the Menai Strait to the north, and, in part, by the River Cadnant to the east.

Historic background

Roman and medieval

The Romans chose the summit of the ridge between the Cadnant and the Seiont to build their 'north-west outlier of the Welsh frontier system', at the pivotal point between the northern and western coast roads¹². Established about AD 77, it continued in occupation certainly until 383 when Magnus Maximus withdrew much of the army, and probably until 393, when troops were removed to control of the revolt of Eugenius in Gaul.¹³ Two hundred metres west of the Auxiliary fort lies a second Roman fortification, usually called Hen Waliau. This was a rectangular enclosure 70m by 50m lying at the top of a steep scarp above the Seiont. The west side is now gone, having been heavily robbed out, though the line of the wall has been found by excavation.¹⁴ The function and date of the fort is still uncertain, though the evidence suggests a late 4th century structure, possibly used as a storage compound. Access down the slope to the Seiont would therefore have been important, and this was probably at the north-west corner of the fort where there is a break in the steep slope. A road is shown through here on the 1888 OS map, and Wood's map of 1834 shows the start of a track from the south-west corner, that would have followed the top of the scarp before dropping down. Alternatively, if timber remains found in the 19th century were a Roman bridge, there may have been a road west from Segontium, passing to the south of Hen Waliau, and across the bridge (see PRN 5564). Evidence of any Roman work will have been largely destroyed by the construction of the railway, particularly by the high revetment wall built 1868, but there is some possibility of timbers remaining in the silts of the river.

Following the withdrawal of Roman troops, the initial focus of settlement appears to have shifted inland of the fort, around the parish church of Llanbeblig, though the location of the church may have been determined by the existence of a Roman cemetery that lay alongside the road outside the fort gate, and not associated with any settlement. It may be of greater significance that when the Normans attempted to gain a foothold in the area in 1090 they chose a site below the fort and alongside the Strait on which to build their motte and bailey castle. A Welsh settlement may well have formerly existed here, and influenced the siting of the motte. What is more certain is the presence of a settlement there by the time of the Edwardian conquest in 1282-3, for it was destroyed in order to make way for the construction of the new castle. This was one of the royal courts of the Welsh princes, and Caernarfon was acknowledged in poetry and prose as the ancient centre of Gwynedd.

¹² Boon in Jarrett 1969, 59

¹³ Casey and Davies 1993

¹⁴ Boyle 1991

Edward I's castle was built around the existing motte, and the town occupied a level plateau to the north on land that was virtually an island, formed by the R Seiont, the Menai Strait and the R Cadnant. The construction of the castle and town was a major undertaking, requiring the importation of massive quantities of stone and timber, much of it brought in by sea.¹⁵ Thus a good quay was essential to the undertaking. Originally built of timber, the first quay was destroyed in an uprising of 1290-1. It was rebuilt in stone, and lay on the Strait side of the town and castle. Accounts survive from 1316 naming a yearly sum of £100 granted towards the completion of the haven works at Caernarfon, though in 1322 it was reported to be in a bad state of repair, and subsequent accounts give weekly progress of its repair.¹⁶ In 1434-5 accounts record timber and stone being used for the construction of a new water gate and postern. Speed's map of 1610 shows an outer gate across the quay, connected to the Eagle Tower, which is almost certainly the outer postern. By the mid-18th century the outer postern had been largely demolished, and a small slipway built close to the site.¹⁷ On the south side the Seiont washed the castle walls, with no space for a quay, though it is probable that the curve in the river beyond had always formed a useful anchorage. To the north of the town walls lay the mouth of Afon Cadnant, which formed the town ditch. This area was known as Bank Quay, and 18th century prints show boats moored within this area, as far as the bridge that underlies Eastgate Street. Excavations in 1994 and 1996 revealed a strong stone wall interpreted as the remains of the medieval quay.¹⁸ This is the wall shown on Speed's map of 1610, lying outside the north-west tower – a site later occupied by the Victoria pier built in 1830.

Post-medieval developments

Though a county town with responsibility for administrative affairs, the medieval harbour did not develop commercially until the 19th century, when the development of the slate industry led to the need for better facilities. The intermittent export of copper ore from the Drws y Coed mines to Swansea, and a steady increase in the export of slate had provided some commercial activity in the 18th century, and small-scale ship building had been undertaken, particularly on the east side of the Seiont. However, the huge increase in the demand for slate caused by the housing demands of the Industrial Revolution led to rapid development of the Nantlle slate quarries. The finished product, though occasionally shipped from Y Foryd to the north, was usually carried to Caernarfon for export.

Construction of new harbours at Abercegin (Penrhyn) and Y Felinheli to ship slate from the Penrhyn and Dinorwic quarries respectively, led to the realisation at Caernarfon that improvements were required there if trade was not to be lost. Following a series of local meetings, an Act was obtained in 1793 for 'enlarging, deepening, cleansing, improving, and regulating the harbour of Carnarvon'. The harbour was deepened and cleansed, and, because of difficulties caused by access through the Caernarfon Bar at the mouth of the Strait, a lifeboat and pilot station was created at Llanddwyn, the Anglesey peninsula that lies north of the bar. A contemporary writer recorded that the improvement to the quay had been 'put in execution, by filling up a large marsh in the right bank of the Seiont, and thus confining the tide within the river bounds, deepening the channel, and enabling vessels to moor on a much more extended line. This has been partially effected by all vessels inwards, in ballast, being bound to discharge it on the spot, destined for the future quay'.¹⁹ A second Act was passed in 1809, and duties were allowed to be charged on certain goods to help pay for the improvements. The quay was further extended to the north in 1821.²⁰

However, moving slates on rough roads and tracks was expensive, time consuming and difficult. The construction of an iron railway linking the Penrhyn quarries to the new harbour by Bangor revealed the way forward, and it was the construction of the Stephenson designed Nantlle Railway, opened in 1828, that secured the future of the slate quay at Caernarfon. The seven mile long, horse-drawn tramway ran from the slate quarries at Nantlle, and approached Caernarfon along the east bank of the Seiont, to the already existing quay, with wharfs for each of the major quarries. The line of the railway and extent of

¹⁵ Taylor 1974, 369-81

¹⁶ Lewis 1912, 104-5

¹⁷ RCAHMW 1960 from print by J Boydell, 1749 in NLW

¹⁸ Smith 1997

¹⁹ Evans 1812

²⁰ Boyd 1981, 73

the quay at this time is clearly shown on John Wood's map of 1834. The former limekilns are shown at the south end of the quay, served by limestone from Arklow, brought in as ballast.²¹

Imports tended to be unloaded on the west side of the town, alongside the Strait. These consisted in the main of timber and coal, though also included provisions. The lack of room for expansion at the slate quay, meant that it was to the north of the town that a pier and patent slip were constructed by the Caernarfon Harbour Trust about 1830. Though the stone pier was not a great success, the patent slip was in continual demand for the maintenance and repair of ships. It was in this area also that the Harbour Trust leased out land for shipbuilding, moving the industry from its more traditional location on the Seiont.

In the early 1860's plans were put forward for the expansion of the harbour, once again on the Strait side where there was greater room for expansion. This site also lay alongside the new 'Caernarvon and Bangor Railway', a branch of the Chester and Holyhead Railway, thus linking Caernarfon to the burgeoning rail network of Great Britain. The line was completed in 1852, though it would be over a decade before it had any substantial impact on the shipping trade. The harbour improvements would involve construction of a wet dock to the east of the former pier, and the infilling of land behind. The plans were put forward and heavily promoted by the mayor of Caernarfon, Llywelyn Turner. Construction started in 1868, and was completed by 1875. Several warehouses constructed at the same time lie alongside the dock.

Meanwhile on the far side of the harbour a new railway was opened between Afonwen and Caernarfon in 1867. This standard gauge line, constructed by the contractor Thomas Savin, lay largely on the bed of the former Nantlle Railway, and thus approached Caernarfon along the line of the slate quays. Proposals to continue the railway round the outside of the castle and along the promenade were vigorously opposed, and the Bangor and Afonwen lines were ultimately connected by a tunnel under Castle Square in 1870.

In the later 19th century there was a decline in the overseas demand for slate, and a reduction in cost of rail freight, resulting in considerably less demand for shipping. This impacted upon all the associated trades, including ship building and ship repair, and symptomatic of this was the closure of the internationally renowned Union Ironworks in 1901-2. By the second half of the 20th century there was considerably reduced activity within the harbour, to be renewed in Victoria Dock by the construction of a marina in the 1980's.

MANAGEMENT

Harbour management

The harbour and marina is managed by the Caernarfon Harbour Trust, who employ a Harbour Master. Many of the buildings alongside the harbour, however, are managed by Gwynedd Council, who are also responsible for redevelopment schemes alongside Victoria Dock and Slate Quay.

Victoria Dock contains a marina in one half of the dock managed by the Harbour Trust. It is hoped to expand the marina to fill the remainder of the dock. The marina ensures the dock continues to be used and maintained, with minimal impact upon the historic environment. Major new developments have taken place alongside the dock, the most recent being the construction of a major new arts centre 'Galeri' built by Cwmni Tref Caernarfon. The extant warehouses that are contemporary with the dock are listed, and managed by Gwynedd Council, though they are currently not being used.

The area of the slate quay that is now a car park is managed by the Caernarfon Harbour Trust, who also own the attractive Harbour Office. A regeneration plan has been completed on behalf of the Council by Wyn Thomas Gordon Lewis for the slate quay area, including the former de Winton buildings, though the St Helen's Road buildings are in different ownership. The report recommends refurbishment of existing structures where possible in order to retain the character of the area.²² Any

²¹ Boyd 1981

²² Wyn Thomas Gordon Lewis 2005 *Slate Quay, Caernarfon: Development Opportunities Final Report*.

refurbishment or redevelopment needs to be preceded by a programme of archaeological recording to include detailed building survey and a wider contextual analysis.

Archaeological potential and recommendations

Roman archaeology associated with the fort/depot at Hen Waliau, will have been largely destroyed by the construction of the railway, particularly the standard gauge line in 1865. However any major development works within the area should be subject to a watching brief, in particular the line of the likely route down the slope between Hen Waliau and the banks of the Seiont.

The location of the chapel and well dedicated to Helen close above the river, and away from the church at Llanbeblig, may denote other activity within the area. The exact site of the chapel is not known, and the well site is very overgrown, however evaluation should precede any development.

The location of the harbour associated with the pre-Edwardian settlement is not known, but is likely, as in later years, to have been both along the edge of the Menai Strait to the west, and along the Seiont to the south. To what extent the Cadnant was used at this time is not known, though the river mouth would certainly have made a suitable mooring spot. The river silts may retain wooden and other organic artefacts associated with this early period.

The construction of the castle and borough after 1283 included the construction of the first known purpose built quay. This lay west of the castle and town walls, alongside the Strait. It is probable that much remains of the later medieval stone quay, and that the present promenade contains within it the medieval masonry. This is particularly likely at the north end, where the quay has been widened. Any development within the area of the medieval quay should be monitored, and areas of particular interest include the later postern gate at the south end, the former quay at the north end (Bank Quay), shown on Speeds map and remains found in 1994 and 1996. The status and date of the water gate alongside the Eagle Tower also needs determining.

There were few major changes to the harbour within the late medieval and early modern periods, and it was not until the industrial period and the growth of the slate industry that major structural changes were made. The slate quay fits into the pattern of development seen at Penrhyn and Port Dinworic, the difference being that at the former two places the harbours were developed by a single quarry owner, whereas at Caernarfon it was developed by a Harbour Trust for a number of independent quarries. This saw a proliferation of industries closer to the quay, including the former lime works and Union Ironworks at the east end, and the development of a separate import harbour at Victoria Dock.

The harbour and associated industries are important for their links with the north Wales slate industry, an industry that provided half the world's slate in the 19th century. Of particular interest are the remains of the Union (de Winton) Ironworks, and a full record should be made of these prior to any development. Two of the buildings that formed the office and erecting shop are listed grade II. The harbour office is also listed (grade II*), however the buildings that lie behind it form an interesting mixed group of offices and workshops, including the Brunswick Ironworks. These are scheduled for redevelopment, and it is important that a full record be made prior to work being undertaken.

The quay itself is listed (grade II). The phases and method of construction should be recorded when opportunity arises, and any significant repairs should be preceded by detailed recording.

Considerable regeneration works have been undertaken at Victoria Dock. However, the siting of a marina within the dock ensures its survival, and three of the former warehouses remain (though two of them are currently empty) and are listed grade II. Also still present is the patent slip, first built in 1830, and the sliding bridge that passes over the slip, and a dock crane on the north side of the dock (all but the slip listed grade II). The potential for archaeological investigation in this area is primarily associated with the earlier medieval remains (see above), however many of the 1860's buildings have been demolished, and detailed recording should be undertaken before the development of any of the remainder.

PWLLHELI HARBOUR

Location and topography

Llŷn is a large peninsula extending south-west of the main mountain massif of Snowdonia. Topographically, it comprises a dissected plateau with outliers of harder rocks forming a number of isolated, but prominent, hills and ridges. The whole, however, has been very much modified by deposits of material laid down at the end of the last Ice Age. Yr Eifl, the so-called Rivals, in the north-east part of the peninsula are the most prominent hills, reaching 564m above OD: these are followed by Carn Fadryn, in the centre of the peninsula, at 371m above OD, and Mynydd Rhiw, in the south-west, at 304m above OD, although there are several lower hills rising in between these summits. The gently undulating plateau surface is generally between 50m and 100m above OD, with occasional lower areas formed by shallow valley basins, coastal margins or narrow, deeply incised, hidden valleys. Bardsey Island lies off the south western tip of the peninsula across Bardsey Sound, and reaches 167m OD.

Pwllheli is situated on the south side of the peninsula, and was the location of the court and administrative centre of the medieval commote of Cafflogion. The importance of Pwllheli as a medieval town and subsequent ship building centre and port owed much to its natural harbour facilities. The settlement developed at the confluence of three rivers, the Afon Rhyd hir, Afon Penrhos and Afon Erch, where a tidal pool formed a safe harbourage.

The topographical development of the coast edge is not fully understood – the rivers have been re-aligned over the years, and sand accumulation, much of it almost certainly in medieval times, will have altered the coastal landscape. In pre-medieval times the rivers may have had separate estuaries along the coast. The mouth of the Erch would have been further east, perhaps joining the sea due south of Abererch, and the mouth of the Penrhos further west. This would not have affected the viability of Pwllheli as a harbour, which almost certainly started as a salt water pool within the area of Pwllheli enclosed by North Street and High Street. This pool is still shown on Lewis Morris's map of 1748, though it silted up during the latter part of the eighteenth century.

The rock of Carreg yr Imbill, at the seaward end of the southern bar, was, before most of it was quarried away, a fixed landmark to the channel that led into the harbour, and may have been a focus for prehistoric settlement.

Prehistoric archaeology

Though no prehistoric or Roman settlements are known from Pwllheli, there is evidence from stray finds that they did exist, but have been destroyed by subsequent development. For example, finds from Carreg yr Imbill include a Bronze Age adze and Iron Age spindle whorl.²³ Three quern stones and a mortar of late prehistoric or Romano-British date were found in the vicinity of Pwllheli, though the exact findspot is not known.²⁴

Medieval archaeology

Under the later Welsh princes in the 12th century, Pwllheli was to become the administrative centre of the commote of Cafflogion, which occupied the southern Llŷn peninsula. Like Nefyn on the north side of the Llŷn, it was to develop into a town and port, and eventually be granted Borough status. The location of the original medieval centre remains uncertain. The parish church of Deneio lies to the north of the town (see fig. ??), and to the north-east again lies the farm of Henllys (old court), suggesting the first (pre-12th century) administrative centre lay outside the limits of the present town.²⁵ Evidence for the earliest development within the existing borough may be sought amongst the place-names of Gadlys (fortified enclosure) and Penmount (artificial mound, possibly referring to a motte).

²³ PRN 2212 and 2213. For identification and description of the adze see S. Green, 1981 'Two perforated adzes from Gwynedd' *BBCS*, XXIX, 342.

²⁴ PRN 2259 see also RCAHMW, 1964 *Inventory of Ancient Monuments of Caernarfonshire* III, xl.

²⁵ PRN 6926 and PRN 63 for the church and Henllys. See Johnstone 2000 for a discussion of the location of the llys sites.

The former lay at the opening of Penlan Street, and until the early 19th century a 'substantial old building called Yr Hendre Gadredd' lay in the vicinity.²⁶ The remainder of the town appears to have developed along the present high street and from there down Stryd Penlan, which led down to the old quay, and Stryd Moch, which lay below and west of Stryd Penlan (see fig. 3).²⁷ Edward I stayed at the court here in 1284, though full borough status was not granted until 1355.²⁸

Harbour developments

In 1566 Pwllheli harbour was described as 'Pwlllely, a port or haven having a town or habitation of the same name upon hit wherein are 36 householdes or cotages'.²⁹ Trade was conducted in agricultural produce, malted barley and coal, and by 1603 Pwllheli had contacts with ports all round the Irish Sea, and two vessels of its own.³⁰ Fishing also played an important role, and Lewis Morris records 'Beds of Oysters, and plenty of other Fish, and some years they have a good Herring fishery here; but the chief commodities of the place are butter and cheese'.³¹ Piracy and smuggling were lucrative trades, encouraged by local landowners, and Pwllheli was often deeply involved with both.³²

It has been suggested that prior to the 18th century the harbour was a tidal pool on the east side of the town that would later become silted up and infilled – the limits of this pool are roughly marked by North Street and Kings Head Street.³³ This area is low-lying, and it is quite feasible to see it as having been a pool, though Morris's map of 1748 does not clearly indicate this, but rather suggests the harbour at that date was of a similar formation to that shown by Wood in 1834. In the early 18th century the limits of the port were laid down as 'from ye cornall of a wall of Gadlis ground lying south-west to ye southern corner of garden wall of Tu Iddiew'. This sites the early 18th century harbour close to Pen y Mount, perhaps inland of the chapel. A quay was built there and the custom house sited nearby. In the later 18th century a new quay was built at the south end of Penylan street – shown on Wood's map as 'The Quay', though construction of the embankment in the early 19th century caused the quay to become landlocked. In 1808 a new quay eighty yards long was built between the Traeth storehouse and Cae Tyddyn, following a 21 year lease of the land by the Corporation to three Englishmen (the quay is shown as 'The port' on Wood's map of 1834).³⁴

In 1811 an Enclosure Act was passed for the common lands of the parish.³⁵ These included Morfa Mawr, which encompassed the southern bar to Carreg yr Imbill. This area was not easy to access, and in order to increase its value and gain additional land a reclamation scheme was proposed. The scheme finally decided upon involved the construction of the existing embankment from Penlan street south to Bwlch y Tywod on the Carreg yr Imbill bar. Sluice gates to prevent tidal water getting beyond the embankment, but allow the river water to flow through, were constructed. Another smaller embankment was built on the north-east side of the harbour across the mouth of the Erch estuary, again with sluice gates. The quay on the east side of the town remained the principal one (see fig 3, Wood's map of 1834). The quay at Penlan (also shown on fig 3), which had become redundant following the construction of the embankment, was demolished in the 1840's to make way for the Mitre Hotel.³⁶ A new landing stage was constructed in the north-east corner of the harbour at Pen y Cob for loading and unloading steamers.³⁷

The construction of the harbour at Portmadog during the early 19th century as part of William Madocks's inspiring scheme provided severe competition for Pwllheli, and though the former was eventually to

²⁶ Johnson 2000; Hughes 1991, 4.

²⁷ Soulsby 1983, 221-2; Jones 1941, 129.

²⁸ See Lewis 1912, 289-91 for the full text of the grant.

²⁹ Lewis 1927, Appendix I.

³⁰ Lloyd 1991, 12-13; see also Lewis 1927 *Welsh Port Books* for details of trade in the 16th and 17th centuries.

³¹ Lewis Morris 1748 *Plans in St George's Channel*

³² Pierce 1944.

³³ See Hughes 1991, 1-20.

³⁴ Hughes 1991, 1-20 and 156-9.

³⁵ Chapman 1992, 41. The award was initially made in 1812 and finally signed in 1869.

³⁶ See Hughes 1991, 12-24 for a detailed description of the enclosure; Dodd 1971, 53-88 for the general background.

³⁷ Shown on 1900 OS map

become the more important, the new inner harbour at Pwllheli created by the construction of two embankments, was busy throughout the middle decades of the 19th century, both for trade and for ship building and repairing. The last ship was built at Pwllheli in 1878.³⁸

In 1867 the Cambrian Railway was opened to a station constructed a short distance outside Pwllheli. Its arrival helped fuel ideas to develop the tourist potential of the town. Development at South Beach was started by three local businessmen in the 1880's, and when financial problems started to arise, the project was boosted by the arrival of Solomon Andrews, a Cardiff businessman who visited the town in 1893, after seeing land advertised for sale. He bought a large plot of land west of the embankment, much of it reclaimed land, which was to form the basis of his development at West End, starting with the construction of the West End Hotel.³⁹ A tramway was also developed that ran along the embankment to West End.⁴⁰ Eventually in 1909 the Cambrian Railway was extended into the town and a new station built. This completed a whole series of changes to the harbour that resulted in the form it would remain until the end of the 20th century.

An embankment was built along the north side of the harbour from the existing railway station to Pen y Cob. This had the effect of reclaiming 18 acres of land, and facilitated the extension of the railway into the town. A new embankment was also constructed on the east side of the harbour at Glan y Don. The inner harbour was dredged to provide a depth of 11 ft at High Water, and the dredged material was used to create an 8 acre island in the harbour. A weir and tidal gates were built across the entrance to the harbour, and the outer harbour between the gates and Carreg yr Imbill was dredged.⁴¹

The new harbour did not prove a great financial success, and was never fully utilised. In the late 1980's a marina was constructed on the west side of the harbour following dredging. The dredged material was used to build an embankment from the island within the harbour to the 1809 embankment, thus linking the two.

PWLLHELI HARBOUR - MANAGEMENT

Harbour management

The harbour at Pwllheli is managed by Cyngor Gwynedd, who employ a harbour master to manage the moorings. However a marina is situated in the eastern part of the harbour, reached via the Glan y Don embankment. Called Hafan Pwllheli, it is managed on behalf of the council by Yacht Haven Management Ltd. It is intended to increase the size of the marina by constructing more berths in the south-west part of the harbour. Though this will require considerable dredging, the silts to be removed are those that have collected during the 20th century. An archaeological assessment has been undertaken, and no specific impact upon the archaeological heritage was identified.⁴²

Archaeological potential

The Glan y Don embankment and bar is now largely occupied by boat chandlers and the marina complex. The Morfa Garreg to Carreg yr Imbill bar is now occupied by houses on the west side, and a caravan site on the east end. Ships Chandlers and repair shops occupy the harbour front towards the east end of the bar, where the only structure of interest is the lifeboat house.

The location and structure of the harbour has changed so radically during the 19th and 20th centuries that much of the potential now lies under the built-up southern areas of Pwllheli, where the silts of the earlier harbours underlying present housing and streets may retain archaeological remains of interest. Hughes (1991) suggests the earliest pool, that gave the name to the town, was that defined by North Street and King's Head Street. Certainly this area is low lying, though Morris's map of 1738 shows the coastline on a similar alignment to that of Wood in 1834, if we disregard the changes wrought by the enclosures and the construction of the town and Glan y Don embankments.

³⁸ See Lloyd 1991 for maritime details, and the rise and decline in ship building.

³⁹ See Andrews 1976 for a detailed account of Solomon Andrews undertakings.

⁴⁰ Andrews 1995 contains details of the tramway and its development.

⁴¹ Hughes 1991, 29-35.

⁴² GAT Report No. 527, April 2004.

Potential for prehistoric archaeology may exist around Carreg yr Imbill, though this must be slight given the extensive quarrying that has been undertaken there. The medieval core of the present town, defined by the Market square, Penlan Street, High Street and Pencei may retain archaeological remains under the present buildings. Of particular interest are the possible motte at Pen y Mount, and the area known as Gadlys under an existing carpark. Identification of the status of the mound at Pen y Mount will help considerably with the interpretation of the medieval layout of the town and harbour.

Recommendations

Developments within the medieval area of the town would require an archaeological response, and also in the possible harbour pool, in the hope that examination of the soils and silts will identify former land use. The status of the mound at Pen y Mount should be ascertained. This would not be a simple matter, though coring might identify archaeological layers within the makeup of the mound.

The standing buildings that form the historic character of Pwllheli are nearly all listed, though consideration should be given to protection of the lifeboat house on Morfa Gareg.

PORTHMADOG HARBOUR

(by Gwynfor Pierce Jones)

Location and topography

Porthmadog lies snugly in the curve of the southern coastline of Caernarfonshire, where it turns south towards Harlech and Barmouth. The harbour and its associated town lie on the northern bank of the River Glaslyn, close to the mouth of the former wide estuary known as 'Traeth Mawr' (the large beach). This is also the location of W. A. Maddocks' embankment ('the Cob'), which makes a physical connection between the old counties of Caernarfonshire and Merionethshire and, by holding back the incoming tide, reclaimed several thousand acres of land. Whilst much of Porthmadog harbour occupies the northern margin of the 'cob' and the sandy former 'Tywyn' lands, much of the wharfage clings to foot of the precipitous Garth headland to the west, almost invading the neighbouring inlet of Borth-y-gêst.

