
Porthdinllaen Lifeboat Station: **Nefyn, Gwynedd**



Archaeological Assessment & Building Record

GAT Project No. 2104

Report No. 843

January, 2010

Porthdinllaen Lifeboat Station: **Nefyn, Gwynedd**

Report No. 843

Prepared for
Royal Haskoning UK Ltd
January 2010

By
Rob Evans

G2104 Porthdinllaen Lifeboat Station, Gwynedd

ARCHAEOLOGICAL ASSESSMENT

Project No. G2104

Gwynedd Archaeological Trust Report No. 843

CONTENTS

Summary	Page
1. Introduction	3
2. Project brief and specification	3
3. Methods and Techniques	4
4. Archaeological Assessment Results	7
5. Summary of Archaeological Potential	13
6. Archaeological Analysis and Level 2 Photographic Record	13
7. Summary of Recommendations	14
8. Conclusions	14
9. Archive	14
10. References and Other Sources Consulted	15

Appendix 1 Sites Located on the Gwynedd HER within 1km of Porthdinllaen Lifeboat Station

FIGURES

Fig. 1 Location Map

Fig. 2 Location of features referred to in the text. Base map taken from Ordnance Survey 1:10 000 sheet SH 24 SE. Crown Copyright, Licence number AL 100020895.

Fig. 3 A Glynllifon Estate Map not dated but probably early 19th century, showing Porthdinllaen harbour (Gwynedd Archives XD2A/1259). Location of the Lifeboat Station is outlined in red, and the old pier is shown

Fig. 4 Extract from Edern Tithe Map of 1841 showing Porthdinllaen. Location of Lifeboat house outlined in red. Map not to scale.

Fig. 5 25 inch 1st edition Ordnance Survey Map of 1889, Caernarvonshire sheets XXXI.8 and 12. The lifeboat station is shown, but the former pier to the north (Feature 2) is not. Scale 1:5000 @ A4

Fig. 6 25 inch 2nd edition Ordnance Survey Map of 1900, Caernarvonshire sheets XXXI.8 and 12. The lifeboat station is shown, but the former pier to the north (Feature 2) is not. The watchtower, built in 1894 (feature 7) and former pier (feature 8) can be seen. Scale 1:5000 @ A4

Fig. 7 25 inch 3rd edition Ordnance Survey Map of 1918, Caernarvonshire sheets XXXI.8 and 12. The lifeboat station is shown, but the former pier to the north (Feature 2) is not. Nefyn golf course occupies the peninsula by this time. Scale 1:5000 @A4

Fig. 8 Porthdinllaen Lifeboat house from the south showing the newly rebuilt station taken during the naming ceremony of the “M. O. Y. E.” on August 12th 1927.

Fig. 9 Detail from aerial photograph RAF 106G/UK/1642 frame 3079, taken 10th July 1946 showing Porthdinllaen

Fig. 10 Reproduction of engineering drawing detailing proposed alterations and additions to Porthdinllaen Lifeboat Station, published 1924

Fig. 11 Location of plates and direction taken: external elevations

Fig. 12 Location of plates and direction taken: internal elevations

PLATES

External

- Plate 01 – Lifeboat station from the southwest
- Plate 02 – Slipway from the southwest
- Plate 03 – Slipway from the south with breakwater to the rear
- Plate 04 – East facing elevation of lifeboat house
- Plate 05 – The slipway from the northwest
- Plate 06 – The lifeboat station from the north
- Plate 07 – The tool shed from the south
- Plate 08 – The breakwater from the west
- Plate 09 – Detail showing breakwater built around remnants of stub wall (Scale: 2.0m with 0.50m divisions)
- Plate 10 - Remnant stub wall of early nineteenth century pier
- Plate 11 - Southwest oriented angle in breakwater, built 1918-1927
- Plate 12 – Breakwater and lifeboat house from the northeast

Internal

- Plate 13 – Interior of lifeboat station from northeast, showing lifeboat *Helly Rampton*
- Plate 14 – Hydraulic winding gear and generator
- Plate 15 – Detail showing roof trusses
- Plate 16 – Winding gear, generator and 1000 gallon fuel tank; view from southwest
- Plate 17 – View showing lifeboat house from northwest
- Plate 18 – Internal east gable
- Plate 19 – Detail of A frame truss; view from northeast
- Plate 20 – Inshore inflatable housed in 1925 side addition to lifeboat house
- Plate 21 – Detail of roof structure from the east
- Plate 22 – Former RNLI boathouse dating from 1875 (ranging pole: 2.0m)

PORTHDINLLAEN LIFEBOAT STATION, ANGLESEY (G2104)

ARCHAEOLOGICAL ASSESSMENT

SUMMARY

An archaeological assessment was carried out on the RNLI lifeboat station at Porthdinllaen, Gwynedd, in advance of the demolition of the current structures and the construction of a larger boathouse. The current structure consists of a rectangular boat house with a cross wing, a slipway and an associated breakwater to the north. The lifeboat station was established in 1864, although the building was substantially re-developed in 1925 and 1926, which forms the basis for the current structure. The breakwater was built between 1918 and 1927, incorporating the remains of an earlier pier which is thought to be early 19th century in date. Substantial alterations were subsequently carried out on the station, the most recent in 1993. The lifeboat station is considered to be an important part of the cultural heritage of the area, and as such, detailed recording before demolition has been carried out. A watching brief is recommended during the ground works for the new lifeboat station, since the footprint of the building is larger than is currently the case, and archaeological deposits may be disturbed.

1 INTRODUCTION

Gwynedd Archaeological Trust has been asked by Haskoning UK Ltd. to carry out an archaeological desk based assessment and photographic survey of the Royal National Lifeboat Institution (RNLI) lifeboat station at Porth Dinllaen, Nefyn (NGR SH 2278 4191), in advance of building work at the station. This is required as a result of the need to increase the size of lifeboat houses and slipways to accommodate and allow the operation of modern lifeboats with increased speeds in order to improve search and rescue operations.

1.1 Acknowledgements

Randolph Velterop at Royal Haskoning has been helpful throughout the project. Colin Rattray at the RNLI archives, Haywards Heath is thanked for supplying the historic plans relating to alterations at the lifeboat station. Jeff Morris, archivist of the Lifeboat Enthusiasts' Society is thanked for providing helpful information regarding the lifeboat house and its history. The help and advice of Ashley Batten of GAPS is greatly appreciated. The staff at the lifeboat were very helpful during the site visit.

2 DESIGN BRIEF AND SPECIFICATION

2.1 Project Background

Gwynedd Archaeological Trust has been asked by Haskoning UK Ltd. to carry out an archaeological desk based assessment at the Royal National Lifeboat Institution (RNLI) lifeboat station of Porthdinllaen, Gwynedd. This report contains the results of the assessment and follows the recommendations of Gwynedd Archaeological Planning Services (GAPS), contained within the Environmental Impact Assessment (EIA) Scoping Report (James 2009, 5) which requested a pre-determination archaeological assessment in accordance with national planning guidance (*Planning Policy Guidance Wales 2002*) and Welsh Office Circular 60/96 (*Planning and the Historic Environment: Archaeology*). A photographic survey was undertaken of the lifeboat as part of the assessment.

This report conforms to the guidelines specified in *Standard and Guidance for Archaeological Desk-based Assessment* (Institute of Field Archaeologists, 1994, rev. 2001).

2.2 Desk-based Assessments

A desk-based assessment is defined as 'a programme of assessment of the known or potential archaeological resource within a specified area or site on land, inter-tidal zone or underwater. It consists of a collation of existing written, graphic, photographic and electronic information in order to identify the likely character, extent, quality and worth of the known or potential archaeological resource in a local, regional, national or

international context as appropriate'. (*Standard and Guidance for Archaeological Desk-based Assessment*, IFA 2001, 2).

The aims of the assessment as given in the specification are:

- to identify and record the cultural heritage within the defined study area;
- to evaluate the importance of what has been identified;
- to recommend ways in which impact upon the cultural heritage can be avoided or minimised.

To comply fully with the aims expressed above it can be necessary to undertake a programme of Field Evaluation following the Desktop study and Field Visit. This is because some sites cannot be assessed by desktop or field visit alone, and additional fieldwork is therefore required. This typically takes the form of geophysical survey or trial excavation, although measured survey is also a possible option. A full programme of assessment and evaluation may therefore consist of:

- Desktop study
- Field walkover
- Initial report
- Field evaluation
- Draft report
- Final report

The phase of the project concerns the first three phases only, and recommendations will be made for any field evaluation required. GAPS however remains responsible for advising the Local Authority on the suitability of the work undertaken.

3 METHODS AND TECHNIQUES

3.1 Desk top study

The desktop study comprised the consultation of maps, documents, computer records, written records and reference works, which form part of the Historic Environment Record (HER), located at Gwynedd Archaeological Trust (GAT), Bangor. The archives held by the Anglesey Record Office, Llangefni and Bangor University were also consulted. Information about listed buildings was consulted by means of the CARN (Core Archaeological Index), which is the online index of the Royal Commission on Ancient and Historic Monuments, Wales. Relevant aerial photographs from the collection at RCAHM, Wales were examined

Sites, buildings and find spots listed in the GAT HER were identified within 500m of the study area were identified in order to give background information relevant to understanding the area, and these are listed in the appendix.