The juxtaposition of the three key elements in the localised landscape – the 'cob', the harbour and the town – is not accidental. The establishment of both port and town was the result of Maddocks' Traeth Mawr embankment, though neither was intended in the original scheme. Both were the consequential results of unexpected circumstances, and exemplify the ability of Maddocks, his successors, and his able assistants to opportunistically capitalise on every available opportunity.

Porthmadog is thus unusual in its origin, in that it was an accidental result of the positioning of the Glaslyn lock gates, the fruit of the imagination of a remarkable person, and the channelling of the prodigious output of the third most productive slate quarrying area via a railway which had a less than auspicious birth.

Historical background

a. Maddocks' early works

Until the middle of the second decade of the nineteenth century, the wide estuaries of the Glaslyn (the 'Traeth Mawr')⁴³, formed a natural formidable barrier to the direct coastal land route to and from Caernarfonshire to Merioneth and *vice versa*. Travellers were either faced with a lengthy circuitous journey around the upper reaches of the twin estuaries, or a perilous trek across the treacherous sands at low tides.

Although the reclamation of land from the salt-water inlet had been mooted as long ago as 1625,⁴⁴ it was not until 1800 that the first successful inroad was made into the salt marshes on the Caernarfonshire (north) side near the hamlet of Prenteg.⁴⁵ William Alexander Maddocks, the young new owner of lands thereabouts financed the first, earthen embankment that reclaimed a significant area of land for his estate. A romantic and 'far-thinker', Maddocks was fired by contemporary ideas on land improvement, and as part of his schemes he established c.1802 a new settlement which was named 'Tremadoc' for his self-aggrandizement.⁴⁶

Buoyed by the success of his first reclamation works of 1800-02, the young *arriviste* landowner sought to enlarge his estate and reputation with the taming of the Glaslyn estuary. By 1807, Maddocks had prepared even more ambitious plans – none other than the taming of the tidal Glaslyn River on Traeth Mawr. He obtained an Act of Parliament to this end,⁴⁷ and in 1808 undertook the huge task of forming a stone barrier ('the Cob') across the outlet of the Traeth.⁴⁸ Completed in 1810 with much acclaim, the

⁴³ Similarly, the adjacent, parallel Dwyryd estuary (the 'Traeth Bach'), was a barrier to land access to the southern Cardigan bay coast

⁴⁴ Davies (1913), quoting Madog ap Owain (1856), of an original reference by Thomas Pennant (1778).

⁴⁵ Davies etc

⁴⁶ now known as Tremadog

⁴⁷ Act of 1807 for enclosure of Traeth Mawr Geo 3 Session 2 Chapter 36.

⁴⁸ For a comprehensive account of the construction of the Cob, and of W.A.Maddocks' life, see Beazley (1967).

Cob prevented the tide from entering the estuary, and thus enabled 2,700 additional acres of land to be reclaimed and added to Maddocks' estate.⁴⁹

Unfortunately, under the onslaught of a hurricane-force storm in 1812, the embankment was seriously breached. Maddocks' local agent, John Williams, was fortuitously able to mobilise financial support and voluntary labour from many county landowners and farmers, effecting a successful repair under challenging conditions. Nevertheless, the costs of the original works plus the disaster left Maddocks' in deep financial problems, and he was pursued by creditors for the remaining 14 years of his life.⁵⁰

b. The harbour

Slate quarrying in the then-remote upland Vale of Ffestiniog had commenced on a small-scale commercial basis in the 1760's,⁵¹ but by c. 1820 a number of important new entrepreneurs had entered the slowly-growing industry. Chief amongst these were Messrs Turner & Cassons, and Samuel Holland jnr., all being destined to play key roles in the industry and trade that was to blossom.

In this era, transport links from the inland slate quarries to the ships engaged in the slate trade were poor. The manufactured roofing slates were carried on mules, and later small carts from the remote works to quays on the Dwyryd estuary, then conveyed by small boats at convenient tides over Traeth bach to a barely-sheltered inlet west of the later Porthmadog harbour. Here, at Ynys Cyngar, the slates were laboriously transhipped into larger vessels, many from the neighbouring ports of Pwllheli and Barmouth, to be taken to the wholesale markets at the ports of Bristol, Liverpool and London.⁵²

W. A. Maddocks had intended to capitalise on the contemporary method of slate transport by building permanent facilities at Ynys Cyngar,⁵³ but changed his plans when a better opportunity presented itself. The Traeth Mawr Cob accommodated the impounded waters of the Glaslyn River during the period of incoming tides, when the lock doors were shut. By reasons of topography, the doors were located near the Caernarfonshire (northern) bank, between the islet of Ynys Towyn and the mainland.⁵⁴ When opened on the ebb tide, this impounded river water swept outwards through the gates at speed, with the result that the sandbanks lining the outer north shore under the Garth headland were rapidly scoured out to sea, and began to silt-up Ynys Cyngar. This scouring cleared a better-sheltered, deeper anchorage than the old transhipment site, and the new quay established here c. 1820 became the core of the new harbour.

By a private Parliamentary Act of 1821,⁵⁵ Maddocks became entitled to construct port facilities along the whole length of the Caernarfonshire shore from the lock gates at Ynys Towyn eastwards as far as the headland of Garth Penclogwyn.⁵⁶ The original small quay was initially extended to include the later 'public quay' at Pen Cei (or Cornhill) under a contract awarded to the builder Griffith Griffiths of Dolgellau & Sons, in the years 1821-24. Subsequently, Samuel Holland, the influential Ffestiniog quarry operator, established a small shipping quay for his own produce nearby in 1824. In same year, the shipbuilding industry of the new port commenced with the launch of the *Two Brothers*, built by Henry Jones, the first of a great number of Porthmadog ships.⁵⁷

Despite the continued use of Ynys Cyngar by the Dwyryd boatmen, increasing amounts of the slate traffic became diverted to Maddocks' new facilities. It was, however, the opening of the 2ft. (60cm)-gauge Festiniog Railway [*sic*] (authorised in 1832, completed in 1836), which proved the turning point

⁴⁹ The Act also allowed the marginal lands not covered by sands, to be subsumed into other estates with which they adjoined.

⁵⁰ Davies (1913) pp 14-16; Beazley (1967).

⁵¹ For the early history of the Ffestiniog quarries, see M.J.T. Lewis & M. Williams *Early Ffestiniog Quarrymen* (Snowdonia National Park Study Centre, Plas Tanybwllch)

⁵² See Lewis (1989) for details.

⁵³ Davies (1913) pp 14-16; 18-19 refers to an Act of 1807 (Geo 3 Session 2 Chap 71) for improvements at Ynys Cyngar, and the unsatisfactory conditions at that location.

⁵⁴ Under 'Britannia' bridge

⁵⁵ Geo 6, Chapter 115, Portmadoc Harbour Act (15 June 1821).

⁵⁶ This is the extent of the present quay on this side of the harbour.

⁵⁷ Davies (1913) p.24. See Hughes & Eames (1975) for details of the shipping.

in the development of the harbour.⁵⁸ In his lifetime, Maddocks (who died in 1828) seems to have envisaged such a development,⁵⁹ and possibly two attempts had already been made to connect inland quarries to the port, one in the late 1820's and a failed 'Ffestiniog' Bill in 1830-31.⁶⁰ The success of the Samuel Holland-inspired 1832 railway Bill ensured the eventual patronage of Porthmadog harbour by almost all of the multitude of quarries that were opened in the surrounding upland hinterland in the remaining decades of the nineteenth century.

In the post-Maddocks era, the increasing tonnage of produce for export from a rapidly expanding slate industry, and in-coming goods and materials for the new town and outlying districts demanded the expansion of the port facilities. The Trustees of the Maddocks estate considerably extended the wharfage space during the middle decades of the C19th, but a contemporary account recorded that despite such work, the facilities were unable to expand to keep up with the demand.⁶¹

Yet, by the middle years of the 1870s, the tide had turned, so to speak. After an all-time peak of exporting some 150,000 tons of slates per annum, the proportion switching to the new UK network rail links increased as the slate trade began its inextricable long-drawn phase of decline.⁶² Thus by 1913, less than half the peak figure was being handled by the port,⁶³ and the ensuing world war (1914-18) virtually decimated what trade remained, and also caused the loss of many of the remaining specialised sailing ships (the "western ocean yachts").⁶⁴

A list of the quay tenants in the greatly declined era of 1913 shows the following:-

Oakeley Slate Quarry Ltd 3 quays
J. W. Greaves & Sons Ltd. ... 2 quays
Davies Bros., slate-merchants ... 1 quay
Votty & Bowydd Slate co Ltd 1 quay
Maen Offeren Slate Quarry Co Ltd ... 1 quay
Manod, Croesor and Rhosydd quarries... 1 shared quay⁶⁵

Post-1918, although the slate industry revived to a certain degree, decreasing use was made of Porthmadog harbour in favour of the UK railway connections from the nearby Minffordd 'Cambrian' exchange sidings and the GWR and LNWR termini at Blaenau Ffestiniog. By 1939, even the Ffestiniog railway – former life-blood of the harbour – had ceased carrying slates except for a short journey in Ffestiniog itself, and both the Harbour Station and the port facilities were becoming decrepit.⁶⁶ Council Housing development had already encroached on the site of the timber yards adjacent to the town 'green' by the 1930s.

⁵⁸ See Boyd (1975) for the authoritative history of this railway. Boyd (1988 & 1989) and Johnston (2002) gives additional detail.

⁵⁹ Davies (1913) p21 suggests that Maddocks had contemplated such a railway in a letter dated 1814 to his agent J. Williams, but the fully quoted text in Morris seems ambiguous. Certainly, the insertion into the Harbour Act of 1821 of a toll-free passage across the cob for rail-born slates was a considerable factor in the choosing of the terminus of the eventual railway as built.

⁶⁰ The story of the abortive precursors of the FR, and of its own early history is very involved. See Lewis (1968) and Boyd (1975) for further analysis.

⁶¹ Madog ap Owain (1856) pp 30-31 refers to the 5 acres (700 ft frontage) available being much too small due to the doubling of trade over 15 years. Incoming vessels had to queue in potentially dangerous moorings before being able to come in to the quays. Morris p.21 claims that £1,000 was spent c.1833-4 on the first new wharves, and subsequently £10,000 was spent on wharves (then leased to the Welsh Slate Co, Rhiwbrydir Co and J. W. Greaves respectively) and the south pier / breakwater, which later became the New Wharf. It should be noted (p.20) that whilst only Sam Holland initially shipped via the railway post-1836 opening, the remaining quarries must have increasingly carried their output by boat to the harbour rather than Ynys Cyngar. The great turning point was the commencement of use of the railway by the important Welsh Slate Company from 1839, and the capture of the German market following the disastrous fire at Hamburg in 1842.

⁶² See Baughan (1980) for details of railways

⁶³ Davies (1913) p.38. Detailed statistics are supplied in text tables in this work.

⁶⁴ See Davies (1913) *passim* and Hughes & Eames (1975) for lists of vessels built & registered here.

⁶⁵ Davies (1913) pp.36-37.

⁶⁶ Boyd (1975)

In the late 1950's the harbour at Porthmadog experienced a temporary commercial renaissance. Components for the Tanygrisiau hydro-electric and the Trawsfynydd nuclear power stations were brought in by sea, to mitigate the effect on road transport. The large pieces of plant were off-loaded from barges by a large, specially installed crane, before being taken to site along improved local roads. The Porthmadog Terrazzo tile works was also active, being originally a private offshoot of the Manod Slate Quarries Co. however, during the 1960s, the potential for re-development of the harbour for the increasing tourist and yachting fraternity saw the building of expensive 'flats' on the New Wharf and of new boat repair and chandlery facilities on the old Garth wharves.⁶⁷

c. Ballast wharf (Lewis' island)

This is an important feature of the harbour, though little is known about it in detail. It is an entirely artificial structure, made out of dumped ballast from the ships entering the harbour without cargo, and is probably so located as to provide shelter for the quays from the open expanses of the Traeth Bach tides. When the original dumping ground next to the deep channel had been exhausted, a sophisticated system of steam crane and tramways was then installed (together with a timber quay – the Ballast Wharf) for unloading the ballast and dumping it in the seaward side of the island. The property of the Tremadoc estate, it was by the late nineteenth century in lease to Messrs Roberts & Lewis (hence the alternative name of 'Lewis Island'), who installed a 'slip' made of iron here, possibly for the establishment of a ship yard, though this does not appear to have been a commercial success.

d. Cornhill & Lombard Street (south)

The port was not totally dedicated to the export of slates. It also imported produce such as coal, lime, and corn for the town and its hinterland, though only 1/6th of the wharfage was available for this in 1856.⁶⁸

However, the first site associated with the harbour development was, logically, that area adjacent to the new quays of the 1820s. Officially known as Cornhill, its more accurate Welsh descriptive name of 'Pen Cei' literally means 'above the quay'. Lombard Street (south) followed soon afterwards (1830s+), and both these two commercial and residential areas formed the earliest portion of the main town that was later established north of the harbour area.

The most obvious early commercial development was in ancillary trades associated with the maintenance of ships, e.g., chandlery and sailmaking and a 'school of navigation' run by an old seaman in the 1840s (at No.7 Cornhill); their provisioning (grocers, flour dealers, butchers, shoemakers); the entertainment of their crews (pubs etc.); and of the seamen's Salvation (at the Mission, later the Reading Rooms).⁶⁹ Several iron foundries and timber yards were also established by the 1840s as the ship building industry grew, and the slate quarries required plant & machinery. The port also served the outlying districts of Eifionydd and the Vale of Ffestiniog, with goods, provisions, and even the huge timbers used to roof the most modern chapels and quarry mills being brought in, and transported by railways.⁷⁰

There was also a parallel economic development. A branch of the North & South Wales Bank opened at No.6 Cornhill in 1836,⁷¹ and the Provincial Bank of England was a contemporary establishment located at the entrepreneurial Capt. Richard Pritchard's house in the confidently-named adjacent

⁶⁷ The author wishes to thank Mr M. J. B. Wynne Williams (of CPRW) for background information about the post-1939 era.

⁶⁸ Madog ap Owain (1856) *passim*.

⁶⁹ Davies (1913) pp.39-40; 93-94; 130-136; 156 and see Porter (1886) for a snapshot of the contemporary commerce. Madog ap Owain (1856) pp.29-32 gives a frank account of the squalor of Cornhill and parts of the new town.

⁷⁰ The Ffestiniog, Croesor, and the Gorseddau & precursor railways.

⁷¹ Davies (1913) pp.39-40 This closed in a financial crisis in 1847 and then became Casson's Bank, moved to the main street in 1865.

Lombard Street.⁷² The provision of local, cheaper shipping insurance was also of great importance, the result of the formation of the Marine Mutual Ship Insurance Society (at No.15 Cornhill) in 1841 by the quarry owners Samuel Holland and J. W. Greaves.⁷³ Samuel Holland was also involved in the formation of the Porthmadog-based Merionethshire Steamship Co., and the Portmadoc Steam Tugboat Co. Ltd [*sic*] – an essential aid to the harbour.⁷⁴

e. The town

The Traeth Mawr cob and the new harbour wharves prevented inundation by the sea of the nearby flat sandy land called Tywyn. Maddocks envisaged this site for another new town as part of his harbour development, but did not live to see this achieved (he died in 1828). His successors and estate Trustees did realise the dream, and over the succeeding half-century 'Portmadoc' (now Porthmadog) developed as a town of economic and cultural significance. Although it lies outside the scope of the present study, the inter-relationship of harbour and town, and town with its economic hinterland was an ever-present factor that pervades their combined histories.⁷⁵

MANAGEMENT

Harbour management

The harbour is managed by Gwynedd Council, who employ a harbour master. The council also own Ballast Island. There are no immediate plans for development within the harbour area by the Council, though regular maintenance is undertaken, and health and safety requirements calls for replacement of old ladders, and maintenance of the top of the quay, which is in relatively poor condition.

Archaeological potential

There is limited potential for the survival of underground archaeology at Porthmadog. The majority of the structures surviving at the harbour belong to one of three eras – (1) the 1820s-50s multi-phased initial construction of the port; (2) the 1930s housing on the timber yard site, and; (3) the 1960s+ modern housing and leisure developments on the New Quay and 'Garth-side quays'.

Whilst the post-1930s developments have destroyed many of the buildings associated with the slate trade and altered the landscape significantly, the integrity of the quays themselves is remarkably intact. Much original 'dock furniture' (e.g. tie-up rings, bollards and timber rubbing-strips) survive *in situ*, and there has been only one large (and unsympathetic) breach made to the impressive façade of the northern quay walls.

The dockside commercial area known as Cornhill (or 'Pen Cei' in Welsh) retains its character, as does the associated south end of Lombard street. Much of the area of the quays closest to the town (Greaves' and Oakeley's) have been tastefully changed into a public open-air amenity area and the community hall ('Y Ganolfan'), though at the sad loss of several large loading sheds. The remaining original buildings on this site now comprise refurbished holiday lets (reasonably sympathetically restored). The Maritime museum occupies one of the few remaining contemporary storage sheds.

Recommendations

A listed building survey is currently being undertaken at Porthmadog. Most of the significant structures are already listed, though consideration needs to be given to the station buildings of the Festiniog Railway.

⁷² Davies (1913) pp.39-40. Pritchard had, after retiring from a maritime career, been involved with the import of (Irish?) porter ale prior to his conversion towards temperance, and was subsequently the finance backing the new Britannia Foundry (of c.1848)

⁷³ Davies (1913) pp.26, 156.

⁷⁴ Davies (1913) p.156.

⁷⁵ Davies (1913) pp.18-20

The quay walls survive largely in tact. The impact on the setting of these needs to be carefully considered in advance of any future development. A detailed survey of the structures and phasing would enhance our understanding of the harbour and its development.

BARMOUTH HARBOUR

Location and topography

A map of the west coast of Wales shows the wide sweep of Cardigan Bay enclosed by the Llŷn peninsula to the north and Pembrokeshire to the south. The northern section of the Bay is indented with three dominant estuaries, each having a principal harbour on its north side. The harbour of Aberdovey lies within the protected lee of the southern estuary, the Dyfi, situated roughly in the middle of Cardigan Bay. At the top of the estuary is the market town of Machynlleth. To the north is the Mawddach estuary with the harbour of Barmouth, which served a wide hinterland up the estuary up to the town of Dolgellau. North again, under the lee of the Llŷn peninsula, is Traeth Mawr with the harbour of Porthmadog. This latter harbour differed from the others, in that the estuary only became suitable for a deep water harbour following the construction of the cob by William Maddocks in the early 19th century, and the trade later taken up by Porthmadog was initially shared between Barmouth and the well-protected Llŷn harbour of Pwllheli.

Though difficult to reach by land, its natural advantages as a harbour were utilised by fishing craft, and as a suitable location for the exchange of goods between small coastal craft that were able to negotiate the estuary, and sea-going vessels that could import and export goods both around the coasts of Britain and further a field. The site also had a long history as a ferry crossing, and is mentioned by Gerald of Wales in the 12th century. Immediately east of Barmouth lies another natural harbour at Aberamffra, where a small river discharges into the Mawddach. Other natural creeks further up the estuary were used for shipbuilding and the distribution of imported goods.

The harbour at Barmouth, located on the north side of the Mawddach estuary, was protected by an island, Ynys Brawd. Passages into the harbour lay north and south of the island, though the north passage has been blocked by an embankment across to the island in recent times. The former harbour was once larger than present, and remains of a quay wall are said to have been found along the lower reaches of the High Street, perhaps even as far as the Cors y Gedol Hotel (see below).

The road currently following the north side of the estuary was constructed in the second half of the 18th century, and prior to that the route from Llanelltyd and Dolgellau lay further inland, along high rocky tracks.

Historic background

Prehistoric and Roman

There is little evidence for early settlement on the coastal plateau, though this may be because of sand inundation that has obscured earlier evidence, and/or because of rising sea levels, evidenced by buried peats visible on the shore. The surrounding uplands are, however, relatively rich in prehistoric and Roman settlement sites.

Medieval

Barmouth lies within the ecclesiastical parish of Llanaber. The parish church lies on the coastal plateau to the north of the town. It is an interesting example of Early English medieval architecture constructed during the latter part of the 12th century. It is possible that Llywelyn ap Iorwerth was, in part, responsible for its construction.⁷⁶

Evidence of Christianity from earlier times is provided by the two early Christian inscribed stones now located in the church of Llanaber. One was recorded as being found on the beach 20 foot below high water mark between Barmouth and Llanaber. It bears an inscription which has been transcribed as 'AETERNI ET AETERNE', translated as (*The stone of) Aeternus and Aeterna*. The other was found at Ceilwart Isa, and bears an inscription transcribed as 'CAELEXTI MONEDORIGI', translated as (*The stone of) Caelextis Monedori*.⁷⁷ Both have been dated to the late 5th or early 6th century AD. Though

⁷⁶ Davidson 2001, 340

⁷⁷ Nash Williams 1950, *Early Christian Monuments of Wales*, No's 271-2

their presence denotes activity within the area, the nature of that activity is not easy to ascertain from archaeological sources. However, the general spread of Christianity is typically linked with movement along the western seaways, and the Mawddach estuary provides the best landfall within Llanaber.

Gruffydd ap Fychan, the strong Lancastrian supporter of Cors y Gedol, chose Barmouth as the site to build a house in the mid 15th century. Though its purpose here is not known with certainty, it is almost certainly the attraction of good harbour facilities that dictates its location at Barmouth, and if we believe the poets, it was built by Gruffydd to facilitate meetings between himself and Jasper Tudor. Jasper may have landed at Barmouth in 1468 before advancing on to Denbigh.⁷⁸ The house is celebrated in a poem by Tudur Penllyn. It consists of a small basement, approximately half the length of the building, a ground-floor room and above a hall open to the roof. The ground floor is entered by a doorway leading on to the quay, and is currently occupied by a café. The first floor is a museum devoted to exhibits from the 'Bronze Bell' wreck.⁷⁹

Post-medieval developments

Though the harbour at Barmouth was to play a minor part in 15th century Welsh politics, the settlement, largely inaccessible from land, did not develop until the 18th century. In 1565 it is described as a 'haven havinge no habitacion, but only foure howses, whereof there are owners Re sap Res, Harry ap Eden, Thomas ap Edward and John ap Hoelll Goche. And there is nother Shipp nor vessel that belongeth to the same haven, But only towte little bootes that the said Re sap Res and Harry ap Eden do use to cary men over that passaige'.⁸⁰ The ferry and fishing were the two principal occupations carried out here.

During the 18th century the importance of coastal trading increased, and the settlement grew in size. Pennant, at the end of the 18th century, describes it in the following manner: 'I found the little town of Barmouth, seated near the bottom of some high mountains, and the houses placed on the steep sides, one above another, in such a manner as to give the upper an opportunity of seeing down the chimneys of their next subjacent neighbours. ... At high water, the tide forms here a bay, about a mile over, but the entrance hazardous, on account of the many sand-banks. This is the port of Merionethshire; but not so much frequented as it ought to be, by reason the inhabitants do not attempt commerce on a large scale, but vend their manufactures through the means of factors, who run away with much of the advantages which the natives might enjoy; yet ships now and then come to fetch the webs, or flannels; and I am informed, that a few years ago, forty thousand pounds worth have been exported in a year, and ten thousand pounds worth of stockings. Many of the webs are sold into Spain, and from thence sent to South America'.⁸¹

It is of interest that by the 1780's Pennant was able to describe Barmouth as a town, with housing developed up the steep slope behind the harbour. Pennant also identifies the importance of the woollen industry carried on in Merionethshire, particularly around Dolgellau, and though at one time the majority of the output was sent overland to Shrewsbury, the monopoly of the Shrewsbury Drapers Company (founded in 1462) lessened in the 18th century, to allow large quantities to be exported by sea. The rise in the export of woollen goods from Barmouth reached a high in the late 18th century, when a depot was established there to hold the goods prior to exporting. This trade suffered initially because of the American civil war and later by the French wars.⁸² Other exports included timber and oak bark (for tanning), and small quantities of copper, lead and manganese. Wool was imported through Barmouth from Italy and Kent for mixing with the local produce, and fullers earth was also imported. Coal and food, particularly grain, was imported, and taken up river in smaller boats. The increase in shipping in the later 18th century, and particularly the revival of the woollen industry following the end of the American civil war, led to a call for improved harbour and docking facilities. This prompted a Private Bill, sponsored by some 200 local people, for the repair and enlargement of

⁷⁸ Williams 1993, 198-202

⁷⁹ Smith 2001, 444

⁸⁰ Quoted in Lewis, E. A., 1927 *The Welsh Port Books (1550-1603)*, Appendix p. 310.

⁸¹ Pennant T. 1781 *Journey to Snowdonia* p. 104

⁸² See Dodd, A. H., 1971 *The Industrial Revolution in North Wales* and Jenkins, J. G. 1969 *The Welsh Woollen Industry* for details of the production and trade in Merionethshire woollens.

the harbour, in 1797.⁸³ Though the wool export trade was severely affected by the war with France, many of the Barmouth ships took advantage of the burgeoning trade in roofing slates, in particular from the Ffestiniog quarries. Slates were taken by horse-back to the river Dwyryd, then down by small river boats before being transferred on to sea-going vessels at the small harbour by Ynys Cyngar. Following the construction of the harbour at Porthmadog vessels from Barmouth and the Madwddach estuary continued to play a role in carrying slates, though this diminished once the ship-building industry at Porthmadog became established.⁸⁴

A description of Barmouth published in 1812 confirms a new pier had been constructed, though access to the harbour was still difficult: 'Barmouth is the only haven in the county. The port is small, formed by Ynis y Brawd, and a gravel beach to the south. The entrance is difficult and dangerous, owing to shifting sands, and particularly two sand-banks, called the north and south bars, so that vessels of any burthen can only get in, or out, at spring tides. The mountains are so high round the harbour, that land-marks for steering inwards, during foggy weather, would not afford the smallest advantage. Buoys are therefore placed on each bar, yet these in foul winds are but inefficient guides. What had been long wanting is now accomplishing; a small pier for increasing the depth of water in the harbour, and facilitating the lading and unlading the cargoes. The number of ships belonging to the port is about one hundred; but many of these lie on their sides, or moored in the mud; their sails laid up; and their owners either out of employ, or earning a scanty pittance for their families by the precarious profits of an uncertain fishery. The vessels afloat are entirely confined to the coasting trade, carrying out the manufactures of the district; oats, barley, butter, cheese, oak-bark, timber, &c. and bringing back coal, culm, and miscellaneous articles, for the use of the interior. But the former articles have of late fallen off; owing to the change that has taken place in the trade; the manufacturers vending their products by means of factors, who reap many of the advantages which the natives might otherwise enjoy'.⁸⁵

Davies tells us that at Barmouth 'a new embankment of stone has been erected, under the sanction of an Act of Parliament, to secure the entrance of the harbour: it was completed in 1802, and cost £1660 including the expense of the Act, £220. A new quay was constructed at the same time'.⁸⁶ Though it is now difficult to ascertain the nature of the early works, it is probable that the embankment lay on Ynys y Brawd, and was built to protect the harbour mouth. Remains of a stone-built breakwater are still visible on the island. The build up of sand banks created difficulties getting into the estuary, and though it was possible to enter the harbour to the north or south of Ynys y Brawd, it would appear that the northern route, which had been the more popular, was becoming blocked, and the southern route became the principal channel. An embankment has been built in recent times across to the island, blocking the north channel completely. The quay and pier built in the early 19th century are those that remain today, though they have been considerably repaired over the years. The harbour formerly extended further into town, and a stone quay is said to have been found during the construction of the Lion Hotel in the early 19th century, and later an old boat was discovered when laying drains beneath the main street.⁸⁷ The owner of the garage by the harbour noted remains of stones possibly forming a quay wall when sinking petrol tanks in the 1980's.⁸⁸ Local tradition states that one branch of the Mawddach formerly ran down the current high street, as far as the Cors y Gedol Hotel, where it turned at right angles to enter the present estuary.⁸⁹

The buildings on the quay comprise an interesting collection of domestic and functional. The medieval house of Ty Gwyn has already been mentioned. At the end of the quay are the present harbour master's office, which was formerly a house called Pen y Cei, and next to it is the present Yacht Club building. Both these date from the middle of the 19th century, and both appear to have had accommodation on the first floor, with workshops/stores below. This is an unusual tradition for north

⁸³ 'An Act for repairing, deepening, enlarging and preserving the Harbour at Barmouth, in the County of Merioneth' 37 Geo III, cap. L (May 3, 1797). See Lloyd 1993, 23-4 and 273-80.

⁸⁴ Lloyd 1993, 26-39.

⁸⁵ John Evans 1812 *Beauties of England and Wales* p. 912-15

⁸⁶ Walter Davies 1810 *Agriculture of North Wales* p. 388

⁸⁷ Jones, E. Rosalie 1909 *History of Barmouth and Vicinity*, p 36-7

⁸⁸ Information from Mr Ken Jeffs, owner of the garage. He also says his father remembers seeing mooring rings on the cellar walls of the Barmouth Hotel, and tradition also states similar rings within the Cors y Gedol.

⁸⁹ Information from Mr Ken Jeffs.

Wales, though here it may have been practical considerations that influenced the design, as influxes of sand are regularly mentioned in early accounts as being a particular problem at Barmouth. A row of single storey stone workshops/storehouses were built in the later 19th century. Also in the later 19th century/early 20th century terraces of houses were constructed and the Sailors Institute was built at the north end.

Another factor in the growth of the town was its popularity as a holiday and bathing resort. Evans, in 1812, says of this aspect 'Barmouth is to the north western part of the kingdom, what Weymouth is to the south, a genteel watering place, and during the summer months is frequented by many respectable families from Wales, and the adjacent English counties. Its origin as the resort of invalids has been attributed, to persons frequenting the banks of the river, for the sake of deriving benefit both from bathing and the virtues of scurvy grass, a plant which grows abundantly on the sides of the stream. The bathing is certainly as fine here, as it can be in any part of Britain. The rough tides, so frequent in St George's channel dashing against the rocky shores of the surrounding coast, must tend greatly to render efficacious the waters of the bay; in addition to which the beach is a very fine firm sand extending from the harbour north-ward to Traeth Artro, where the small river Artro empties itself into the sea. The accommodations for bathing are not of the most eligible kind. There are three machines not furnished with horses, as in some instances, nor with ropes, winch, and an inclined plane, as in others but fixed on the sands at a given distance, so as to be within reach of certain states of tide. These also are exclusively appropriated to the use of the ladies, the gentlemen bathing on the open coast. The inn, the sign of the Cors y Gedol arms, has attached to it a large boarding house, where persons are very comfortably and reasonably accommodated; the company sitting down at one table to dine, and sup. A harper is kept in pay and assemblies twice a week, tend, among other amusements, to give hilarity to the company. Another good lodging house affords additional conveniency otherwise houses in the town of this description, are but very indifferent'.⁹⁰ A building next to the quay is still called the bath house, though it has been considerably modernised.

The arrival of the railway in 1867 marked an even more dramatic shift in the fortunes of the town and stimulated a major campaign of building: the Cors y Gedol hotel was rebuilt in 1870, and many other boarding houses and domestic terraces can be dated to the following decades (Porkington Terrace, c1870, for example). Several chapels followed (*Caersalem*, of 1866 just pre-dates the railway), and *The Church of Saint John* was built specifically to provide for the town's population of English-speaking visitors in 1889. By 1902, 'with but few exceptions, all the houses in the town are let to visitors'.⁹¹ This rapid growth fostered urban institutions and amenities, with a public water supply from 1873 (from a reservoir at Llyn Bodlyn). Commercial establishments – shops and banks – also signify its urbanity: the North and South Wales Bank arrived in 1870, and *Morris and Co* was built in 1882.⁹²

MANAGEMENT

Harbour management

The harbour is managed by Gwynedd Council, who employ a harbour master to manage it. This is a relatively small harbour, and although efforts have been made to create a marina in parts of the estuary, nothing has yet developed. The most recent development has involved the construction of an embankment between the mainland and Ynys y Brawd, so stopping the northern channel. This has affected silting patterns. Much of the estuary is now a SAC, and new development will be more difficult. The quayside is a small area, with little room for further development. The harbourmaster's office, Yacht club, Ty Gwyn, the circular lock-up, the row of storage sheds and the Sailor's Institute all contribute to the vernacular feel of the area. This is maintained by those buildings that would have fronted the harbour prior to the construction of the railway, and Old Barmouth behind, as well as the

⁹⁰ Evans 1812, p. 912-15

⁹¹ Heywood 1902

⁹² For a description of the development of the town see Thompson, D., 2004 *Historic Landscape Characterisation of Mawddach*, GAT Report No. 472. See also Hubbard 1991 for details of the work of architect John Douglas responsible for Plas Mynach and the Church of St John.

pleasing style of the church of St David's. These contrast with the later developments to the north-west, and the present amusement arcades on the sea front.

Archaeological potential

The principal area of potential is that part of the harbour that is now infilled between Church Street and the Cambrian Railway, and along the lower reaches of High Street, where quay walls and remains of a boat were discovered in the 19th century. Identification and recording of the 19th century harbour works and remains on Ynys y Brawd will lead to a clearer understanding of the development of the harbour.

Recommendations

Whereas Barmouth contains a very high number of listed buildings, there are several on the quay that give that area its specific character, and yet are not listed. These include Pen y Cei (the harbour master's office), the Yacht Club, and the workshops/storage sheds. The first two appear to have originated as houses with first floor accommodation and ground floor storage and working space. Consideration should be given to providing statutory protection for these buildings.

Construction work involving underground excavations within the area of the former harbour along Church Street and High Street needs to be monitored.

HARBOUR GAZETTEERS

Introduction

A gazetteer of sites has been compiled, linked to the Ordnance Survey map through a GIS program, that includes all sites in the immediate vicinity of a harbour. If sites are listed or scheduled then references are given under Site Status, and an assessment of importance according to National (A), Regional (B), Local (C), Other (D) and requiring evaluation to assess (E) is also given. The gazetteer is divided into four categories of site:

- **Extant sites** includes all sites still extant, usually standing buildings or quay walls. Quay furniture such as bollards and mooring posts have been noted where relevant, though not given an individual site number, though cranes are given specific site numbers.
- **Former sites with archaeological potential** include former structures for which there is good map or documentary evidence, and for which there may be remains preserved underground. Typically these are former standing buildings, though they can include earlier archaeological evidence, such as the medieval quay in Caernarfon.
- **Former sites with little or no archaeological potential** include those buildings or structures for which there is good map or documentary evidence, but for which, usually because of redevelopment, there is very poor potential for the recovery of underground archaeological remains.
- **Sites of relevance in the immediate vicinity** include sites that have a bearing on the history of the harbour, but do not form part of the working harbour. A significant example is the castle and town walls at Caernarfon.

Sitenames in capitals are existing SMR site entries, whereas those in lower case are new entries. The harbours are printed in the order Penryhn, Caernarfon, Pwllheli, Porthmadog and Barmouth.

PENRHYN HARBOUR: SITE GAZETTEER

GROUP A: EXTANT SITES

6490 PORT HOUSE, PENRHYN

Assessment of Importance: A

Site Status Reference: GII

Large classical building built c. 1840. Boyd says 1833 and designed by Benjamin Wyatt, though Wyatt died in 1818, when he was succeeded by his son James. Listed Building description says built 1840 by William Baxter, Clerk of Works to the estate between 1819 and 1840.

Built in classical style with stone built rendered walls to the side and rear, and ashlar front. Two storeyed building with three bay front, the centre bay narrower and advanced with clock in triangular pediment above, and doric entrance porch below. In use as Solicitors offices (Carter Jones Vincent), interior not examined.

Eastings: 259220

Northings: 372640

11434 PORT LODGE

Assessment of Importance: A

Site Status Reference: GII

The west entrance to Penrhyn Park, it was built as part of the general improvements to the estate to accompany the construction of the present castle by Thomas Hopper in 1822-38 for George Hay Dawkins Pennant. The lodge is less severely Romanesque in style than the main lodge, and it is not known if Hopper had any hand in its design. It consists of a square, battlemented tower, with a pointed arch over double wooden doors and a smaller tower the other side (see Listed Building description).

Eastings: 259300

Northings: 372600

12078 COTTAGE N.E. OF PORT HOUSE

Assessment of Importance: A

Site Status Reference: GII

A cottage adjacent to Abercegin. It appears to form part of the group of buildings that were in existence prior to 1803. Style would suggest 18th century. Said to contain a reset stone bearing the inscription '1593/PG' for Piers Griffith (according to listed building description). Piers Griffith was the last of the Griffith family of owners. He inherited the estate in 1580 on the death of his father Rhys Griffith, but Piers was to lose the estate to John Williams, after he became bankrupt (see Dictionary of National Biography and National Trust Guide to Penrhyn, 1992). See also PRN

Eastings: 259252

Northings: 372650

12143 CEGIN VIADUCT, PENRHYN ESTATE, BANGOR

Assessment of Importance: A

Site Status Reference: C380

This monument is a well-preserved example of an early railroad bridge, built between 1798 and 1800 to carry the Penrhyn railroad over the lower reaches of the Afon Cegin. It is likely that the Cegin Viaduct is the oldest known multi-arched railway bridge to survive above ground in Wales and possibly the world. It is a stone-built three-arched railway bridge measuring about 26m in length between each abutment and 5m in width and 3.2m in height. Each arch has a span of between 5m and 6m and a height of about 1.8m. The arches are well-constructed, with each voussoir of similar size and shape and with even soffits. There is a slate-roofed sluice at the north end (measuring 1.2m in width and 2m in height) and an artificial pitched stone surface to the riverbed beneath the bridge and extending east, immediately upstream.

The earliest known record of the bridge is found in an estate map of 1803, which shows the Penrhyn railroad crossing the Afon Cegin on the site of the present bridge. Work had begun on the railroad in 1800 and comprised laying a then very ambitious length of cast iron rails (designed for use with double-flanged wheel). This edge railway was a longer construction than those already in existence in the South Wales valleys and, as such, marks an important stage in the evolution of the modern railway system. The bridge was almost certainly constructed sometime between 1798 and 1800 and it has been suggested as typical of the work of the local architect and builder, John Foulkes (c.1765 – 1850). The new Penrhyn Quarry Railway (with a new bridge, the pillars of which

still stand immediately to the west, carrying a timber footbridge) superceded the Penrhyn railroad in 1879.

Easting: 259260

Northing: 372390

12689 Communal Lavatory, Port Penrhyn

Assessment of Importance: A

Site Status Reference: GII

A circular communal lavatory. The date of construction is unknown, though probably mid to late 19th century (Boyd 1985 says 1862). Constructed of dressed stone blocks, with conical slate roof. Six port-hole openings below the eaves, and a single door with segmental arch. Door is blocked, and interior not accessible. However it used to have a large chamber underneath that was drained on each tide, but the chamber has apparently been filled in (information from Harbour Master).

Easting: 259153

Northing: 372848

18453 Penrhyn bridge

Assessment of Importance: A

Site Status Reference: GII

A stone built bridge over the Afon Cegin and the original port tramway. It linked the new Holyhead road to the port lodge entrance to Penrhyn Castle, and allowed the tramway direct access onto the docks. Erected by Douglas Pennant in 1820 (there is an inscription on the north face 'GHDP/1820'), presumably to a design by Wyatt. Additional arches were inserted through the causeway to the east when the new quarry railway was built in 1878-9. Constructed of coursed, squared limestone blocks, the parapets are topped with massive slate slabs which contain graffiti, much of it early, and including sketches of ships. The river bridge is a segmental arch with voussoirs, springing from solid rectangular piers with round-headed niches. The inscription 'GHDP/1820' is on an iron plate above the keystone on the north face. The bridge has an iron balustrade above the slate coping. East of the river are two segmental arches inserted 1878-9 with brick soffits. The eastern arch is blocked.

Easting: 259203

Northing: 372565

18454 Old port office, Port Penrhyn

Assessment of Importance: A

Site Status Reference: GII

Small square building of one storey. Classical style suggests it was built at a similar time to Port House to the north, and would therefore be c. 1840, and possibly built by William Baxter, the Penrhyn clerk of works. A map of 1873 describes it as a 'weigh office', and its location alongside the Penrhyn Railway and LNWR branch does help confirm this. It is reported that all trains had to stop here before proceeding to the quayside (see Rear 2003). It is unlikely to have been built as a port office, as the larger and more impressive Port House performed this function. Built of rendered stone with hipped slate roof. Boarded up at the time of visit.

Easting: 259216

Northing: 372598

18455 Dockmaster's Office, Port Penrhyn

Assessment of Importance: A

Site Status Reference: GII

A small rectangular stone building, situated on the west quay. It is in use as a harbour master's office. Listed Building information says built c. 1860, though it is not marked on either a plan of 1875, nor on the 1889 and 1900 OS maps. However, a structure very similar to the present one is visible on a photograph of the 1890's on the south-west corner of the new dock, built between 1875 and 1889, and it may have been subsequently moved to this location after 1900, or built new after that date. Almost certainly first built as a weigh house (the layout is typical of this function). Foundations are visible on the north side, and these may be an engine house (and weighing machine?) marked in 1875.

It is a small stone built single storey building with hipped roof. Built of large, squared granite blocks, mainly uncoursed. Single door and window on east facing front, with windows in end walls, and chimney at rear.

Easting: 259181

Northing: 372707

18456 Former locomotive shed, Porth Penrhyn

Assessment of Importance: A

Site Status Reference: GII

Stone built locomotive shed, built c. 1878 in association with new quarry railway. It is a long

rectangular building in two parts, the rear part slightly narrower and lower. Built of stone rubble with squared stone quoins at the corners (limestone at the east end but darker rock at the earlier west end), and brick dressings to the windows and doors. West gable has two large round-arched doors for engine access with a roundel in the gable above. East end has two large doors with flat slate and timber lintels. Four large rectangular windows in recessed panels in the side walls of the first section, three in the lower section. The interior was not accessible.

Easting: 259285

Northing: 372794

18457 Carriage shed, Port Penrhyn

Assessment of Importance: B

Site Status Reference:

Stone built carriage shed, c. 1880. Hipped slate roof. Interior not examined.

Easting: 259288

Northing: 372806

18458 Shed, Port Penrhyn

Assessment of Importance: B

Site Status Reference:

Large stone shed next to engine and carriage sheds at Port Penrhyn, east of new dock. Now used for boat repair. Post-dates 1900, as it is not on the OS map of that date. Boyd (1985) say it was a fitting shop in 1934, presumably connected with the foundry that occupied the former slate mill south of the engine shed. Rails remain on floor by entrance (c. 2ft gauge), and inside on the west gable is a blacksmiths hearth. Roof supported on iron trusses, with bearings and some lineshafting with belt drives still in situ.

Easting: 259285

Northing: 372817

18459 Kilns, Port Penrhyn

Assessment of Importance: B

Site Status Reference:

Kilns were originally built at the port for reducing flints for the flint mill. A map of 1803 shows a single kiln approximately under the present estate office. Between then and 1828 the present kilns were built. When the flint mill closed, they were used for burning lime. Boyd (1985) says they ceased operation in 1863.

The kilns are located within a triangular area, surrounded by a high stone wall. They are on sloping ground, with access to the charging chamber at the south corner, close to the estate office, and the stoke holes within the north face at the bottom of the slope. Two tracks lead down past the east and west sides, which are defined by stone walls some 4m high. The enclosed area is now very overgrown, but the charging holes appear to be blocked in, though are partly defined by low brick walls. The OS maps show two holes, though there may be a third. The remains of a stone building lies on the east side of the south entrance. The north wall curves inwards, and is some six metres high. It contains three stoke holes each with segmental arches of squared stone voussoirs. Above two of them, at the top of the wall, are blocked doorways. The chambers are filled with stone.

Easting: 259300

Northing: 372693

18462 Import warehouse, Port Penrhyn

Assessment of Importance: B

Site Status Reference:

Warehouses lying on the west side of the Cegin, lying around three sides of a courtyard. The west range was built by 1803, as was part of the east range. Both were extended south by 1828. The north range was certainly built by 1873, though probably much earlier, in the 1830's. The complex was converted into an outward bound school in the 1970's, and are currently in use as offices and accommodation.

With the exception of the south-east range, the warehouses are brick built (the lower half of the north range and north-east range are stone built to roughly first floor level. Original wide openings with segmental arches are visible, either blocked or still in use. Though considerably modified, there remains considerable detailed evidence within the fabric of the buildings.

Easting: 259155

Northing: 372616

18463 West quay, Port Penrhyn

Assessment of Importance: A

Site Status Reference: GII*

The first quay was constructed here in the 1790's. By 1803 a pier had been constructed, and this was further lengthened by 1828 by an additional 400ft (from 600ft to 1000ft long). The Afon

Cegin runs along the west side of the quay, and water used to be stored in the pool above, and flushed down at low tide to help clear the moorings of silt. The masonry at the south end of the quay (about level with Porth House) looks rebuilt, and is in dressed coursed masonry. A set of steps separates the next length, which is less regularly coursed, and smaller, less regular, stone. Occasionally it is possible to see brushwood emerging from under the masonry, suggesting the quay was built on a brushwood foundation. The end of the first quay is shown by a slight step within the quay wall, though the masonry of the second section is similar to the first. The final extension occurred in 1855, as part of the construction of the new dock and east pier, and this is constructed in ashlar limestone, to match the remainder of the 1855 works. The quay wall is topped with limestone blocks, joined with iron bars. Round limestone mooring posts line the edge of the quay. Occasional later iron mooring posts are also present.

Easting: 259166

Northing: 372804

18464 New Dock, Port Penrhyn

Assessment of Importance: A

Site Status Reference: GII*

The new dock was built in the mid-1850's. A new breakwater was built east of the earlier pier (PRN 18463), that extended beyond and curved around the pier, in order to create an inner basin or dock.

All the new work was built of fine limestone blocks, regularly coursed. Additional dumping on the east side of the breakwater has created a large level area now used for various industrial purposes. The dock is lined with circular limestone mooring posts, and occasional later iron posts. Cranes are sited at the south end of the dock, and towards the south end of the original quay.

Easting: 259200

Northing: 372890

18466 Crane, New dock, Port Penrhyn

Assessment of Importance: B

Site Status Reference:

One of two remaining cranes at the harbour. This one, located at the south end of the new dock, is marked on the 1900 OS map, though not on the 1889 map. The other crane, formerly located on the east side of the new dock, has been taken down and is in storage.

Easting: 259234

Northing: 372795

18467 Crane, Porth Penrhyn

Assessment of Importance: B

Site Status Reference:

A crane, now sited on the quayside close to the Harbour master's office. It was moved here from the Manchester Ship Canal in recent years (information from the Harbour Master).

Easting: 259173

Northing: 372734

18470 Abercegin farmhouse

Assessment of Importance: B

Site Status Reference:

The remains of Abercegin farmhouse. The cottage (PRN 12078) may also have formed part of the farm. Abercegin farm is certainly 18th century in origin, and probably earlier. Buildings are shown in this location on an estate map of 1768, and parts of these may be incorporated into the present house. Rebuilt and in use as a house.

Easting: 259256

Northing: 372660

18471 Penrhyn Estate Office

Assessment of Importance: A

Site Status Reference: GII

Situated close to the Port Lodge. A building of c. 1860, constructed as, and still in use as, estate offices. Designed in Italianate style. See Listed Building description for detail.

Easting: 259264

Northing: 372632

GROUP B: FORMER SITES WITH ARCHAEOLOGICAL POTENTIAL

18452 Abercegin harbour

Assessment of Importance: E

Site Status Reference:

The site of the medieval and later harbour at Abercegin. Slates were shipped from here certainly

within the 16th century and it must be assumed that it would have been used as a harbour before then, possibly from prehistoric times onwards, though the development of the coastline here is not known with certainty. The likely spot for shipment of materials is on the east bank, by Abercegin farm, where the road from Penrhyn met the river. No structural remains are visible, and none are clearly marked on the 1768 estate map, though the construction of the tramway would have removed any evidence. The harbour was superseded in the 1790's when the new quay was constructed to the north. At this time the name was changed to Port Penrhyn. There remains good potential within the silts for the preservation of wooden vessels or structures.

Easting: 259216

Northing: 372530

18460 Site of kiln, Port Penrhyn

Assessment of Importance: E

Site Status Reference:

Kilns were originally built at the port for reducing flints for the flint mill. A map of 1803 shows a single kiln approximately under the present estate office, though this was replaced by two existing kilns by 1828. No remains visible.

Easting: 259262

Northing: 372620

GROUP C: FORMER SITES WITH NO ARCHAEOLOGICAL POTENTIAL

18461 Former iron bridge, Port Penrhyn

Assessment of Importance: D

Site Status Reference:

In the 1830's (Boyd 1985 says 1835) an ornamental iron bridge was constructed over the Cegin to allow improved access down to the harbour and Port House. A photograph of 1894 (GAS XS 1077/3/2/9) clearly shows the bridge, and a tramway running along the south side to the import warehouse on the west side of the Cegin. A stone pillar with pyramid cap marks each corner of the bridge, with iron railings between. The bridge was supported on curved iron beams, with round elongated holes, supporting iron girders. Ironwork buried within vegetation behind Port House appears to be part of this bridge, which was taken down when replaced by the modern concrete

Easting: 259194

Northing: 372585

18465 Site of Slate Works, Port Penrhyn

Assessment of Importance: D

Site Status Reference:

A writing slate factory was established as early as 1797 by Worthington. In 1829 the quarry took over the running of the factory, and in the mid 19th century it was established on this site north of the limekilns. It remained in use until the early years of the 20th century. It was converted to a foundry, and large quantities of iron slag line the east shore of the breakwater. No upstanding

Easting: 259316

Northing: 372739

18468 Former Straw Yard, Port Penrhyn

Assessment of Importance: D

Site Status Reference:

A straw yard was established in 1806, though it may not have been on this site. A map of 1873 marks it here west of the slate works. It was used for packing the writing slates more securely to avoid damage during transit.

Easting: 259256

Northing: 372736

18469 Former Smithy, Port Penrhyn

Assessment of Importance: D

Site Status Reference:

Site marked on the OS 25" map of 1890 as a building with associated yard. No visual remains.