3.2 Field Search

The field search was undertaken on the 7th January 2010, when the area of the proposed development was examined. Notes were taken, sketches and measurements were taken of sites of potential archaeological interest and a photographic record was made. Conditions were reasonable for a site visit.

3.3 Photographic Survey

A level 2 record (as defined in *Understanding Historic Buildings: A guide to good recording practice*, English Heritage 2006) was undertaken, and incorporated into the field visit (3.2 above).

A Level 2 Record is a descriptive record. Both the exterior and the interior were viewed, described and photographed. The record present conclusions regarding the building's development and use.

Existing plans of the Lifeboat stations were obtained from RNLI, and these are used to indicate significant features and locations of photographs.

Site photography included

- General views of the exterior in its wider context
- The buildings external appearance
- External detail
- Internal detail
- Machinery detail
- Dates or inscriptions

3.4 Report

The available information was synthesised to give a summary of the archaeological and historic background and of the assessment and recommendations, as set out below. The separate features, their evaluation and recommendations are listed separately, and a summary of the overall assessment of the area is given at the end.

The criteria used for assessing the value of features was based upon those used by the Secretary of State for Wales when considering sites for protection as scheduled ancient monuments, as set out in the Welsh Office circular 60/96. The definitions of categories used for impact, field evaluation and mitigation are set out in Appendix II, and the definitions of Categories of Importance are given below.

3.4.1 Categories of importance

The following categories were used to define the importance of the archaeological resource.

Category A - Sites of National Importance.

Scheduled Ancient Monuments, Listed Buildings of grade II* and above, as well as those that would meet the requirements for scheduling (ancient monuments) or listing (buildings) or both.

Sites that are scheduled or listed have legal protection, and it is recommended that all Category A sites remain preserved and protected *in situ*.

Category B - Sites of regional or county importance.

Grade II listed buildings and sites which would not fulfil the criteria for scheduling or listing, but which are nevertheless of particular importance within the region.

Preservation *in situ* is the preferred option for Category B sites, but if damage or destruction cannot be avoided, appropriate detailed recording might be an acceptable alternative.

Category C - Sites of district or local importance.

Sites which are not of sufficient importance to justify a recommendation for preservation if threatened.

Category C sites nevertheless merit adequate recording in advance of damage or destruction.

Category D - Minor and damaged sites.

Sites that are of minor importance or are so badly damaged that too little remains to justify their inclusion in a higher category.

For Category D sites, rapid recording, either in advance of or during destruction, should be sufficient.

Category E - Sites needing further investigation.

Sites, the importance of which is as yet undetermined and which will require further work before they can be allocated to categories A - D are temporarily placed in this category, with specific recommendations for further evaluation. By the end of the assessment there should usually be no sites remaining in this category. In this case several areas of unknown potential have been allocated to this category. These require environmental sampling which should be carried out during the pipeline works.

4 ARCHAEOLOGICAL ASSESSMENT RESULTS

4.1 Topographic description

Porthdinllaen is located close to the town of Nefyn (centred on NGR SH 277 419), on a relatively level plateau that has the sea to the west and the steep slopes of Mynydd Nefyn and Garn Boduan to the east (Fig. 1). At the coast edge the long crescent bays of Nefyn and Dinllaen are each ended by promontories of hard rock – Penrhyn Nefyn and Trwyn Porth Dinllaen. The promontories protected the bays from the worst of the prevailing winds, and harbours of regional significance with localised shipbuilding industries developed in the lee of each, though neither developed any major infra-structure. This trading capability of Nefyn was influential in its establishment and growth, though communications with the sea were hampered by high cliffs of glacial moraine, down which difficult paths had to be negotiated. Where a natural break in the cliff occurred it was often termed ‘bwlch’ (a pass or a gap) such as Bwlch Glas or Bwlch y Bridyn which lie between Penrhyn Nefyn and Porth Dinllaen. Development occurred at three specific places on the coast edge, namely Porth Nefyn tucked into the curve of the bay on the east side of Penrhyn Nefyn; Porth Dinllaen similarly located east of Trwyn Dinllaen; and at Bwlch y Bridyn.