Easting: 259253

Northing: 372766

GROUP D: RELEVANT SITES IN IMMEDIATE VICINITY OF STUDY AREA

2300 DOMINICAN FRIARY (EARLY), HIRAEI, BANGOR

Assessment of Importance: E

Site Status Reference:

In 1898-9, sewer trenches opened at the north end of Seiriol Road cut through graves and foundations, which indicated the presence of a church 27ft wide to the north of which was a cloister garth about 40ft east-west by 50ft. This was surrounded by a walk 12ft wide and ranges of buildings 20ft wide, with an extension to the north east. The principal discoveries were the grave slabs some of which are now in the Museum of Welsh Antiquities, Bangor. It seems probable that these remains represent the earlier buildings of the friary, before it was rebuilt on the old Friars School site c. 1290-1300. The style and probable dates of the grave slabs from the two locations seem consistent with this hypothesis.

Easting: 258570

Northing: 372780

2325 PENRHYN CASTLE, LLANDEGAI

Assessment of Importance: A

Site Status Reference: G1

An estate with medieval origins. It belonged to the Griffith family until it passed to the Williams of Cochwillan, and eventually through the female line to Richard Pennant, who through his wife inherited half of the estate, and in 1785 purchased the other half. Wealth from Jamaican plantations allowed him to develop the estate, its quarries and port. The main house, of medieval origin, was rebuilt by Samuel Wyatt c. 1780. On the death of Richard Pennant, the estate passed to his cousin, George Hay Dawkins Pennant, who employed Thomas Hopper to build the present castle (1822-38), now run by the National Trust.

Easting: 260260

Northing: 371910

5466 OGWEI FISH WEIR

Assessment of Importance: A

Site Status Reference: C335

The ogwei weir is a very large, impressive and well preserved example of a post medieval fish weir, the construction of which has been dated by tree-ring analysis to 1556. It comprises a rectilinear weir defined by slate and oak posts and a narrow bank of stone. There are the remains of a sluice at the apex of the trap. Erosion by the ogwei channel has uncovered earlier phases of the weir comprising posts with some remnants of wattle in-fill.

Easting: 260265

Northing: 373151

11497 TAN-Y-COED

Assessment of Importance: A

Site Status Reference: GII

Designed by Benjamin Wyatt, and built 1810 as the Caernarvonshire and Anglesey dispensary for Dean Warren. One of two Wyatt designed houses here (the other is Pen y Bryn), which with the portico of the Penrhyn Arms (also Wyatt) and the bridge over the Cegin forming the approach road to Penrhyn Castle, were significant in establishing a 'polite' architecture within the immediate environs of the port.

Easting: 258920

Northing: 372483

11679 BRIDGE NR. PEN-Y-BRYN TERRACE

Assessment of Importance: A

Site Status Reference: GII

Easting: 259033

Northing: 372478

12123 ENTRANCE ARCH OF DESTROYED PEN-Y-BRYN ARMS

Assessment of Importance: A

Site Status Reference: GII

The Penrhyn Arms hotel was built in 1799 to a design by Benjamin Wyatt. It later housed the University College of North Wales. The building was demolished in the 1950's to allow improvements to the A5. The portico remains, built in Doric style, with an arched entrance and paired columns. Wyatt also built the hotel at Plas y Brenin, Capel Curig, for the Pennant family at about the same time.

Easting: 258986

Northing: 372495

14621 CORED CEGIN

Assessment of Importance: B

Site Status Reference:

A single row of round posts, some standing to a height of 0.6m at the inner end, each with a diameter of about 0.1m. The row of stakes runs out from the shore to close to the tidal channel of the straits. Not used within living memory but shown on 1st ed. OS and 1920s OS with modifications to accommodate new dock.

Easting: 259730

Northing: 372900

16602 ABER OGWEN SUBMERGED FOREST

Assessment of Importance: E

Site Status Reference:

No peat visible. There are probably some dozens of tree stumps here, spread over quite a wide area, as well as overturned stump boles. Several have been sawn off as low as possible to the bole, suggesting deliberate felling. Several are almost eroded out and are left perched on root buttresses. Although they lie on the higher part of the shore they are still a metre or more below mean high water. They may have been growing in a wet valley bottom but are probably post-medieval as previously suggested. The coast behind, part of penrhyn castle park has certainly eroded - the park wall is fragmentary, standing on the foreshore. Early OS or estate maps may show if the area of stumps was dry land within historic times.

Easting: 261000

Northing: 372350

CAERNARFON: SITE GAZETTEER

GROUP A: EXTANT SITES

3552 Victoria Dock, Caernarfon

Assessment of importance: A

Site Status: GII 26613

The new dock was built 1868-74 following plans put forward by Llywelyn Turner, Mayor of Caernarfon. His first ambitious plans were formulated as early as c. 1863, though these were not accepted, and lesser plans were finally approved in 1865, though money was not raised and construction begun until 1868. Plans drawn by Frederick Jackson, Civil Engineer of Nottingham. The contractors were Thomas Bugbird & Son Ltd (or Bugbird and Jones) Civil Engineers of Caernarfon. Note that John Jackson was Clerk to the Trustees of Caernarvon Harbour (relation of Frederick Jackson?).

The earlier Victoria Pier, constructed c. 1830, was partly demolished, and the promenade widened to the head of the former pier. The new dock lay north of the former pier, and consists of a wet dock approximately 200m by 90m. The seaward side has a low parapet, which on the east side of the entrance is of original limestone blocks, whilst on the west side the wall was rebuilt in the 20th century, retaining an original square terminal pier at the west end (see Listed Building description). A cobbled slipway to a landing pier on the outer NW side. The dock entrance is rounded on the south side. Mooring posts are spaced around the dock. The patent slip of 1830 (PRN 18439) runs through the east wall, crossed by a drawbridge (PRN 18440).

Easting: 247825

Northing: 363120

11641 Harbour Office, Slate Quay, Caernarfon

Assessment of importance: A

Site Status: GII*

An attractive building that forms the centre piece of Slate Quay. Built in 1840 to a design in classical style by John Lloyd. The building originally incorporated a meeting room, an external weighing machine on the N side of the building and a dwelling for the machine man. A clock by David Griffith was incorporated into the original front. The building was restored in 1993 (See Listed Building information for a full description).

Easting: 247909

Northing: 362607

11662 Warehouse, St Helens Road, Caernarfon

Assessment of importance: A

Site Status: GII 3921

The warehouse is now partly used as a night club, but it has been renovated, and is a dramatic building on the edge of Slate Quay. Built in the middle of the 19th century as a Bonded Warehouse for Morgan Lloyd & Son, wine and spirit merchants. A 4 storey warehouse of coursed rubble stone. The south-west facing front has central gablet over the loading bay (see Listed Building description).

Easting: 247960

Northing: 362610

18414 Former Caernarvon Slate Works

Assessment of importance: B

Site Status:

The easternmost of the remaining early industrial buildings on the quay is a large stone and brick built warehouse, post-dating 1918 (a yard with three smaller buildings is shown on the OS map of that date). Prior to that the site had formed the 'Caernarvon Slate Works', as shown on the 25" OS map of 1900.

Easting: 248168

Northing: 362370

18416 Workshops, Union Ironworks

Assessment of importance: A

Site Status:

A series of buildings on St Helens Road form the remains of the Union Ironworks. The works were started by Owen Thomas sometime around 1844 on a plot of land leased from Lord Newborough. It is known he constructed a crane for the Caernarfon Harbour Trust in 1844, and that he manufactured components for the Britannia Bridge in the late 1840's. In 1852 he was awarded a contract for providing cast iron girders for the new Houses of Parliament in London (Lloyd 1994, 10-11). In 1854 Thomas was joined by J. P. de Winton, who developed the marine engineering

side of the business. The company was particularly influential in producing a wide range of machinery for the slate quarrying industry, including locomotives (in particular the small vertical boiler locomotives), wagons and turntables, weighing machines, winding drums and saw tables (Abbott 1956). Owen Thomas died in 1866, though his son continued in partnership with de Winton and production levels remained high until the 1880's, after which the company started to suffer financial difficulties. J. P. de Winton died in 1892. Final closure of the works took place in 1901-2.

Other parts of the Ironworks form sites 18417, 18418, 18420, 18421, 18423 and 18425. This site refers specifically to the eastern end formerly occupied by the works, forming the buildings currently used by Gwynedd Tyres. Fronting the road is a stone-built, single storey building. The roof (now corrugated iron sheets) is supported on king-post trusses with evidence for line-shafting. Separated by an open yard is a second building, lying against the quayside. It is a long brick building, with two large horizontal windows divided with vertical mullions containing glass panes that overlap one another in each vertical section. The eastern end of the building now has another structure lying against its north side, and the wall and windows have been removed from the earlier structure to create a large space opening into the newer structure. An early photograph of the site appears to show a series of chimneys on the river side of the roof, best interpreted as a series of hearths in a smithy.

Easting: 248141

Northing: 362385

18417 Foundry, Union Ironworks, Caernarfon

Assessment of importance: B

Site Status:

A large warehouse within the range of buildings that formed part of the Union (De Winton) Ironworks in the 19th century. The size and height suggest this may have been a former foundry shop or similar. It was occupied by 'Vanwil Oil' for most of the 20th century. Upper parts of the walls and the roof covered in corrugated sheeting; the lower walls are of stone and brick. Built before 1888, as it is shown on the OS map of that date.

Easting: 248115

Northing: 362413

18418 Former workshop, Union Ironworks, St Helen's Road,

Assessment of importance: C

Site Status:

The eastern remains of a series of three large warehouses or workshops that formed part of the Union (De Winton) Ironworks (see 18420 and 18421). The two eastern ones are partly demolished and roofless, the western one (18421) is completely demolished. The remaining workshop to the west (see 18423) formerly opened into the demolished building. Though partially demolished these retain much of archaeological interest.

Easting: 248108

Northing: 362420

18420 Former workshop, Union Ironworks, St Helen's Road,

Assessment of importance: C

Site Status:

The centre of a series of three large warehouses or workshops that formed part of the Union (De Winton) Ironworks (see 18418 and 18421). This one is partly demolished and roofless, though fittings on the remaining walls (and potentially the floor layout) retain much of interest.

Easting: 248098

Northing: 362427

18421 Former workshop, Union Ironworks, St Helen's Road,

Assessment of importance: C

Site Status:

The western of a series of three large warehouses or workshops that formed part of the Union (De Winton) Ironworks (see 18418 and 18420). The two eastern ones are partly demolished and roofless, whereas this one is fully demolished. The erecting shop to the west (see 18423) formerly opened into this building. The remains of the walls of the buildings either side, and potentially the floor, could retain details of archaeological interest.

Easting: 248092

Northing: 362439

18423 Erecting Shop, Union Ironworks, St Helen's Road,

Assessment of importance: A

Site Status: GII 26548

A late-19th century brick-built workshop that formed part of the Union (De Winton) Ironworks. The original roof (visible on photographs as a double span hipped roof) has been replaced with a modern flat one. A large doorway on the north front opening on to St Helens Road with rounded

arch, flanked by tall windows in recessed bays with rounded arches, and with small panes in iron frames. Similar windows in the upper part of the side walls. A large beam for lifting runs across the interior of the building.

Easting: 248084

Northing: 362448

18425 Cadw works, St Helen's Road, Caernarfon

Assessment of importance: B

Site Status:

An open yard and stone-built structure with slate roof and end chimneys. This development appears to be shown on a map dated 1844, though not on Wood's map of 1834. Their original use is not known, but the yard was possibly constructed for copper ore storage after the earlier storage yards that had lain further west on the island site (see 18428) had been built over. The principal stone structure appears to have been a row of three cottages. Presently used by Cadw for storage/workshops.

Easting: 248049

Northing: 362474

18426 Weigh Machine, St Helen's Road, Caernarfon

Assessment of importance: B

Site Status:

A small brick built shed with slate roof, originally constructed as a weighing machine in connection with the railway and slate quay. Certainly built by 1888, and probably constructed in 1870 when the rails on the quay were converted to standard gauge. The interior has not been examined, so it is not known if any machinery remains.

Easting: 248041

Northing: 362487

18428 Workshops and Offices, Slate Quay, Caernarfon

Assessment of importance: B

Site Status:

A collection of buildings fronting two streets: St Helen's Road (called Parish Road on a map of 1844) and the Slate Quay. The site was initially developed as a coal yard, and was probably first built in 1829 (GAS XD15/39/1 contains a contract for constructing the walls). It is marked as coal yards on John Wood's map of 1834, where it is shown as a triangle aligned north-west to south-east, split into two parts by an allotment (see also map dated 1830 in GAS XD15/39/1). The south-east part was further divided, and contained yards for ore storage for the Drws y Coed and Simdde Dylluan copper mines. The north-west part was also sub-divided, and contained a number of buildings. In 1840 the new harbour office was built at the north-west end of the island, and by 1844 the site had been divided into several lots and buildings erected on them. A number of these were offices representing the major slate quarries, or offices of independent agents operating in the slate trade. Others, particularly those on the north side, were workshops of various trades, including ironworks. The buildings date from a variety of periods, the majority of those facing the quay being of late 19th or 20th century date, whilst those opening onto St Helen's road tend to be earlier. One of the principal businesses was the Brunswick Ironworks, operating from the late 19th century. These buildings are due for demolition as part of a regeneration scheme.

Easting: 247948

Northing: 362582

18429 Rails on Slate Quay, Caernarfon

Assessment of importance: B

Site Status:

The remains of iron rails are visible within the tarmac of the carpark. These are the standard gauge rails installed in 1870. The carpark was tarmaced in the 1950's (1958 according to Rear 2003). The tarmac was re-laid flush with the rail-head, and to ensure the tracks were useable an engine was run up and down the lines to depress the flangeways before the tarmac hardened (see Rear 2003, 161).

Easting: 247796

Northing: 362608

18431 Swing Bridge, Caernarfon

Assessment of importance: D

Site Status:

The first swing bridge was opened in 1900, linking the Slate Quay with Coed Helen. It was designed by W G Owen, and constructed of steel. It was demolished in 1969 when the present bridge was built.

Easting: 247655

Northing: 362629

18434 Battery, Victoria Dock, Caernarfon

Assessment of importance: B Site Status:
Marked as the 'Royal Naval Reserve Drill Battery' on the 1888 OS map. Built for the Royal Naval Artillery Volunteers which were formed in 1872. Also referred to as 'The Silent Battery'. Now the home of the Caernarfon Sailing Club.

Easting: 247729 Northing: 362982

18436 Warehouse, Victoria Dock, Caernarfon

Assessment of importance: A Site Status: GII 26637

The building is clearly marked on the 1888 OS map, and was probably constructed at the same time as the Victoria Dock (completed 1872). A long 2 storey warehouse, built of granite rubble with squared quoins, on the north-east it abuts the gable of a contemporary warehouse (18437). The south-east gable is of cyclopean granite. The slate roof has been renewed, but most of the openings appear original, including large central double doors in the south-east gable that opens on to Balaclava Road, and a row of six windows each side in the upper side walls.

Easting: 247913 Northing: 363044

18437 Warehouse, Victoria Dock, Caernarfon

Assessment of importance: A Site Status: GII 26638

The building is clearly marked on the 1888 OS map (Anglesey Sheet XXV.04), and was probably constructed at the same time as the Victoria Dock (completed 1872). A long 2 storey warehouse, built of granite rubble with squared quoins, on the south-west it abuts the gable of a contemporary warehouse (18436). It opens on to Victoria Dock, through a wide doorway in the north-east gable. A later warehouse (18438) lies against the south-west side. There were originally 6 windows in the upper north-east side, and a series of doors and windows in the lower.

Easting: 247881 Northing: 363070

18438 Warehouse, Victoria Dock, Caernarfon

Assessment of importance: A Site Status: GII 26639

One of a series of three warehouses, this one is slightly later than the other two, one of which (18437) lies on its north-east side. It is marked on the 1900 OS map, so was certainly built by then.

Easting: 247880 Northing: 363057

18439 Slipway, Victoria Dock, Caernarfon

Assessment of importance: B Site Status:

A slipway runs down into the dock alongside the warehouse (18438). A patent slip was first constructed here by the Harbour Trust with the Victoria Pier about 1830, and was in constant use for the repair of ships. It was retained, though almost certainly rebuilt, when the new Victoria Dock was built (opened 1872). It is still in use, crossed at its lower end by a drawbridge (18440). A ladder rack runs down the centre of the slip.

Easting: 247866 Northing: 363052

18440 Drawbridge, Victoria Dock, Caernarfon

Assessment of importance: A Site Status: GII 26611

Dated 1883. Designed by Frederick Jacox, engineer of Nottingham, and built by Oliver & Co of Chesterfield. A similar bridge was built over the harbour entrance (see Listed Building description).

Easting: 247855 Northing: 363062

18441 Crane at Victoria Dock

Assessment of importance: A Site Status: GII 26612

Crane by W Johnson & Co of Liverpool. Shown on 1890 OS map, and probably an original feature from the 1865-74 dock (see Listed Building description).

Easting: 247878 Northing: 363178

18442 Quay, Coed Helen, Caernarfon

Assessment of importance: B Site Status:

A stone built quay lies adjacent to a former boat-builders yard, marked on the 1888 OS map. A gridiron is shown on the north side of the quay. Buildings are shown in this location on John Woods map, though their function is not identified. By 1918 the gridiron had gone out of use, and

the buildings on the west side of the site were being used by the Rowing Club. The site is currently a chandlers and ship repair works. The stone quay remains, and there are two later buildings, the chandler's and a boat shed.

Easting: 247832

Northing: 362493

18443 Jetty off Promenade, Caernarfon

Assessment of importance: B

Site Status:

A small stone-built jetty used by the ferries that plied between the Castle and Coed Helen on the far side of the Seiont. The associated ferry house still stands. The jetty was increased in width in 1844 (GAS XD15/39/5).

Easting: 247657

Northing: 362684

18444 Slate Quay, Caernarfon

Assessment of importance: A

Site Status: GII 26629

Slate Quay was constructed along the north bank of the Seiont in the early years of the 19th century, following the passing of the 1793 and 1809 Acts for improving the harbour. The initial quay was partly constructed by in-filling the marshy bank of the river. Vessels were asked to discharge ballast there, and much material was also obtained from a large mound that lay east of the castle in Y Maes, or Castle Square (Evans 1812; Flynn-Hughes et al 1975, 23-4), possibly the former bailey of the original motte and bailey castle (RCAHMW 1960). This work was partly undertaken by soldiers back from the Napoleonic wars, the idea being that of the then town mayor, Henry William Marques of Anglesey, who had lost his leg at the Battle of Waterloo. The quay is clearly shown on the John Wood map of 1834, where it is fully developed at the north-west end, but at the south-east it ends at a small dock lying on the north side of Lord Newborough's quay. It is possible this dock had formerly been a graving dock, for a report from the engineer of the Nantlle Railway Robert Williams in 1828 says 'it will be necessary to cross the graving Dock with the line of Road, so as to extend it to the extreme end of the old quay along the castle, and I understand that the Trustees of the Harbour are ready to fill it up with soil for the company' (quoted in Boyd 1981, 21). This was later to be the site of the Union Ironworks (see A3 below). The two small docks were fully filled in sometime after 1844, possibly after Owen Thomas founder of the Union Ironworks had leased the land from Lord Newborough. The south end of the quay, now lying behind the Age Concern building, was held by the Welsh Highland Railway to become their Caernarfon terminus (Rear 1985).

Though the quay was constructed in several phases, it is not easy to divide it into strict chronological development, partly because of lack of records, and partly because of repairs and maintenance undertaken over the intervening years. The first section appears to have been from the present site of the De Winton fitting shop (a change in masonry style is visible where the quay finished, and a straight joint is clearly visible in the masonry marking the east side of the in-filled dock), to opposite the Queens Tower of the castle. This was constructed about 1803-12 on land purchased by the Harbour Trust. Shortly after it was extended at the north-west end to its present length – the masonry of this part is quite different to that further east, and with a more pronounced batter. Two sets of stone steps were built into the west end of the quay. The south end of the quay lay in private ownership. It starts from a pronounced bend in the river bank, and was already partly developed by 1834 (the John Wood map shows lime kilns on it), and a timber yard was later to be developed further south.

The slate quay that lay in the ownership of the Harbour Trust was divided into a series of yards with access onto ships via ramps. These are clearly shown on the 1844 map (GAS XT15/39/1), where 20 loading ramps are marked. By 1889 all but two of the ramps had been filled in. The yards were let to the various slate quarries, the larger quarries leasing several, usually contiguous, plots.

The 3'6" gauge Nantlle Railway, built in 1828 (the line of the rails is shown on the John Wood map) was replaced by standard gauge rails in 1871 (Baughan 1980). Part of these rails are visible within the tarmac at the west end of the carpark (PRN 18429).

Easting: 247857

Northing: 362598

18445 Promenade, Caernarfon

Assessment of importance: A

Site Status: GII 26626

The promenade on the Strait side of the town walls was created in the later 19th century as part of the harbour improvements that included Victoria Dock. It incorporates the medieval quay, and it is very probable that much of the underlying work is medieval, though the present walls and steps appear 19th century in style.

John Woods map of 1834 calls it 'the terrace', and shows it running parallel to the town wall throughout its length, until it reaches the former Victoria pier (demolished when the dock was built).

Easting: 247698

Northing: 362765

21182 Office, Union Ironworks, Caernarfon

Assessment of importance: A

Site Status: GII 26547

The former office and show room of the Union Ironworks. Built in yellow brick, though now partly rendered, this is in gothic style, with much use of capitals and colonnettes to emphasise the importance of the building (see Listed Building description). Built in the second half of the 19th century. The windows are presently boarded up, and the interior has not been examined.

Easting: 248062

Northing: 362461

GROUP B: FORMER SITES WITH ARCHAEOLOGICAL POTENTIAL**5564 Roman Bridge (possible), Caernarfon**

Assessment of importance: E

Site Status:

In 1817 the remains of an 'immense wooden bridge, buried several feet in the sand, and extending over the River Seiont' were discovered a short distance upstream of Hén Waliau (Bygones 1907-8, quoting Cambrian of 1817).

Easting: 248085

Northing: 362223

18415 Dock - site of, Slate Quay, Caernarfon

Assessment of importance: E

Site Status:

Site of a small dock lying south of 'Lord Newborough's Quay' shown on J Wood map of 1834. It was later filled in, and overlain by the southernmost building of the Union (De Winton) Ironworks.

Easting: 248154

Northing: 362378

18422 Dock - site of, Slate Quay, Caernarfon

Assessment of importance: D

Site Status:

Site of a small dock lying north of 'Lord Newborough's Quay' shown on J Wood map of 1834. A crane is marked on the quay alongside. The site was later to become the Union (De Winton) Ironworks.

Easting: 248095

Northing: 362445

18432 Site of medieval postern, Town wall, Caernarfon

Assessment of importance: E

Site Status:

In 1434-5 accounts record timber and stone being used for the construction of a new water gate and postern. Speed's map of 1610 shows an outer gate across the quay, connected to the Eagle Tower, which is almost certainly the outer postern. By the mid-18th century the outer postern had been largely demolished, and a small slipway built close to the site (print by J Boydell, 1749 in NLW).

Easting: 247693

Northing: 362662

18433 Medieval Quay, Caernarfon

Assessment of importance: E

Site Status:

The medieval quay formerly lay along the west side of the town walls. The first quay was of timber, but this was destroyed during an uprising of 1290-1, and later rebuilt in stone. An outer postern was built 1434-5 to protect the quay and the sea gate alongside the Eagle tower - the junction with the Eagle tower is still clearly visible. It is not known how much of the visible masonry is medieval, but it is possible that the construction of the promenade in the mid-19th century has left portions of the medieval quay in tact, within the later masonry.

Easting: 247726

Northing: 362907

20750 Nantlle Railway

Assessment of importance: E

Site Status:

Built in 1828, its route largely followed that of the current cycle track. The railway was crucial to the development of the port, and it was only following its construction that Caernarfon was able to develop as a significant port. It was built to a gauge of 3'6", and largely designed by George Stephenson and his brother Robert. The railway was finally converted to standard gauge in 1871.

Easting: 248173

Northing: 362148

GROUP C: FORMER SITES WITH NO ARCHAEOLOGICAL POTENTIAL

18408 Gas works - site of, St Helen's Road, Caernarfon

Assessment of importance: D

Site Status:

Shown on OS 25" 1889 edition at south end of study area. Constructed in the 1830's, the site was later used for a sewage works.

Easting: 248052

Northing: 361967

18409 Timber yard - site of, St Helen's Road, Caernarfon

Assessment of importance: D

Site Status:

The southern of two timber yards marked on OS 25" 1889 edition.

Easting: 248164

Northing: 362186

18410 Seiont Limeworks - site of, St Helen's Road, Caernarfon

Assessment of importance: D

Site Status:

Marked on OS 25" 1889 edition. Situated at the south end of the wharf. The buildings had been cleared by 1918, possibly in anticipation of putting a station on this site. May be the same works described as 'Hugh Jones & Co, Marble & Stone saw mills, monumental masons, manufactures of slate goods, brewers and distiller's tanks, Seiont works, Caernarfon' who supplied a memorial stone for Lord Newborough to be erected on Bardsey Island (GAS XD2A/61).

Easting: 248124

Northing: 362125

18411 Toll house - site of, Nantlle Railway, Slate Quay,

Assessment of importance: D

Site Status:

Site of a toll house shown on J Wood's map of 1834. It formed part of the Nantlle Railway, built 1828.

Easting: 248210

Northing: 362230

18412 Timber yard - site of, St Helen's Road, Caernarfon

Assessment of importance: D

Site Status:

The northern of two timber yards marked on the OS 1888 map. This may have been the Union Ironworks timber yard.

Easting: 248196

Northing: 362323

18413 Limekilns - site of, Slate Quay, Caernarfon

Assessment of importance: D

Site Status:

Marked on John Wood 1834 map, and on the OS 25" 1889 edition and the 1920 edition of the 6" County Series. Limestone would have been brought in as ballast, or with coal as a return load, and burnt in the kilns for the building and agricultural industries. The site is now occupied by the offices of Age Concern.

Easting: 248171

Northing: 362356

18419 Crane - site of, Slate Quay, Caernarfon

Assessment of importance: D

Site Status:

A crane marked on John Wood's map of 1834 on 'Lord Newborough's Quay'. The site is that later

occupied by the Union (De Winton) Ironworks.

Easting: 248101 Northing: 362422

18430 Crane - site of, Slate Quay, Caernarfon

Assessment of importance: D

Site Status:

A crane is marked on John Wood's map of 1834 at the west end of Slate Quay, close to the ferry crossing.

Easting: 247698 Northing: 362608

18446 Site of Ferry Crossing

Assessment of importance: E

Site Status:

The site of the ferry crossing. Associated with Aber Ferry House, built 1822 (PRN 11894).

Easting: 247667 Northing: 362599

18447 Victorian Flour Mills - Site of, Caernarfon

Assessment of importance: D

Site Status:

The Victoria Flour Mills were sited on the north side of Victoria Dock. They were built sometime after 1888 and before 1910, when the buildings suffered serious damage by fire. Now demolished.

Easting: 247918 Northing: 363192

18448 Caernarfon Station - site of, Caernarfon

Assessment of importance: D

Site Status:

The site of the former railway station in Caernarfon lay north-east of Victoria Dock. The Caernarfon extension of the Chester to Holyhead line was built in 1852, and the first station dates from then. It was enlarged following the opening of the town line in 1870. In 1894 an island platform was constructed. A second freight yard occupying the ground as far as Victoria Dock was opened. Changes to the platforms were made for the 1911 Investiture. The line and station closed in 1970, though was given a slight reprieve following the fire on the Britannia Bridge, when freight for Holyhead was handled at Caernarfon. The station was eventually demolished, and Safeways supermarket now lies over part of the site.

Easting: 248163 Northing: 363228

GROUP D: RELEVANT SITES IN IMMEDIATE VICINITY OF STUDY AREA

62 Well (rock cut), Bron y Gaer, Caernarfon

Assessment of importance: E

Site Status:

A rock-cut well found in 1975 in the garden of Bron y Gaer. The well was 5m deep to the top of the silt, and 1.5m in diameter. The only find was a pair of candle snuffers (c. 1700). The well is impossible to date on present evidence, but could be Roman.

Easting: 248199 Northing: 362442

3090 Hen Waliau, Roman fortification, Caernarfon

Assessment of importance: A

Site Status: CN 094

A rectangular area 70m by 50m enclosed by a 5m high stone wall. It is situated at the top of a steep scarp 18m above the Seiont. The west side is now gone, having been heavily robbed out, though the line of the wall has been found by excavation (Boyle 1991). The function and date of the fort is still uncertain, though the evidence suggests a late 4th century structure, possibly used as a storage compound, but lack of fortifications would suggest it was not an outlying fort.

Easting: 248266 Northing: 362370

3095 Caernarfon Castle

Assessment of importance: A

Site Status: CN 079

Edwardian castle, built following conquest of Wales 1283 on site of earlier motte and bailey. World Heritage Site.

Easting: 247771 Northing: 362664

- 3096 Caernarfon Town Wall**
 Assessment of importance: A Site Status: CN 034
 Defensive wall of borough built following conquest of Wales in 1283. World Heritage Site.
 Easting: 247705 Northing: 362781
- 3119 Ffynon Helen, Holy Well, Caernarfon**
 Assessment of importance: E Site Status:
 The well was still in use in the 1920's when it is described as being approached by a flight of modern steps, and the water retained in a slate cistern. No old work remained, but the water was plentiful, and taken away in bottles for healing (Hughes and North 1924, 236-7). The site is currently overgrown, and though running water can be heard alongside, no structural remains are visible.
 Easting: 248243 Northing: 362226
- 3120 Capel Helen - site of, Caernarfon**
 Assessment of importance: E Site Status:
 'There is a Ffynon S. Elen near Yr Hen Waliau at Caernarfon and by it were formerly to be seen the remains of a small chapel' (Baring-Gould & Fisher, 1911, 259, quoting John Ray, Itinerary of 1662; see also Hughes and North 1924, 236-7). In 1889 no traces were visible of the chapel (Jones 1889, 163-4).
 Easting: 248245 Northing: 362229
- 5058 Motte and Bailey Castle, Norman, Caernarfon**
 Assessment of importance: E Site Status:
 Site of the motte within the inner ward of the castle. The bailey is thought to have lain in the area now occupied by the Maes or Castle Square. A large mound was dug from here to help create slate quay in the early 19th century. Motte probably dates from the first Norman incursions of 1090 (RCAHMW 1960).
 Easting: 247840 Northing: 362670
- 5565 Roman well, probable, site of, Hen Waliau, Caernarfon**
 Assessment of importance: E Site Status:
 A square structure, interpreted as a well, was found during excavations in Hen Waliau in 1963, though full exploration was not possible. No secure dating evidence, though thought to be Roman (see Boyle, S D, 1990).
 Easting: 248210 Northing: 362399
- 6917 St Mary's Church, Caernarfon**
 Assessment of importance: A Site Status: GI 3857
 Built early 14th century to serve as the garrison chapel for the town. The west and north walls of the church use the town walls, and the vestry is the corner tower. Restoration work in 1814 by Benjamin Wyatt included rebuilding the south and east walls, with new windows and door. Original east window was reset in the west wall (RCAHMW 1960 and Listed Building description).
 Easting: 247748 Northing: 362947
- 11633 County Hall, Caernarfon**
 Assessment of importance: A Site Status: GI 3828
 Built in 1863 to a design by John Thomas, County Surveyor.
 Easting: 247731 Northing: 362706
- 11648 Old School (Ysgol Jones Bach)**
 Assessment of importance: B Site Status: GI 3919
 Remains of former Carnarvon Grammar and Collegiate School. Founded by Rev. James Bransby, Bron Hendre, 1836.
 Easting: 248232 Northing: 362334
- 11651 Police Station, Caernarfon**

Assessment of importance: A Site Status: GI 3827
Built 1863 as Chief Constables Office.
Easting: 247713 Northing: 362693

11889 Anglesey Hotel, Caernarfon

Assessment of importance: A Site Status: GII 3930
The site of the original custom house in the eighteenth century, a building is shown here on Boydells view of 1749, and on Buckler's view of 1810. It became a hotel in the mid-19th century. The present building, of 3 storeys and in Georgian style, is probably mid-19th century also (see Listed Building description).
Easting: 247697 Northing: 362707

11894 Aber Ferry House, Coed Helen, Caernarfon

Assessment of importance: A Site Status: GII 3818
A small castellated house built in 1822 (date on building), presumably by the Coed Helen Estate, as a ferry house.
Easting: 247592 Northing: 362617

11965 Bron y Gaer, Caernarfon

Assessment of importance: A Site Status: GII 3899
Early 19th century house. Home of Owen Thomas, founder of Union Ironworks.
Easting: 248209 Northing: 362434

12005 Castle Gift Shop, Caernarfon

Assessment of importance: A Site Status: GII 3931
Constructed in the later 19th century, it lies north of Slate Quay, and forms part of Castle Square improvements undertaken then. Shown on 1888 OS map.
Easting: 247897 Northing: 362649

14600 Cored Aber Saint, fishwier, site of, Caernarfon

Assessment of importance: E Site Status:
Three weirs at Coed Helen are documented, though went out of use c. 1800 (Hopewell 2000, GAT Report 363). May be weir owned by Clynog Church, and mentioned in medieval sources.
Easting: 247500 Northing: 362700

18427 Railway tunnel portal, St Helen's Road, Caernarfon

Assessment of importance: A Site Status: GII 26618
Part of the Caernarfon Town Line built to connect the Afonwen and Llanberis lines through to the Caernarvon and Bangor line. Opened in 1870, though the iron girder, cast at the Union Ironworks, which spans the portal is dated 1869. Horizontal lintel across the portal with a roll moulding above that continues along the left side of the portal, above a row of four brick-arched recesses. This lies adjacent to the bonded warehouse (PRN 11662).
Easting: 247984 Northing: 362591

PWLLHELI: SITE GAZETTEER

GROUP A: EXTANT SITES

18369 EMBANKMENT, PWLLHELI HARBOUR

Assessment of importance: A

Site Status Reference:

First constructed in 1813, and widened to take the tramway in the early 20th century, the embankment forms the lynchpin in understanding the development and existing layout of the town, and thus is considered of national importance as part of a classic reclamation and improvement scheme undertaken in the early years of the 19th century, and following that of Porthmadog/Tremadog where William Maddocks was transforming the landscape of Traeth Mawr.

Easting: 237550

Northing: 334760

18370 WAR MEMORIAL, PWLLHELI HARBOUR

Assessment of importance: A

Site Status Reference: GII

The war memorial, erected in 1924, is on the east side of the embankment, overlooking the inner harbour. It consists of a Bronze figure of a soldier, with plaques to the two World Wars and the Falklands War of 1982.

Easting: 237550

Northing: 334790

19711 Lifeboat house, Pwllheli

Assessment of importance: A

Site Status Reference:

The original lifeboat house was opened in 1891, with the lifeboat Caroline Richardson, though this was soon changed for the Margaret Platt of Staleybridge. A long stone-built single storey building, in two stages, with dressed stone quoins and slate roof.

Easting: 238453

Northing: 334403

19712 Quarry pier, Pwllheli

Assessment of importance: B

Site Status Reference:

A stone-built pier that formed part of the loading arrangements of Gimlet Quarry. The OS map clearly shows it with tramways leading from the quarry onto the pier. Part of the pier remains in use, though shorter in length.

Easting: 238738

Northing: 334491

19714 Tidal gates, Pwllheli

Assessment of importance: B

Site Status Reference:

A set of tidal gates that allow the R Erch to flow through, but hold back the tidal waters at high tide. They are located within an embankment built 1811-1813 (the Abererch or Glan y Don embankment) that formed part of a larger reclamation scheme including the construction of the town embankment. The present gates are in the same location as the original, though renewed.

Easting: 238180

Northing: 335413

GROUP B: FORMER SITES WITH ARCHAEOLOGICAL POTENTIAL

1199 CASTLE MOUND (POSS.) - PLACE-NAME, PWLLHELI

Assessment of importance: B

Site Status Reference:

The name Pen Y Mount, now surviving in names such as Penmount Square and Penmount terrace suggests the site of a possible pre-Edwardian conquest castle mound in this vicinity. There are no medieval references to a motte in Pwllheli. A short distance to the west is the area known as Gadlys (see PRN 19720), which may also indicate a fortified enclosure. Pwllheli was the commotal centre of Cafflogion, though the site of the hall and court buildings is not known with certainty.

Leland, during his visit in 1536-9 says 'the Prince had a palace there, as yet apperith', which may refer to remains at Gadlys and/or Pen y Mount. A quillet called Llain y Twr would have faced the mount. A high mound remains behind the chapel of Pen y Mount. It is some 6m high, and though it has been encroached on all sides by buildings, still measures some 20m by 12m. High retaining walls separate the gardens on all sides, though less so at the south-west end. If a bailey existed, it may well have been here, with Gadlys slightly further again to the west. The area occupied by the mount is undeveloped on Wood's plan of 1834.

Eastings: 237671

Northings: 335179

2212 SPINDLE WHORL - FINDSPOT, GIMLET ROCK,

Assessment of importance: E

Site Status Reference:

A spindle whorl was found on Gimlet Rock, and is reputedly at Bangor Museum, though it is not recorded in the most recent catalogue (see RCAHMW 1960 and Lynch 1986). Most likely of late prehistoric or Romano-British date.

Eastings: 238700

Northings: 334300

2213 STONE TOOL - FINDSPOT, GIMLET ROCK, PWLLHELI

Assessment of importance: E

Site Status Reference:

A Bronze Age adze with an hour-glass perforated hole. Made of quartzite. Found on Gimlet Rock (see Green 1981).

Eastings: 238800

Northings: 334400

2259 QUERNSTONES - FINDSPOT, PWLLHELI

Assessment of importance: E

Site Status Reference:

Three querns and a mortar were found some 500m west of the harbour. These finds are typical of those associated with late prehistoric and Romano-British settlements.

Eastings: 237000

Northings: 335000

7247 PWLLHELI HARBOUR

Assessment of importance: E

Site Status Reference:

The harbour has, from at least the 18th century, formed part of a tidal pool, that was incorporated into a harbour during the construction of the embankment across the pool in the early 19th century, and further developed in the early 20th century when the harbour was modified to take into account development on the north side. At this time much of the harbour was dredged, and an island constructed in the centre. Work in the early 1990s, during construction of the existing marina, and again in 1995, involved the dredging of the proposed development area, and alterations to the existing island, including the construction of a causeway linking the island to the

Eastings: 237900

Northings: 334600

19721 Y Gadlys, Pwllheli - Placename.

Assessment of importance: E

Site Status Reference:

The area now occupied by the carpark that lies between New Street and Pen Lan has always been known as Y Gadlys, a placename implying a fortified enclosure, and typically found in association with the Welsh medieval court. To the west is Pen y Mownt, a possible motte site (see PRN 1199).

Eastings: 237558

Northings: 335156

19722 Port, Pwllheli - site of

Assessment of importance: E

Site Status Reference:

This area is shown on Wood's map of 1834 as the principal quay within the harbour. The street is still called Pencei, and leads directly off the towns' High Street. It lies north of Penmount chapel, and adjacent to a raised mound that is a possible medieval motte. The area was developed in 1808 following the lease of land for 21 years to three Englishmen, who built a quay here. This quay continued in use as the principal town quay until the construction of the new harbour in the early years of the 20th century. An earlier quay lay inland of here by Ty Eiddew.

Eastings: 237731

Northings: 335217

19727 Old harbour, Pwllheli

Assessment of importance: E

Site Status Reference:

The possible site of the original pool that gave Pwllheli its name, and formed the harbour into the eighteenth century. It is defined by North Street on the north side and King's Head Street on the south.

Easting: 237603

Northing: 335320

19740 Quay, site of, Pwllheli

Assessment of importance: E

Site Status Reference:

The site of a quay built in the middle years of the 18th century. A custom house was established near by. The use of the quay diminished following the construction of a new quay at Penylan in 1808. Construction of the embankment meant the quay became landlocked, and it was built over in 1840 by the construction of the Mitre Hotel.

Easting: 237401

Northing: 335052

19741 Quay Traeth Ty-Eiddew, site of, Pwllheli

Assessment of importance: E

Site Status Reference:

The site of the 18th century quay in Pwllheli. It is mentioned in a Corporation document of 1723 that laid down the limits of the port at Traeth Ty Eiddew.

Easting: 237675

Northing: 335215

GROUP C: FORMER SITES WITH NO ARCHAEOLOGICAL POTENTIAL

5468 STONE LINED WELL, PWLLHELI

Assessment of importance: C

Site Status Reference:

A circular well, at least 10m deep, lined with dry stone walling two courses thick. The stones are not dressed, and are of igneous origin. When uncovered the well was capped with slate slabs. A brewery is marked here on John Woods map of 1834, and the well may be associated with this.

Easting: 237750

Northing: 335350

19710 Gimblet Rock Quarry, Pwllheli

Assessment of importance: B

Site Status Reference:

Gimblet Rock (also Gimlet Rock) was once a dramatic landmark for sailors, though has been largely quarried away. It is located on the west side of the harbour entrance, at the end of a long sand bar. Prehistoric finds from the rock suggest the area may have been the focus for early settlement. Considerable changes will have occurred to the coastline since prehistoric times, and it is now difficult to reconstruct the topography of the area.

Easting: 238748

Northing: 334385

19713 Glan y Don farm, site of, Pwllheli

Assessment of importance: D

Site Status Reference:

A small farm called Glan y Don, situated on the sand embankment that formed the east side of the harbour. It is shown on the 1889 OS map, though nothing now remains of the buildings.

Easting: 238343

Northing: 334907

19715 Limekiln, site of, Abererch Road, Pwllheli

Assessment of importance: D

Site Status Reference:

A limekiln, situated by the side of the Abererch Road, is clearly indicated on the 1889 OS map. Nothing now remains.

Easting: 237984

Northing: 335388

19716 Limekiln, Pwllheli - site of

Assessment of importance: D

Site Status Reference:

A limekiln situated on the corner of Sand Street and Abererch Road. It is shown on John Woods map of 1834, and on the OS map of 1889. Nothing remains on site.

Easting: 237728

Northing: 335336

19723 Limekiln, Pwllheli - site of

Assessment of importance: D

Site Status Reference:

A former limekiln, marked on John Woods map of 1834. It is on the site of the later Mission School, built in 1882.

Easting: 237728

Northing: 335288

19724 Shipbuilding yard, Pwllheli - site of

Assessment of importance: D

Site Status Reference:

Fronting the harbour, and north of Pencei, there is a shipbuilding yard shown on John Woods map of 1834, owned by Thomas Griffiths. This is probably the same Thomas Griffiths included in the 1851 census, then aged 76 and described as 'Shipbuilder (retired)'. Now built over and no longer by the water's edge, but the property boundaries still follow the same alignment.

Easting: 237731

Northing: 335229

19725 Shipbuilding yard, Pwllheli - site of

Assessment of importance: D

Site Status Reference:

Now partly occupying the carpark and Penmount terrace, and separated from the water's edge by the railway, is the site of a former shipbuilding yard owned by John Ellis, and marked on Wood's map of 1834.

Easting: 237676

Northing: 335136

19726 Timber yard, Pwllheli - site of

Assessment of importance: D

Site Status Reference:

A timber yard at the seaward end of Penylan street. It belonged to Robert Evans, a Draper and businessman, who also built ships at the yard, in particular the 'Ancient Briton', a ship of 411 tons. Now partly underlying the present post office.

Easting: 237472

Northing: 335060

19728 Former wier and tidal gates, Pwllheli

Assessment of importance: D

Site Status Reference:

The site of a former weir and tidal gates, it also provided a footbridge from the end of the Glan y Don embankment across to Morfa Mawr. It formed part of the harbour improvements of 1904-8, and was designed to retain a depth of water within the inner and outer harbours, and also allowed sluicing of the outer harbour to keep it free of silt.

Easting: 238244

Northing: 334614

19729 Pier, site of, Pwllheli

Assessment of importance: D

Site Status Reference:

A pier was built here during the harbour improvements of 1904-8, to be used to transport fish to the railway station, and a new fish processing plant that was proposed but never built.

Easting: 238350

Northing: 334555

GROUP D: RELEVANT SITES IN IMMEDIATE VICINITY OF STUDY AREA**1338 WATCHING BRIEF, 20 HIGH STREET, PWLLHELI**

Assessment of importance: D

Site Status Reference:

A watching brief was undertaken on a small rear extension to 20 high street, Pwllheli: visited by RSK on 19/04/90. Nothing found. Details in F.I. File.

Easting: 237634

Northing: 335214

11390 PENLAN FAWR P.H., PENLAN ST, PWLLHELI

Assessment of importance: A

Site Status Reference: GII

A 17th century Inn. It is of 2 storeys with a heavy stone porch that projects into the street. Slate roof

and stone chimney stacks.

Easting: 237490

Northing: 335110

11649 OLD TOWN/MARKET HALL, PENLAN ST, PWLLHELI

Assessment of importance: A

Site Status Reference: GII

Late 18th or early 19th century. A 2 storey building of dressed stone. Stone pediment. 2 central arches with iron gates. Thin mid 19th century wooden clock tower.

Easting: 237460

Northing: 335150

19717 Mathan House, Pwllheli

Assessment of importance: A

Site Status Reference: GII 4565

A late 17th century house in Penlan Street, situated on the entrance to Market Square, and just north of the later Town Hall. It was once the Eagles public house. Listed Building description says the original roof structure with chamfered purlins is retained, though much of the interior has been modernised.

Easting: 237984

Northing: 335388

19718 Capel Penmount, Pwllheli

Assessment of importance: A

Site Status Reference: GII 4586

Penmount Chapel was built on the foreshore of the town, to the south of the principal quay and on the seaward side of a raised mound, possibly the site of a medieval motte. The chapel was first built in 1780, and rebuilt 1802/3. The Sunday School alongside was built in 1870. The stone wall running around the east side of the chapel separated the building from the sea, and is thought to date from the 1802/3 rebuilding (Listed Building description No. 4588).

Easting: 237701

Northing: 335166

19719 Railway Station, Pwllheli

Assessment of importance: A

Site Status Reference: GII 4589

A small railway station built in 1909 following the extension of the line from the Glan y Don embankment where the original station had been built in 1867. The line extension and the station were built on land reclaimed from the north side of the harbour following the construction of a new quay wall. It is a single storey building of timber boarded construction, renovated (according to the Listed Building description) in 1984.

Easting: 237485

Northing: 335019

19720 Brynhyfryd, Pwllheli

Assessment of importance: A

Site Status Reference: GII 23017

An early 19th century house built for William Jones (1793-1855). William Jones started his career as a druggist, but became the town's principal ship builder and timber merchant, with a yard on the site of the old Brewery at Allt Fawr. Brynhyfryd lay next to the timber yard, and above the harbour. Described as a villa with Italianate detailing, the interior retains high quality mahogany fittings, including stair, window shutters and doors (see Listed Building description).

Easting: 237828

Northing: 335397

PORTHMADOG: SITE GAZETTEER

GROUP A: EXTANT SITES

7252 Ballast Island (Cei Ballast), Porthmadog

Assessment of Importance: B

Site Status

This was formed from the dumping of ballast for over a century. With the increasing size of the dump over the decades, specialised arrangements had to be made to expedite the unloading and deposition of the stone. In its fully developed state, there was a travelling (rail-mounted) steam crane in use, traversing along a timber quay (of which the stumps remain). Tramways carried the waste ballast to the far side of the island for controlled dumping. A late nineteenth century inventory also refers to an grid iron slipway, dwelling house, warehouse (for what?) and coal shed on the island, but these are not now visible due to the growth of vegetation.

Easting: 256962

Northing 337833

7254 Britannia Bridge

Assessment of Importance: A

Site Status GII 4407

This is Maddocks' original sluice outlet for the Traeth Mawr Cob of 1810-12. It is a three-arched bridge, having relatively narrow spacing between the pontoon-like heavy masonry platform bases from which the pointed arches spring. These platforms extend significantly on the seaward side of the bridge, and provide the structure on which the original vertically hung sluice gates operated. Socket holes in the masonry identify the housings for the heavy horizontal timbers required to support the back (inland) side of the gates against the incoming tide. The operating mechanism for raising the gates must have been on a platform (in timber?) above the piers, but this portion of the structure has been rebuilt in concrete during a road-widening in the 1920s, and subsequently carried the new Welsh Highland Railway tracks.

Easting: 257078

Northing 338485

11361 Greaves' & Oakeley quays

Assessment of Importance: A

Site Status GII 4407

These plots, lying between the public quay and the Britannia Bridge, are of one unified construction by the Tremadoc estate, probably dating from the 1830s. The naming of the site refers to the two important quarry companies who formerly leased half each of the quay space, namely J. W. Greaves & Sons (Llechwedd quarry) on the west side, and the Oakeley Quarries having that to the east.

These quays retain much standard dock furniture (rings, fenders), but the surface has been almost completely covered by a layer of new paved surfacing.

Easting: 256955

Northing 338406

11632 Ex- commercial building, 6 Cornhill

Assessment of Importance: A

Site Status GII 4415

A four-storey ex-commercial building, possibly a corn & flour warehouse, now sub-divided into holiday flats. The central gabled portion retains the housing hole for a winch that served the loading doors on the upper floors (now all converted to tall windows).

Easting: 256857

Northing 338341

11639 Oakeley wharf buildings (including Maritime Museum)

Assessment of Importance: A

Site Status GII 4426

This range of buildings is shown on a sale catalogue of 1879 as having been previously in the occupation of the Rhiwbryfdir Slate Company, which was to become part of the Oakeley conglomeration soon afterwards. It comprises a single storey range under a slate roof, being of multi-phase construction, with much-modified openings. Currently, the northern half is in disrepair, whilst the remainder is occupied by the Maritime Museum and the harbourmaster.

Easting: 256972

Northing 338448

12180 Dwelling – “Wharf Cottage”

Assessment of Importance: A

Site Status GII 4423

This is a much modified, free-standing house, adjacent to the Greaves wharf, and now converted into holiday lets. It is reputed that it was originally the dwelling of a quarry wharf agent.

Easting: 256897

Northing 338430

12180 Dwellings – “Wharf Court”

Assessment of Importance: A

Site Status GII 4424

A long range of slate-quay-related buildings, now converted into holiday flats, forming possibly the east side of the former Greaves' wharf. The north end was formerly a dwelling or office, and has a distinct blocked ground floor doorway. The southern end was formerly in commercial use, and has an inserted/enlarged large door on the west side.

Easting: 256934

Northing 338457

12181 Seamen's Mission & house (presently the Madog Yacht Club)

Assessment of Importance: A

Site Status GII 4422

A multi-phase building, consisting of a three-storey former dwelling/offices (with ashlar facing) abutting a two-storey building with a multi-fenestrated upper room (the former subscription reading room) reached by an external masonry staircase. On the ground floor there was possibly a store-room, accessed by a wide door in the east gable end, now altered. Originally a Seamen's Mission, the reading room and lending library was established in the 1840s.

Easting: 256890

Northing 338295

12200 Dwelling (Harbourside) at Cornhill

Assessment of Importance: A

Site Status GII 4413

A Regency style dwelling, possibly originally that of the harbourmaster or a slate quarry shipping agent.

Easting: 256880

Northing 338280

12578 Grisiau Mawr

Assessment of Importance: A

Site Status GII 4416

A long straight flight of steep steps, in a series of flights interrupted by short flat platforms, giving access to/from Cornhill and the Public Quay from/to the dwellings of Garth road above. Originally constructed of country slatey-slab, the surface has been covered with concrete for reasons of safety.

Easting: 256855

Northing 338349

12709 Ex- commercial buildings 1 - 5 Cornhill

Assessment of Importance: A

Site Status GII 4414

A four-storey multiple-occupation commercial block, now in other use. The 1886 street directory suggests that at least the ground floor was divided into several individual office premises at that date. The eastern bay (only) had originally an external winch (stump in situ) serving loading doors at the upper floors of what may have been an important sail loft, but it is uncertain whether all of the upper storeys were in a single occupation, or were subdivided.

Easting: 256866

Northing 338317

12714 South Snowdon wharf

Assessment of Importance: A

Site Status GII 4408

This is a multi-phased construction of uncertain provenance. That portion adjacent to the southern end of Britannia bridge is certainly the earliest construction, and possibly of the 1830s.

It is virtually identical to the other quays already described. The western extension, beyond the Ffestiniog Railway station, is certainly of a later date, and was constructed abutting an older structure that is now only visible in the end-section of the wharf. This old, now internal structure, appears to correlate to an 1830s breakwater, or pier mentioned in some references. Completely redeveloped for housing in the 1960s, there are a few features of interest remaining on this site other than the basal masonry.

Easting: 257034

Northing 338305

12715 Garth Quay, Porthmadog

Assessment of Importance: A

Site Status GII 4409

Slate quay constructed along foot of cliff under the Garth headland in 1830s/40s, as secondary work following the Act of Parliament of 1821 for constructing the harbour. It appears to have built from the country rock of the adjacent Garth headland, which is a cleavable semi-slate. A shelf cut high into the rock face (A1.a) above the quay is reputedly the site of a tramway used in conjunction with this quarrying.

Individual quarry companies leased plots of the quay with frontage to the quay, from the Tremadoc estate [sic], and maintained their individual stockpiles in this secure site that was bounded by a high masonry wall. The slates were brought to the wharves via a 2 ft (60cm) gauge railway system connected directly with the Ffestiniog, Croesor and (rebuilt) Gorseddau railways.

Whereas the quayside stockpiles were originally open to the weather, marketing forces eventually dictated the construction of open-sided shed shelters to prevent the rust-discolouration of pyrites-affected slates through weathering. None of these 'slate sheds' now survive. The individual tenanted quays also would have had their own wharf foreman's office and a hay store (for packing the slates on the ship). Of these minor structures, the present Scout's building appears to be the sole, but greatly-modified remnant (see B below). The slate cargo was transferred to the ships using planks to allow the loaders to deftly slide piles of slates from one man on the quay edge to another in the vessel's hold. It is surmised that the approx 50 degree from horizontal inwards inclination of much of the wharf walls in the harbour was designed to make the ships lie on their port sides when they keeled-over at low water, thus ensuring a maximum loading rate.

The quay retains many of the ship anchoring rings and most of its timber fenders, which are interestingly distributed uniformly except for a dense concentration at one location. There is one significant modern breach in the masonry, where an access ramp has been constructed.

Related sites include:

A. a shelf cut high into the rock face above the Garth quay is reputedly the site of a tramway used in conjunction with the quarrying of stone for the construction of the quay.

B. probable original building, now used by the Scouts' association, but may have originally been a slate company wharf office.

Easting: 256856

Northing 337972

16488 Commercial buildings & dwellings, 16-21 Cornhill

Assessment of Importance: A

Site Status GII 4420

Nos.16-18 are currently integrated into the modern Blue Anchor Inn, but were originally plain two-storey cottages. No.19 was the original Anchor Inn a large double-fronted building having a substantial cellar. Nos., 20-21 are additions to the row, being three storeys high. No.21 the end building - was formerly a shop, having a vernacular design of a door cutting the corner of the building at ground level, and with the upstairs rooms corbelled out to regain squareness.

Easting: 256859

Northing 338418

16490 Ffestiniog Railway Harbour Station

Assessment of Importance: B

Site Status

The passenger terminus of this famous narrow gauge railway, the Harbour Station is a world-wide icon of the modern Porthmadog. The present form of the building has evolved since the 1860s, when steam locomotives were first introduced to the railway and passenger traffic was regularised. This building has been greatly, but sympathetically modified over the years, specially since the 1960s.

Easting: 257135

Northing 338420

16491 Ex-Goods warehouse, Ffestiniog Railway

Assessment of Importance: B

Site Status

A plain railway building alongside the line running to the main harbour, this is now a warehouse for the a nearby shop.

Easting: 257118

Northing 338403

18481 Public Quay

Assessment of Importance: A

Site Status GII 4409

First slate quay constructed on north shore of scoured new channel of the Glaslyn River, possibly just prior to the Act of Parliament of 1821 for constructing the harbour. The original structure was extended c.1824 to create a quay for public (i.e. non-slate) use, incorporating a slipway.

This quay is constructed from large blocks of the country rock of the adjoining steep scarp slope.

It retains some original features such as a number of tie-rings, three slate-slab bollards, and the slate-slab foundation of a timber derrick.

Easting: 256873

Northing 338351

18481 New Wharf

Assessment of Importance: A

Site Status GII 4408

This extension (of the 1860s?) to the harbour facilities made use of a meandering offshoot of the Dwyrdd river which ran along the outer side of the Traeth Mawr Cob, thus scouring a sufficiently deep channel for ships adjacent to the old breakwater. Completely redeveloped for housing in the 1960s, there are a surprising number of original features of interest remaining on this site, being predominantly tie-rings, a rare iron bollard and timber fenders having cast-iron heads.

Easting: 257083

Northing 338269

18482 Former Oakeley Slate Quarry Office

Assessment of Importance: A

Site Status GII 4425

Formerly the main local office of the Oakeley Slate Quarries (Company formed in the 1880s by amalgamating three operations). This building was at one time very imposing, having a rendered decorative façade and patterned slate-hangings on the side walls. It ceased its primary function in the 1960s.

Easting: 256956

Northing 338477

18485 Commercial buildings & dwellings, 7-10 Cornhill

Assessment of Importance: A

Site Status GII 4417

A multi-phased row of commercial buildings and dwellings, the earliest being probably contemporary with the construction of the Public Quay in the mid-1820s. The western portion (Nos.7-10) is three storeys high, and included the former Victoria Tavern. Nos.11-13 are subtly different, being two storeys with a cellar, and are built in an English town style with broad steps up to the main doors. Nos.14-15 are plain two storey houses.

Easting: 256856

Northing 338364

18486 Commercial buildings & dwellings, 11-15 Cornhill

Assessment of Importance: A

Site Status GII 4418

A multi-phased row of commercial buildings and dwellings, the earliest being probably contemporary with the construction of the Public Quay in the mid-1820s. The western portion (Nos.7-10) is three storeys high, and included the former Victoria Tavern. Nos.11-13 are subtly different, being two storeys with a cellar, and are built in an English town style with broad steps up to the main doors. Nos.14-15 are plain two storey houses.

Easting: 256846

Northing 338386

18487 Limekiln cottages

Assessment of Importance: A

Site Status GII 4419

A pair of two-storey cottages on an elevated location, with high retaining walls on the down-slope side. The site of the former limekiln, east of the dwellings, is occupied by a modern car park.

Easting: 256829

Northing 338407

GROUP B: FORMER SITES WITH ARCHAEOLOGICAL POTENTIAL

19702 Former track layout of Gorseddau and Festiniog Railways
 Assessment of Importance: D Site Status
 Easting: 256941 Northing 338487

GROUP C: FORMER SITES WITH NO ARCHAEOLOGICAL POTENTIAL

16492 Garth quays slate sheds
 Assessment of Importance: D Site Status
 Open-fronted slate-storage sheds covered part of the Garth quay by 1900.
 Easting: 256888 Northing 338107

16493 Minor structures on north of Garth quays
 Assessment of Importance: D Site Status
 The 1900 2nd edition OS map shows unidentified minor structures occupying the bowl of the construction quarry under Garth headland, on the site now occupied by a boat park.
 Easting: 256860 Northing 338247

18494 Public Quay Weighbridge
 Assessment of Importance: D Site Status
 The OS 1900 map identifies a (public?) weighbridge near the centre of the public quay, a facility which is not unexpected in connection with the working of the quay.
 Easting: 256875 Northing 338383

18495 Limekiln
 Assessment of Importance: D Site Status
 A limekiln is shown on the 1900 map on land behind Lombard Street, adjacent to the present "Limekiln Cottage". This is another facility commonly found in ports having an agricultural hinterland.
 Easting: 256839 Northing 338433

18496 Greaves wharf slate sheds
 Assessment of Importance: D Site Status
 The 1900 map and archive photographs show a series of slate storage sheds (at right angles to the quay) on this wharf.
 Easting: 256934 Northing 338404

18497 Timber yard, adjoining Lombard street
 Assessment of Importance: D Site Status
 North of Greaves' wharf, and fronting onto Lombard street was a large timber yard (or possibly two of), now occupied by 1930s Council houses and a car park.
 Easting: 256925 Northing 338496

18498 Offices adjacent (south) to Britannia bridge
 Assessment of Importance: D Site Status
 The 1900 map and archive photographs show a pair of relatively small, single storey buildings on this plot, being possibly wharf offices and/or mess-room.
 Easting: 257096 Northing 338463

GROUP D: RELEVANT SITES IN IMMEDIATE VICINITY OF STUDY AREA

16489 Commercial buildings & dwellings 1-16 Lombard Street

Assessment of Importance:

Site Status

These are included because of their physical connection to Cornhill (in the case of Nos.1-3) and their intimate proximity to the quays and adjacent timber yards.

Nos.1-3 are a continuation of the three-storey block ending Cornhill, and of which No.3 was the Ship on launch Tavern an example of a single fronted, simple Victorian beer house.

The detached block forming Nos.4-16 Lombard Street is an eclectic multi-phase mix of a middle-class double-fronted house with bay windows (No.4), a large shop with original frontage (No.5), plain dwellings, and a single-build block of unified architectural style (Nos.11-16) including the Ship Inn (No.14).

Easting: 256841

Northing 338488

18499 Ynys Towyn house, Madog Street

Assessment of Importance: A

Site Status GII 4428

The residence and office of John Williams, local agent of W. A. Maddocks from the commencement of the construction of the Traeth Mawr Cob in 1810. Presently a Tourist Information Office.

Easting: 257027

Northing 338563

18500 Towyn cottage ('The Oakeley Cottage')

Assessment of Importance: A

Site Status GII 4412

Occupying the site of the original c.1812 toll-house of Maddocks' Traeth Mawr Cob, the present structure is possibly a replacement. It was reputedly used as the office for the ill-fated Gorseddau Quarry in the 1860s, but its present decorative slate hung exterior cladding might have been added by a different tenant.

Easting: 257104

Northing 338480

19701 Britannia Terrace

Assessment of Importance: A

Site Status GII 4411

This terrace of substantial houses possibly represents a speculative investment by a property developer, perhaps the owner of the former Britannia Foundry (now the site of the Tax Office).

Easting: 257169

Northing 338447

BARMOUTH: SITE GAZETTEER

GROUP A: EXTANT SITES

6577 TY GWYN, BARMOUTH

Assessment of importance: A

Site Status Reference: II* 4897

Situated close to the harbour, Ty Gwyn was reputedly built by Gruffydd Fychan of Cors y Gedol c. 1450 in connection with Lancastrian intrigues associated with Jasper Tudor. It is its first floor hall, consisting of a small basement, a long ground-floor room and above a hall open to the roof. Fireplaces in ground and first floor rooms. Ground floor (currently a café) is entered by a doorway leading on to the quay. Seven bay roof of simple collar-beam trusses with threaded purlins.

Easting: 261510

Northing: 315496

7270 BARMOUTH HARBOUR

Assessment of importance: A

Site Status Reference:

Barmouth has a long history as a harbour, serving the Mawddach estuary and much of central Merioneth. An act for 'repairing, deepening, enlarging and preserving the harbour of Barmouth' was passed in 1797, and the work completed by 1802. The present quay wall dates back to those works, though the masonry appears to have been partially rebuilt. On the quay are several 19th century buildings, including the present harbour master's office (also called Pen y Cei), the present Yacht Club building, a row of single storey sheds and 'Ty crwn', a round lock-up with a central chimney, built in 1833, containing separate cells for male and female vagrants. The buildings in the immediate vicinity are mainly boarding-houses constructed between 1872 and 1878, though immediately behind the yacht-club is a good example of art-deco style construction. Ty Gwyn, now incorporating the café 'Davy Jones' Locker' on the ground floor was built c. 1460. The Seaman's Mission lies at the north end of the quay.

Easting: 261556

Northing: 315485

7271 BARMOUTH BRIDGE

Assessment of importance: A

Site Status Reference: II* 5207

Originally built to a design by Benjamin Piercy for the Cambrian Railway and opened in 1867. It was partially rebuilt 1899 to 1909, and extensively repaired 1981-5. It consists of a single track railway viaduct of which the longest section, to the south, consists of 113 timber trestles supporting longitudinal timbers and main timber deck. Many of the timber piles have been replaced or encased in glass fibre reinforced concrete sleeves to protect against marine borer's. On the north side of the estuary is the deep water channel, where there is now a swing bridge on a central pivot of four cylindrical piers, and on the south side of the bridge a fixed span also supported on cylindrical piers. The swing bridge was built in 1900 to replace an earlier overdraw bridge. Two smaller openings abut a stone causeway on the north side of the bridge. The piers support a metal deck and latticework braces. There is a lower boarded pedestrian walkway on the east (upstream) side.

Easting: 262121

Northing: 315281

12637 Ty Crwn, Quay, Barmouth

Assessment of importance: A

Site Status Reference: GII 4898

A circular lock-up, probably built 1833 (see Listed Building information). Single storey, of dressed stone with conical slate roof rising to central cylindrical stack. Two rooms each with a corner privy. Managed by the Trust that also looks after the Sailors Institute and first floor of Ty Gwyn.

Easting: 261474

Northing: 315490

19730 Harbour master's office, Barmouth

Assessment of importance: A

Site Status Reference:

Harbourmaster's office situated on the quay at Barmouth. It was constructed some time in the latter part of the 19th century. It is certainly marked on the 1889 OS map, though not shown on the tithe map. Also known as Pen y Cei, it was a house with workshop/storage underneath.

It is built of roughly coursed mortared stone, of two storeys, with external stairs to the first floor, which currently houses the office. Ground floor housed the RNLI lifeboat museum, with access through the door in the south-west gable, though it is now a workshop used by the harbour master.

Easting: 261455

Northing: 315418

19731 Sailing Club, Barmouth

Assessment of importance: A

Site Status Reference:

A 3 storey stone building, now the home of the Merioneth Yacht Club, who added the third floor in the 1970's. The building dates from the mid-19th century (it is not marked on the tithe map). Ground floor has a wide doorway with flattened arch of radiating voussoirs. Windows to either side with flat stone lintels. Wide door would suggest a warehouse, with living accommodation above.

Easting: 261466

Northing: 315429

19732 Store sheds, Quay, Barmouth

Assessment of importance: A

Site Status Reference:

A long row of stone built single storey store sheds. Now owned by the council and used for storage by local businesses. Built before 1889, but late in the 19th century. Renovated. Used by fisherman, and in the middle of the 20th century by boatmen operating pleasure boats.

Easting: 261495

Northing: 315451

19733 Sailor's Institute, Barmouth

Assessment of importance: A

Site Status Reference:

The Sailors Insititute was established by Canon Edward Hughes, Rector of Barmouth, in 1890. It is situated on the quay front, close to St David's church. It is currently being refurbished. The outer walls and roof are of corrugated iron sheets. It is a single storey building, with a large billiard room and reading room forming the two principal divisions inside. It is usually open to the public, and managed in conjunction with Ty Gwyn and the round house.

Easting: 261526

Northing: 315524

19735 St David's Church, Barmouth

Assessment of importance: A

Site Status Reference: GII 5245

Barmouth lies within the parish of Llanaber, and the medieval parish church lies north of the town on the coast. St David's was built in 1830 to a design by Edward Haycock of Shrewsbury to cater for the growing town. It is situated close to the harbour at the lower end of the high street. St Johns church, designed by John Douglas, later prelaced St David's as the principal church within the town. The building is of cruciform plan, built in Tudor style of ashlar construction - for detail see listed building description.

Easting: 261537

Northing: 315561

19736 Breakwater, Ynys y Brawd, Barmouth

Assessment of importance: B

Site Status Reference:

A breakwater was built on Ynys y Brawd as part of the harbour works following the Barmouth Harbour Improvement Act of 1797. Remains of a stone wall are still visible within the sand.

Easting: 261143

Northing: 315343

GROUP B: FORMER SITES WITH ARCHAEOLOGICAL POTENTIAL

19734 Former harbour, Barmouth

Assessment of importance: E

Site Status Reference:

This area once formed part of the harbour of Barmouth, and mooring rings are reputedly still to be found in the walls by the street. It would have been reclaimed following the construction of the

Cambrian Railway in 1867. Potential for former harbour works or boat remains. In the 1980's during digging for new tanks outside the garage stones were noticed that were thought to have been part of a quay wall. Similar stones were noted in the 19th century during construction of the Lion Hotel. Mooring rings were also apparently to be seen in the cellars of the Barmouth Hotel (information from Ken Jeffs, Barmouth, who owned the garage).

Easting: 261584

Northing: 315553

GROUP D: RELEVANT SITES IN IMMEDIATE VICINITY OF STUDY AREA

1140 HILLFORT (POSS), DINAS OLEU

Assessment of importance: B

Site Status Reference:

An Iron age defensive enclosure situated at SH6171578 upon the summit of a rocky crag, measures 60m N-S by 48m. Defence of the site depended largely on the steep outer faces of rock outcrop, where this is not present the gaps have been filled with walling, now collapsed, to an average width of 4.0m and a height of 0.5m. The original entrance was probably in the NW.

Easting: 261700

Northing: 315700

4164 BRONZE BOWL - FIND

Assessment of importance: E

Site Status Reference:

In the Ashmolean Museum, Oxford, there are two round bottomed bronze bowls recorded under Merioneth. One is fragmentary and nothing appears to be known about it, the other is described in the Museum Report for 1905 as 'a bronze bowl of very thin fabric, found in the marsh near the sea at Barmouth, Wales'. Five and half inches in diameter and just over 3 inches high. (Bowen and Gresham, History of Merioneth Vol I, 1967, p 263).

Easting: 261000

Northing: 316000

4173 BRONZE SPEARHEAD - FINDSPOT, NEAR BARMOUTH

Assessment of importance: E

Site Status Reference:

There are four socketed spear heads from the county other than that in the Cwm Moch hoard; one from near Barmouth, now lost, had loops on the socket, the others are without loops (Bowen and Gresham, 1967, History of Merioneth Vol I, p 126).

Easting: 261010

Northing: 316008

6571 BARMOUTH SOUTH SIGNAL BOX

Assessment of importance: A

Site Status Reference: GII

Small signal box; brick locking room with timber cabin above under a slated pitched roof. Site visited B.A.Malaws, 21 November 1989.

Signal box moved to Glyndyfrdwy on the Llangollen Railway; in use.
B.A.Malaws, 27 July 1999.

Easting: 261231

Northing: 315783

BIBLIOGRAPHY AND PRINCIPAL SOURCES

The following section lists the principal sources used for the report, and contains the bibliographic references for the textual notes above. The sources are divided by harbour, and then by primary or archive sources and secondary sources. Not all known sources are listed, and neither can the lists pretend to be complete in their coverage, though an attempt has been made to list the principal archive collections, even if the individual records within the archive are not listed. The Porthmadog list is based upon one compiled by Gwynfor Pierce Jones is more comprehensive than the others.

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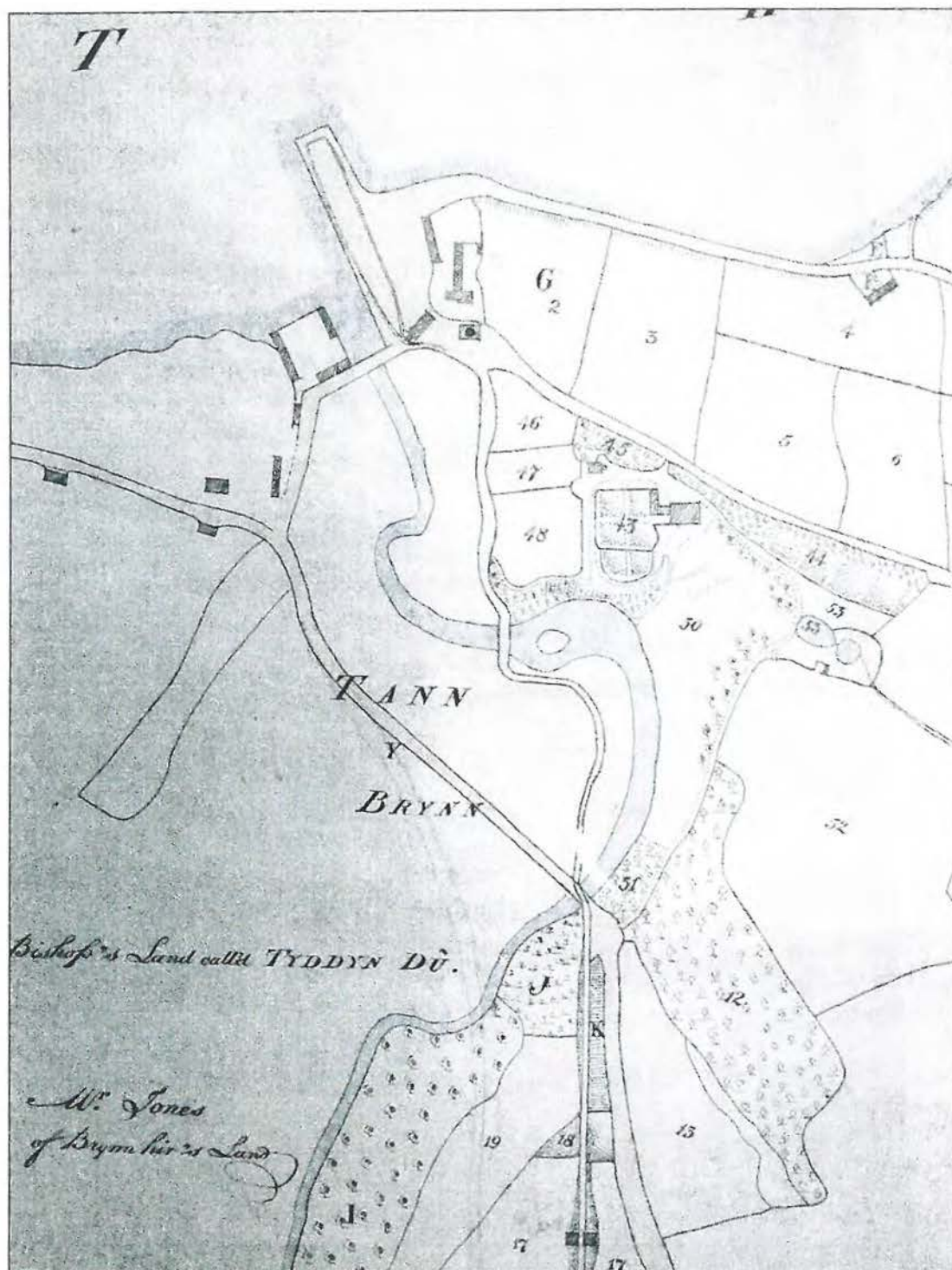
See collection GAS Z/DAS which form the records of the Barmouth Harbour Trust.

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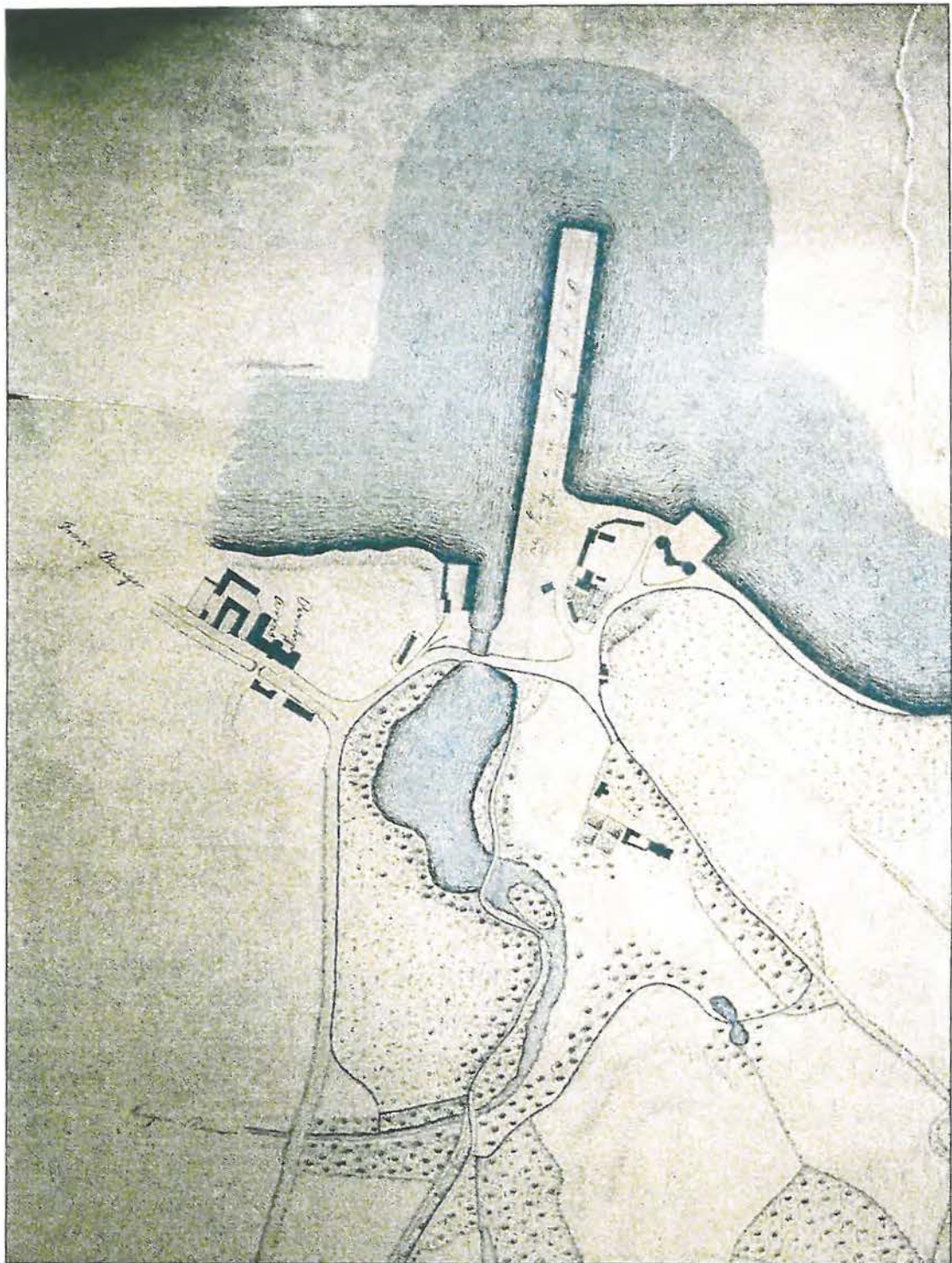
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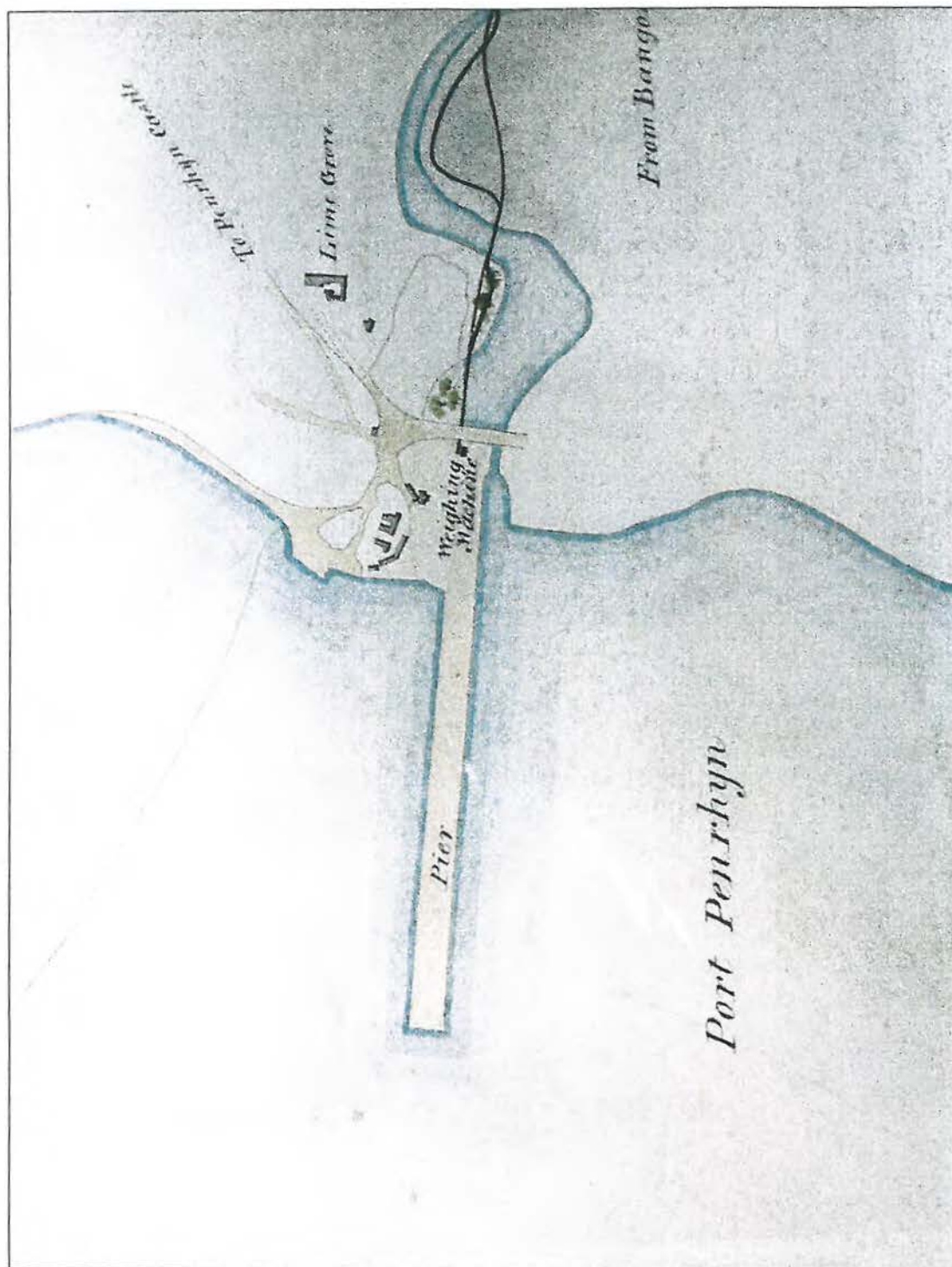
Penrhyn figure 1. The harbour in 1769 (UWB Penrhyn Manuscript. Uncatalogued. No.36)



Penrhyn figure 2. The harbour in 1803 (UWB Penrhyn Manuscript, Uncatalogued. No.40)



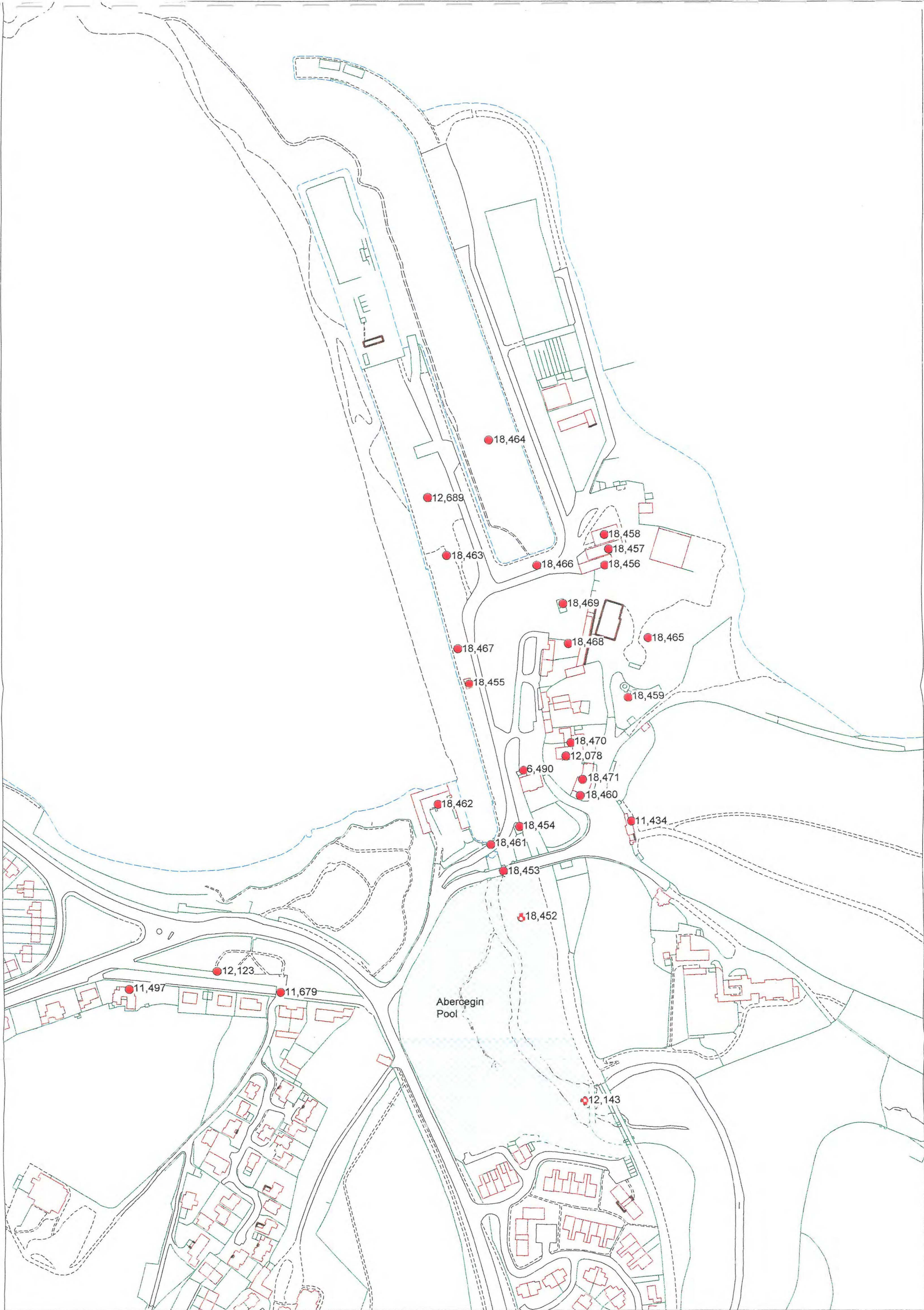
Penrhyn figure 3. The harbour in 1828 (UWB Penrhyn Manuscript, Uncatalogued, No.26)



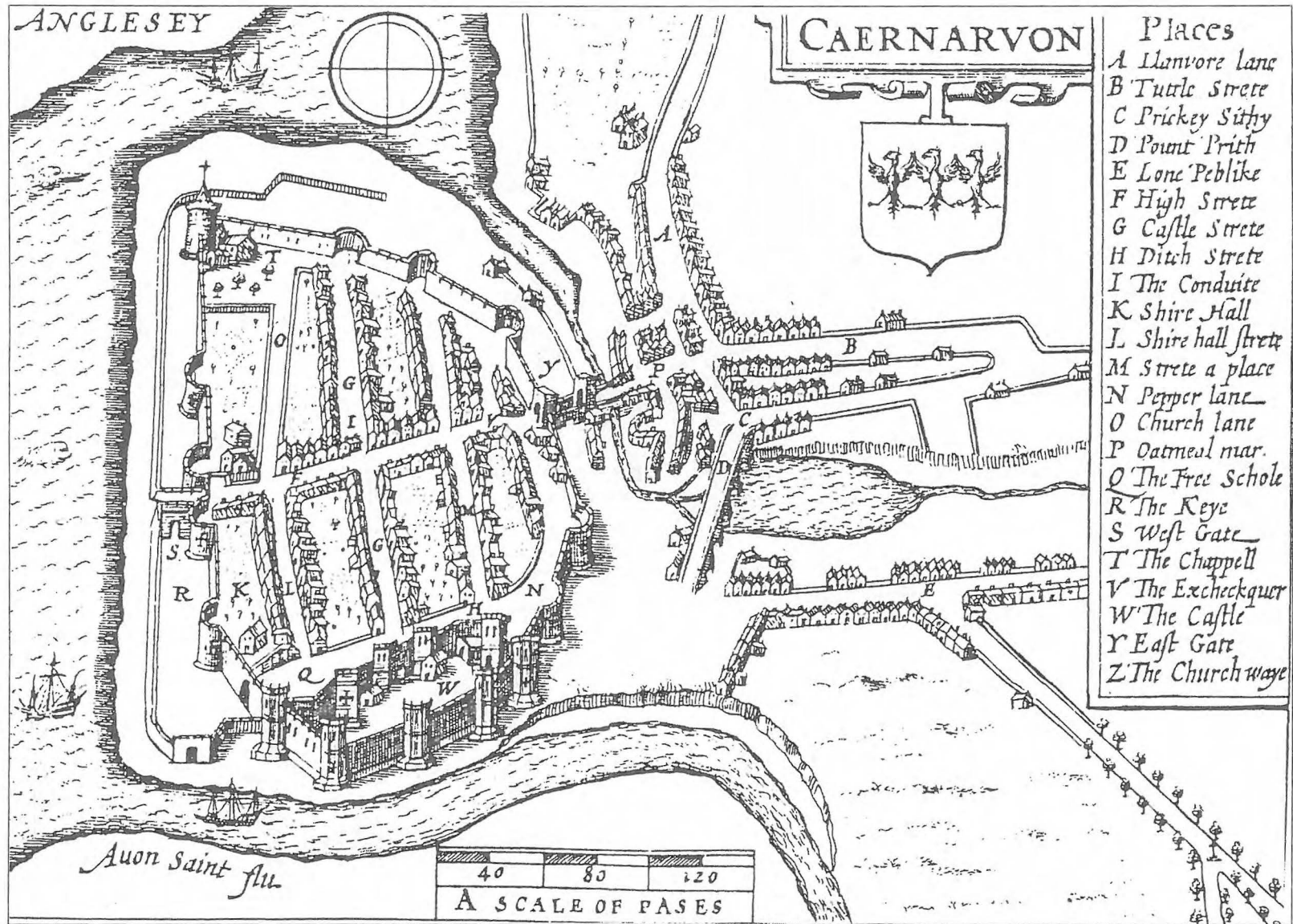
Penrhyn figure 4. The harbour in 1844 (UWB Penrhyn Manuscript. Uncatalogued. No.65)

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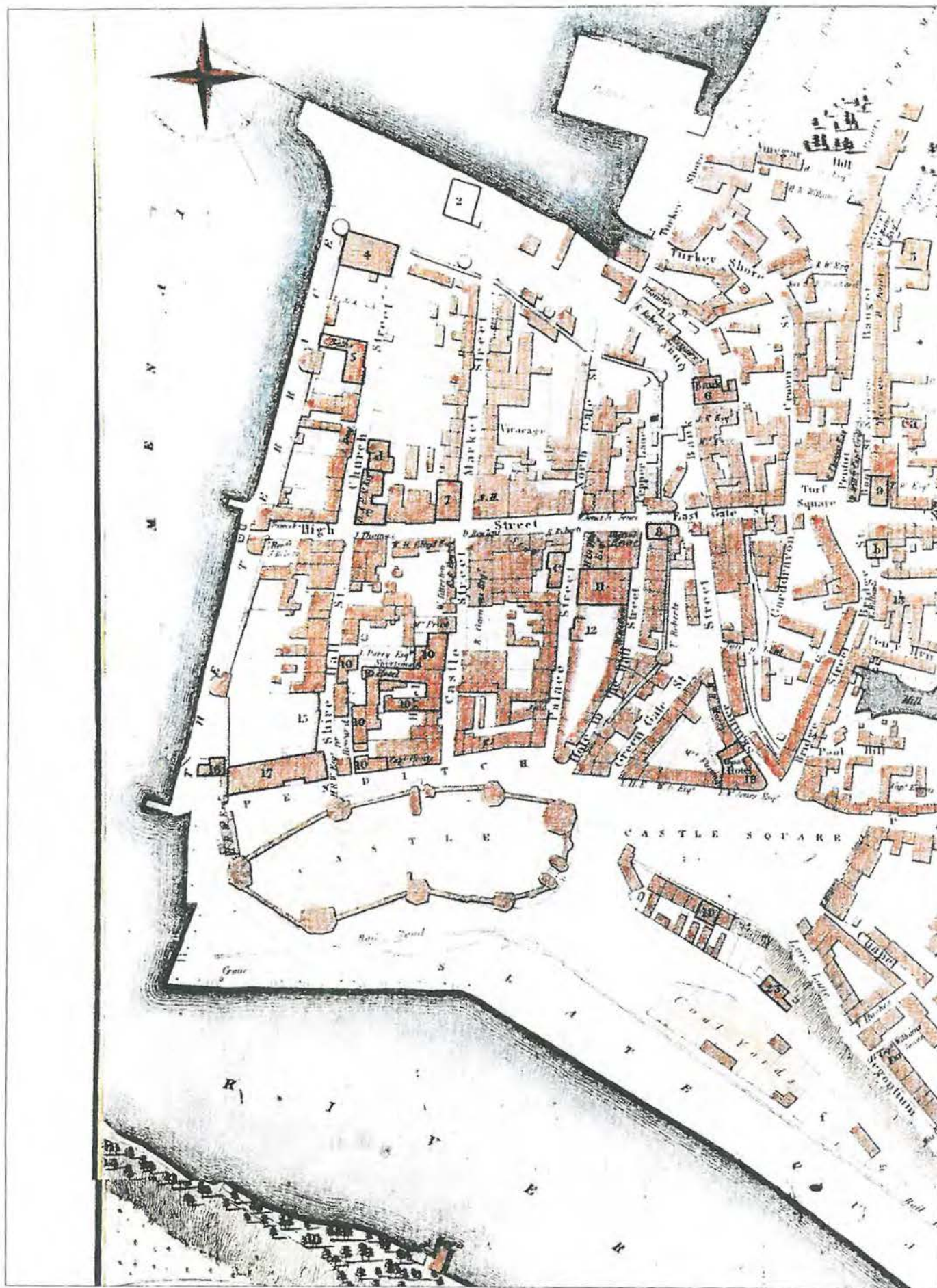
Penrhyn figure 5: The harbour in 1900 (OS Sheets Caernarfon IX.5 and IX.9 Second Edition 1900. Scale 1:2500



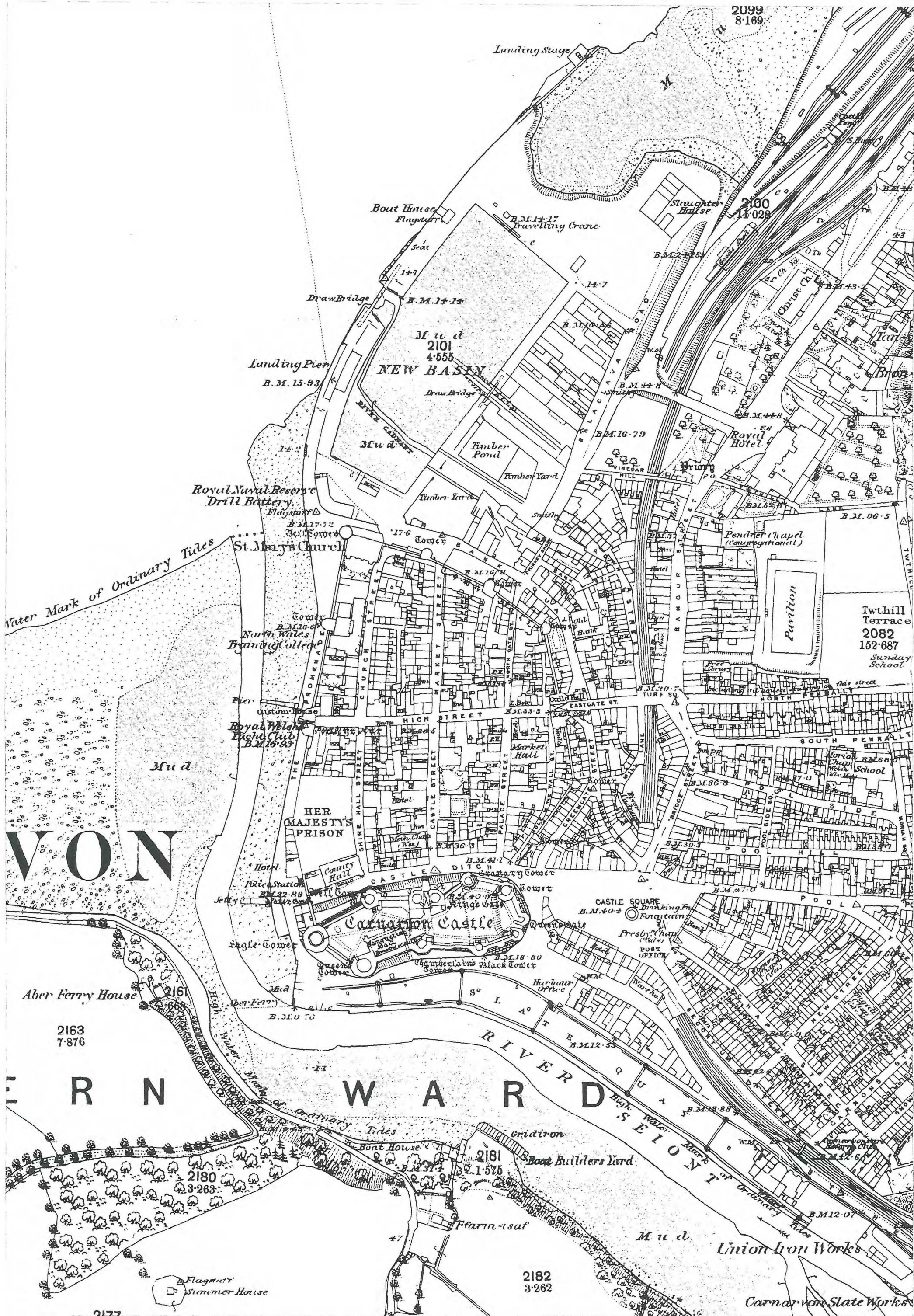
Penrhyn figure 6: Location of archaeological sites. Scale 1:2500



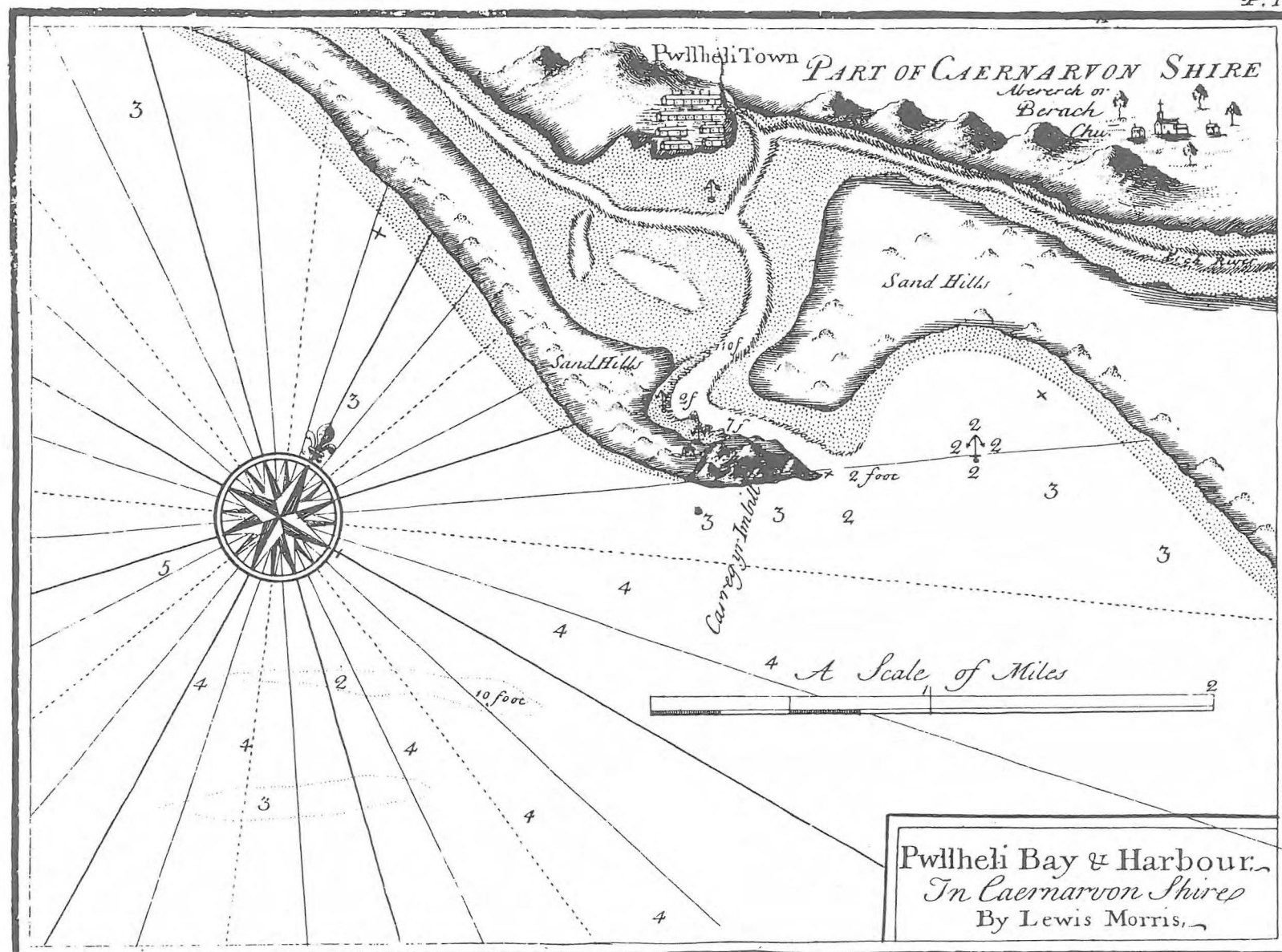
Caernarfon figure 1. John Speed map of 1610



Caernarfon figure 2: John Wood map of Caernarfon 1834



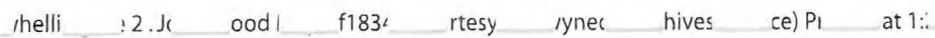
Caernarfon figure 4: Victoria Dock in 1888 (OS Sheet Anglesey 25.04) Scale 1:2500

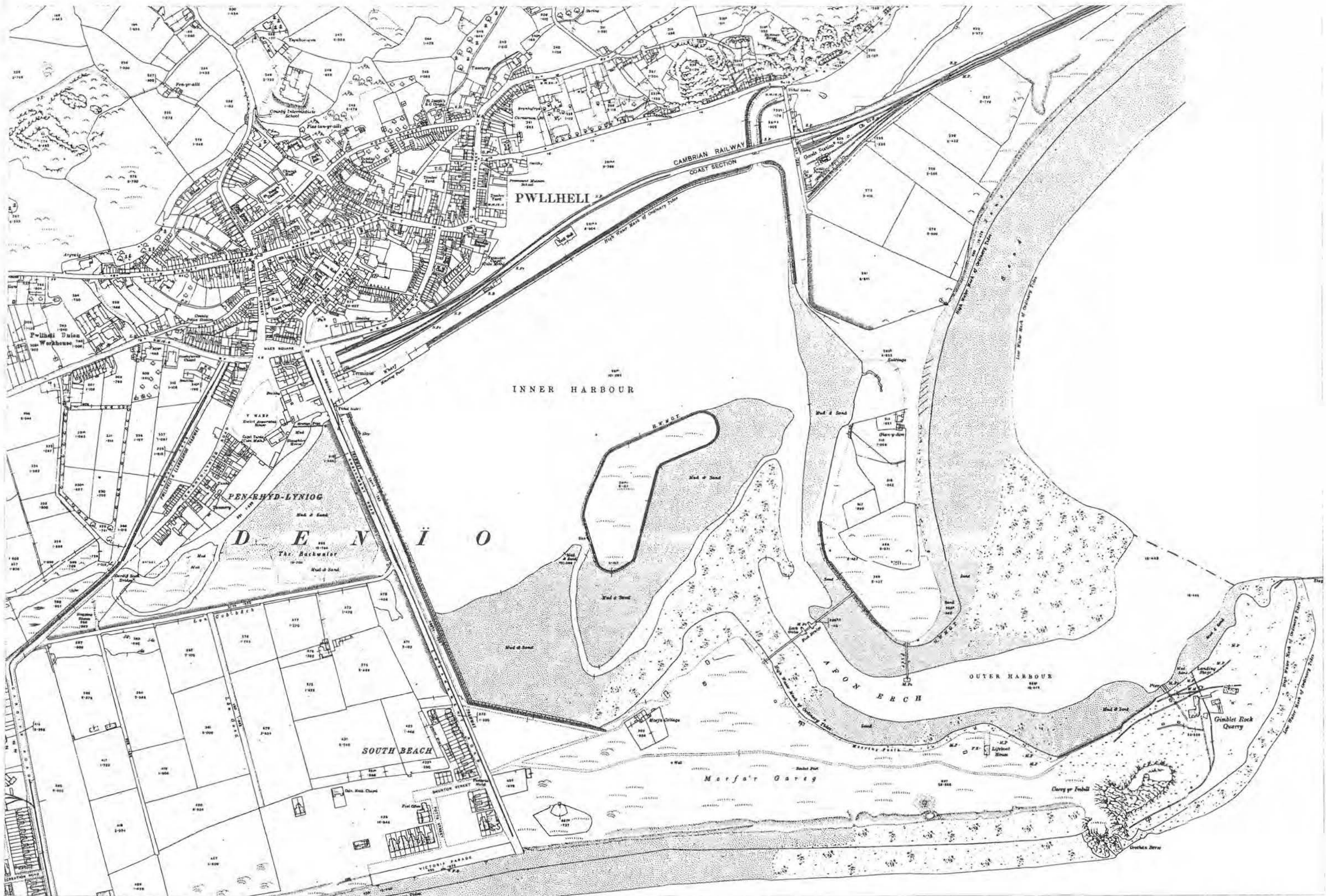


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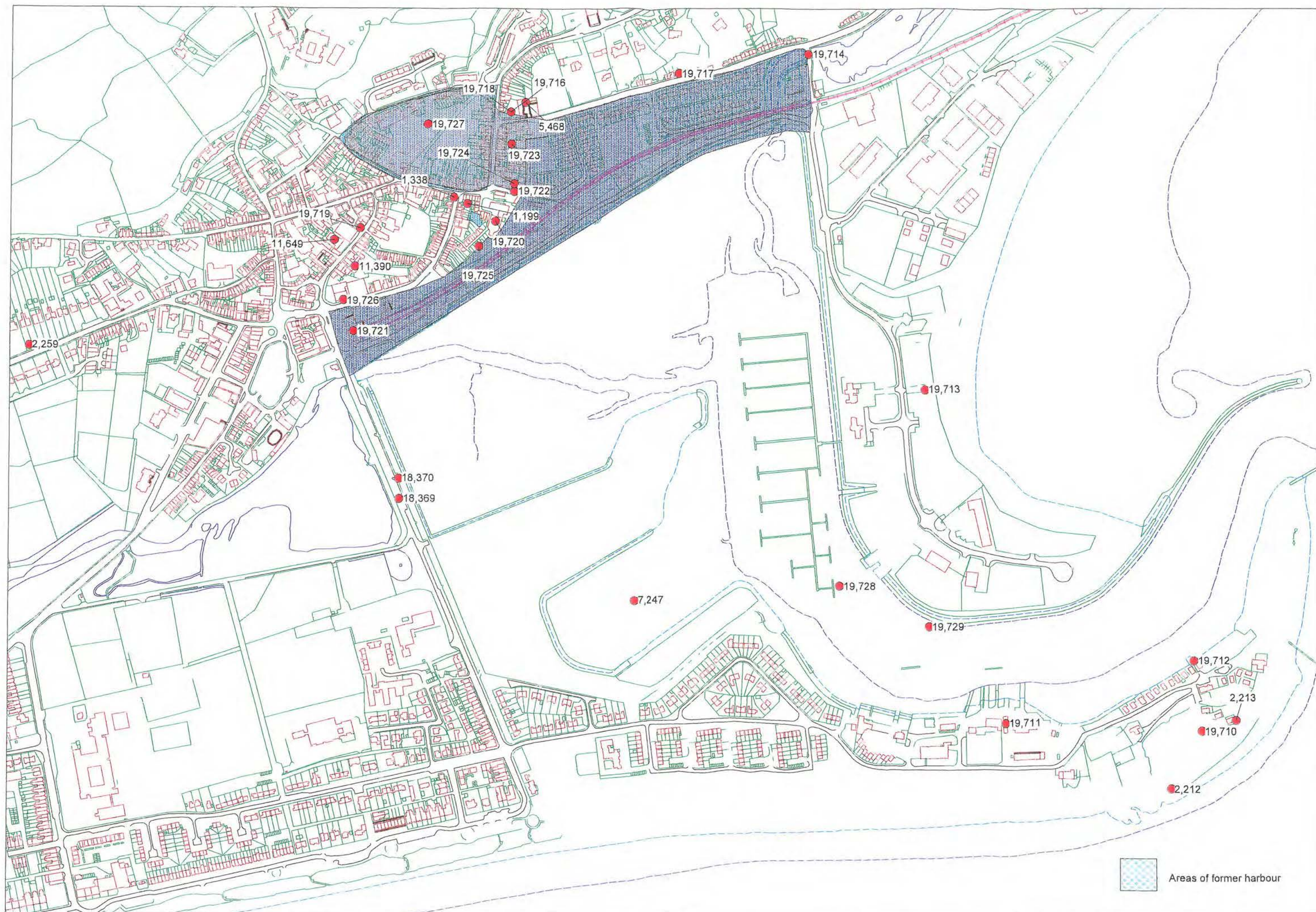
Published according to Act of Parliament Sep^r 29. 1748

Pwllheli figure 1. Lewis Morris Map of 1748

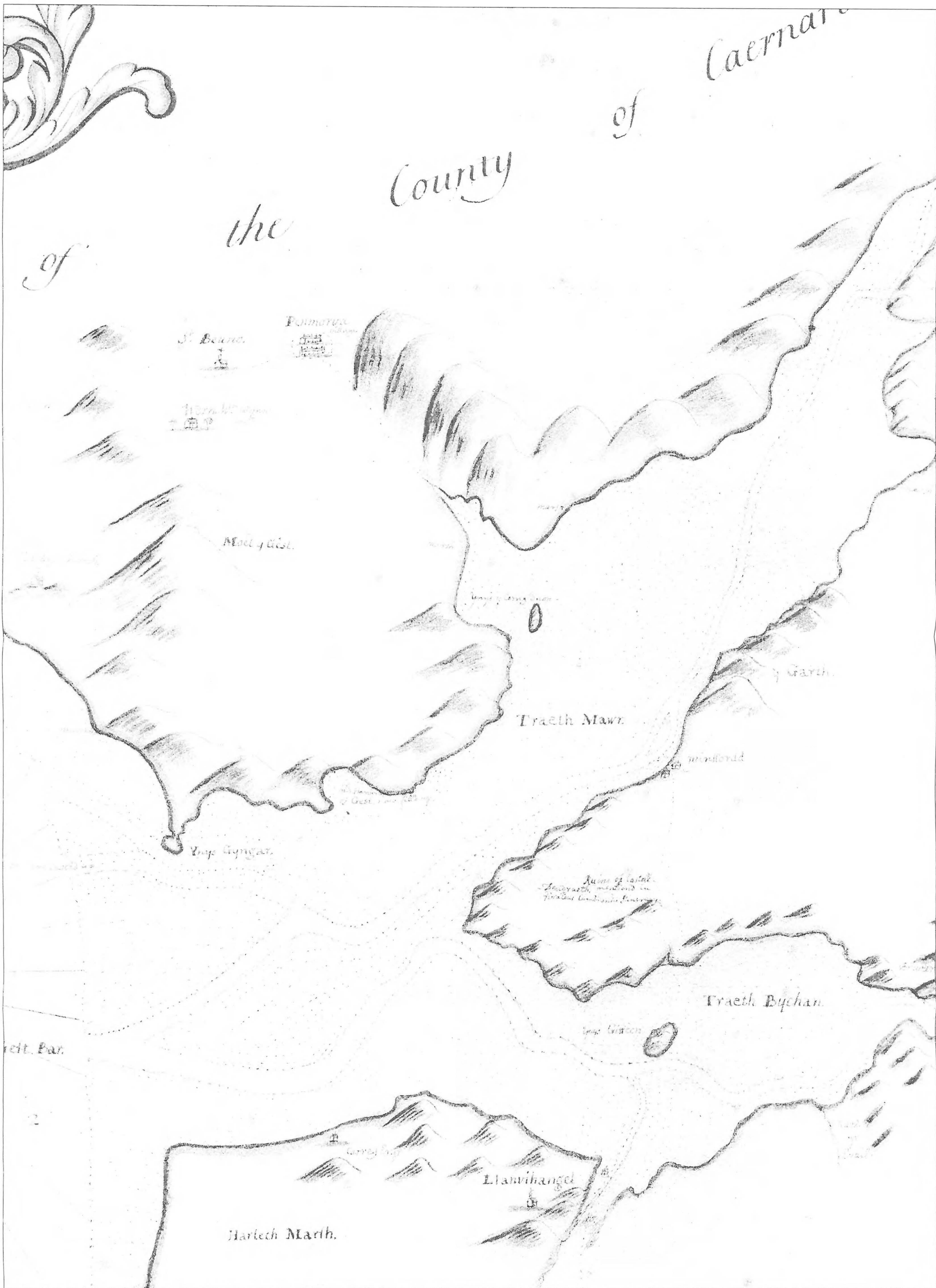




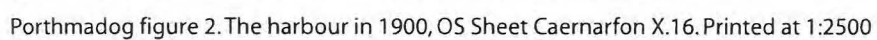
Pwllheli figure 4. The harbour in 1918. OS Sheet XL.8 and XL.12. Printed at a scale of 1:5000

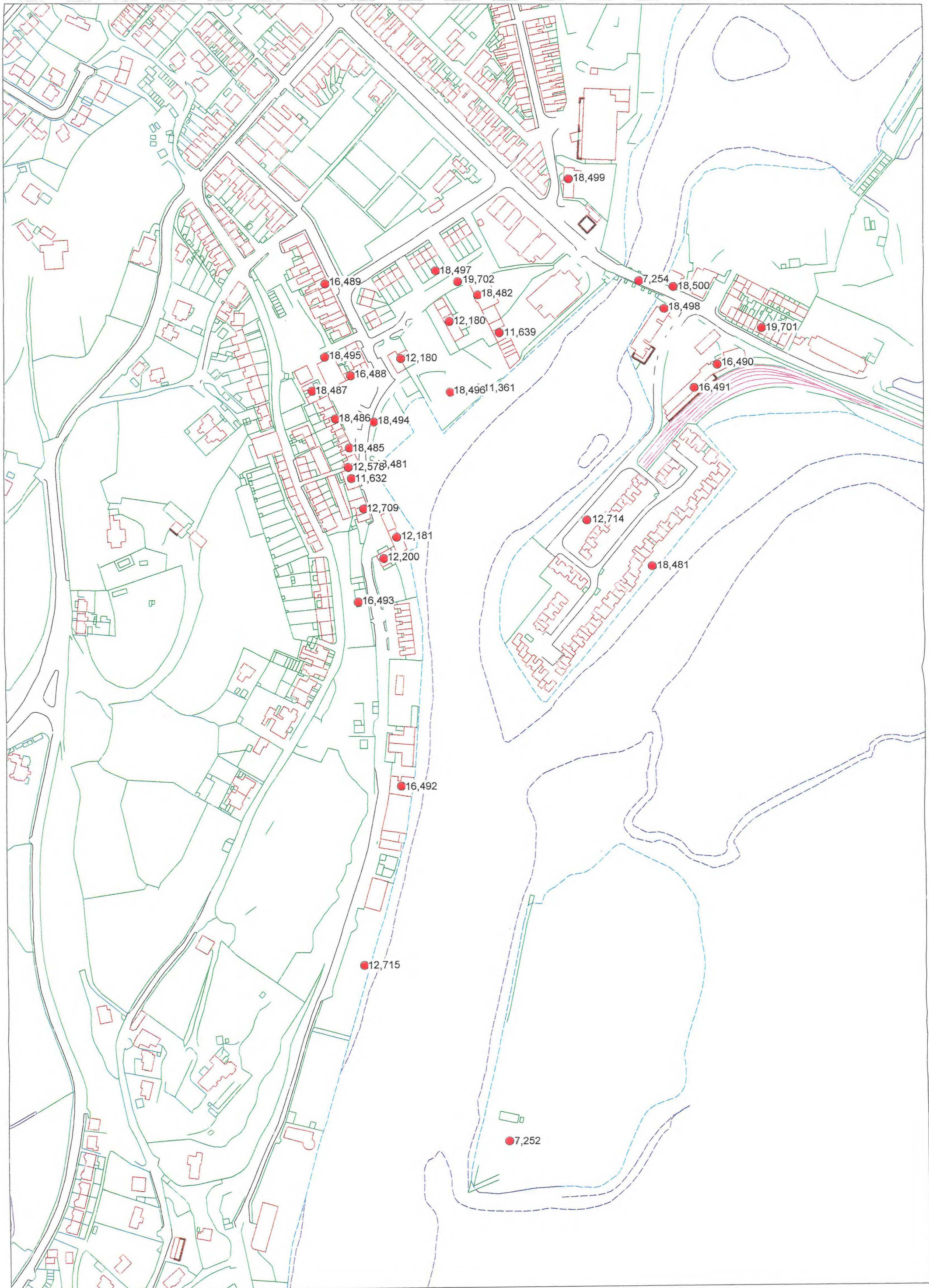


Pwllheli figure 5. Location of archaeological sites. Printed at a scale of 1:5000



Porthmadog figure 1. Lewis Morris Chart of 1736. (Courtesy of Anglesey County Record Office)

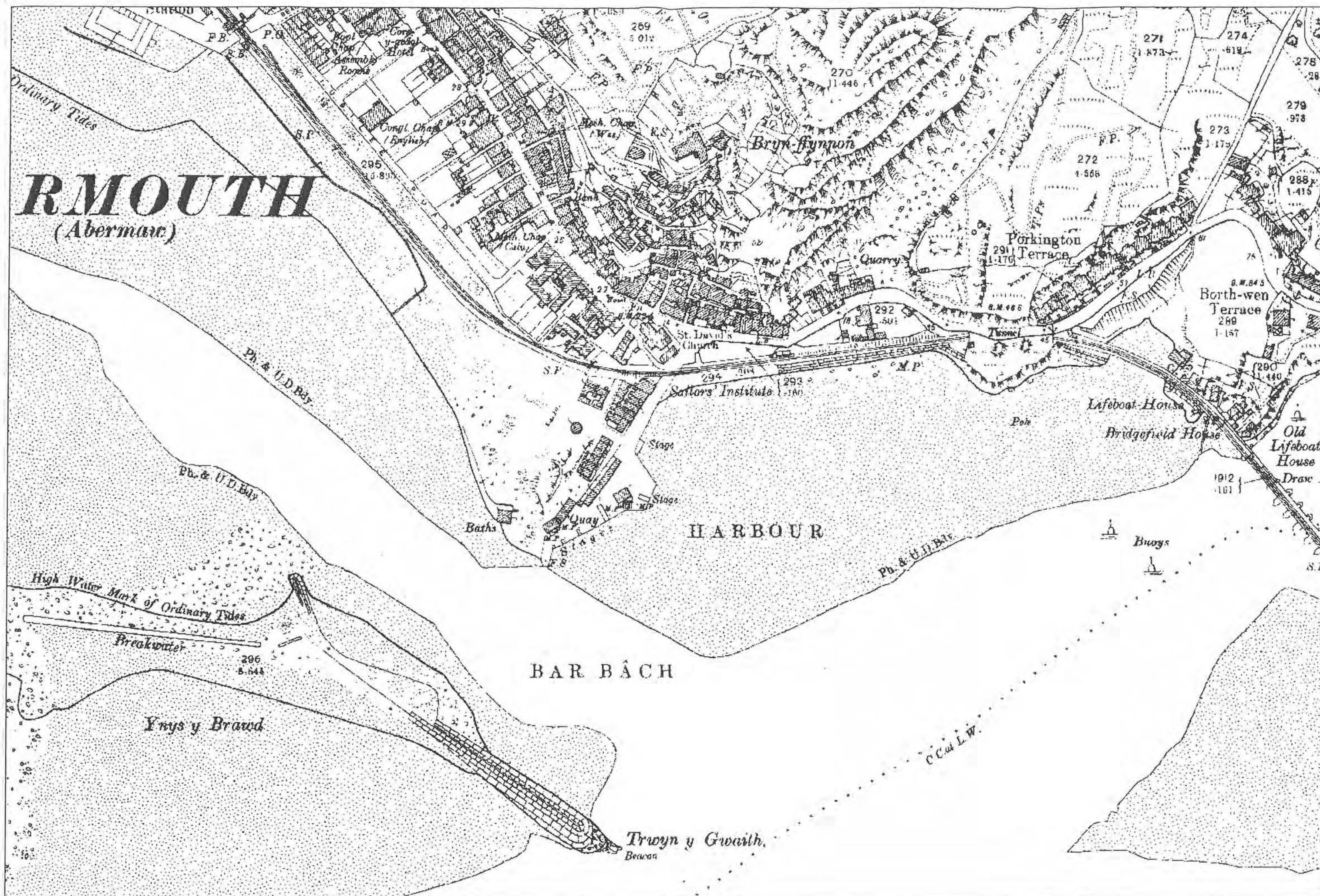




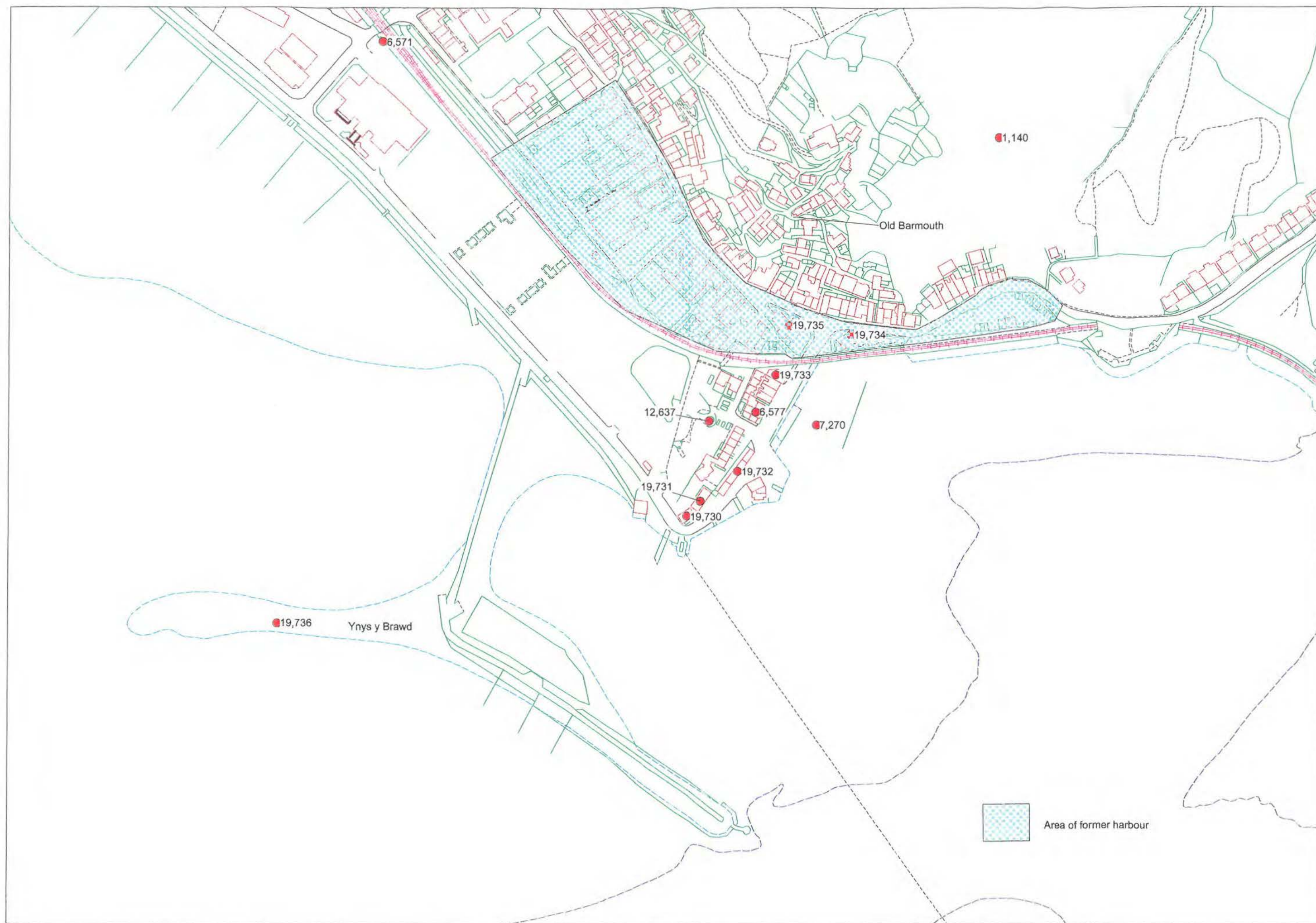
Porthmadog figure 3: Location of archaeological sites. Scale 1:2500



Barmouth figure 2. Tithe map of Llanaber 1840



Barmouth figure 3. The harbour in 1900 (OS Map Caernarfon XXXVI.06 and XXXVI.10. Printed at a scale of 1,2500



Barmouth figure 4. Location of sites (Scale 1:2500).

Ymddiriedolaeth Archaeolegol *Gwynedd* Archaeological Trust
Craig Beuno, Ffordd y Garth, Bangor, Gwynedd. LL57 2RT
Ffon: 01248 352535. Ffacs: 01248 370925
email: gat@heneb.co.uk