4.2 Archaeological and historical background

4.2.1. Earlier Prehistoric

The evidence for prehistoric settlement within the lower lying area around Porthdinllaen is quite limited, although upland areas, particularly in the region of Mynydd Nefyn, show a greater concentration of evidence. The earliest activity at Porthdinllaen is associated with a scatter of prehistoric flints (recorded as possibly Neolithic) noted in 1923 as found both ‘inside and outside the camp’ (Hemp 1923, 148). In the area to the south-east of Morfa Nefyn, near Ty-mawr a possible round barrow (SH 29383991) is located (Hopewell 2003, 3). Three or four Bronze Age cremation urn burials (SH 29273992; PRN 3,640) are recorded as having been found at Pen yr Orsedd in 1691 (Lloyd nd.). The name Pen yr Orsedd is preserved by a house on the road to Morfa Nefyn and a former owner recorded that local tradition maintains that it was the site of an old cemetery.

4.2.2 Late Prehistoric / Romano-British

It incorporates the same root name as the headland, which also gave its name to the medieval commote or administrative district, however no hut circles or internal features can be identified. The headland of Porthdinllaen forms an Iron Age promontory fort, known as Dinas Dinllaen (SH 2750 4160; PRN 421), where banks and ditches protect an area of about 14 acres. The western half of the southern defences are well preserved for a length of 39.6m, consisting of a flat bottomed ditch 11m wide and survive to a height of 1.5m (RCAHMW 1964, 34). The ramparts of the fort have been badly mutilated by the golf course that is now located upon it. The town of Nefyn lies in the shadow of the extensive late prehistoric hillfort of Garn Boduan to the south (SH 3100 3930; PRN 446). A late prehistoric round house settlement has been identified at Cariog Ganol (NGR SH 32614018; PRN 1,337) and a round house at Tyddyn-Blondeg (SH 32224084; PRN 4,398). A circular enclosure has also been identified at Cerniog Bach (SH 32453982; PRN 3,441).

4.2.3 Medieval

The origins of the borough of Nefyn are obscure. It was the commotal centre of Dinllaen, and as such the *llys* (court) and *maerdref* (home farm) of the Prince’s of Gwynedd would have been established there. Post-conquest documents describe a complex of buildings (Pierce 1957, 37), implying a settlement of some importance. The Extent of 1284 records a diminished *maerdref* of five households, and a community of fifty free households described as being of the borough of Nefyn. The men of the *maerdref* were required to ‘keep clean the precincts of the manor house, to bring fuel to the hall from the Prince’s woods and turbaries, and there to attend to the fires’, a reminder of the unfree origins of the town (Pierce 1957, 39). A grant by Maredudd ap Cynan dated 1195-1199 is witnessed by two burgesses of Nefyn, Robert and Stephen (Pryce 2005, 341). The evidence would suggest that the commotal centre had been reorganised as a *borough* before the end of the 12th century. Parallels have been drawn with other contemporary Welsh towns such as Llanfaes and Pwllheli, and post-conquest documents make it clear that markets were being held there and that ships were calling in to the harbour to trade (Pierce 1957, 40).

A survey of the town in 1293 recorded 93 taxpayers including an innkeeper, a goldsmith and Madoc the priest (Pierce 1931, 146). The manor included a garden, meadow and vaccaries along with 200 acres of arable land within the demesne (*ibid.* 1933, 256). This was a sizeable area for the time, suggesting a considerable and profitable surplus. The *llys* was also of some size and complexity as shown by records of repairs in 1284 and 1306-7, including a 'great barn', presumably for storing grain from taxes, a small hall, with its chamber and private chamber next to the king's chamber and a gallery of the solar. Mention is also made of the wooden shingles of the roof of the solar, of straw for thatching the solar and of the cost of re-erecting a fallen wall of the hall (*ibid.* 1957, 150).

The town's importance as a centre was clearly recognised by Edward I when he organised a grand tournament there in 1284 to celebrate his victory over Llywelyn ap Gruffydd in 1282 (Pennant 1783, 212). He ordered new ovens to be built to entertain the number of guests for this occasion. The location of this tournament is not known but was identified by Lewis (1833) to be at a circular earthwork by the Edern road out of Nefyn (PRN 6628).

The town was never fortified and it does not appear to have been reorganised by Edward I in a regular manner to resemble the new fortified towns of Caernarfon and Conwy. The manorial fields lay to the south and south-west of the town, between the cliffs and 'an outer boundary extending roughly from Cae Rhyg to Penymaes, and skirting the lands of Bodtacho Ddu, which at that time was a separate rural district outside the limits of Nefyn' (Jones Pierce 1957, 39).

4.2.4 Post-Medieval

The town fields of Nefyn were made up of the characteristically long curving strips, and these were often to stay in separate ownership up to the 19th century, and many are still recognisable in the landscape today (the strips are clearly marked on a number of the 18th and 19th century estate maps including Parry 1775; Nanhoron 1778; Glynlifon 1790 and 1815 and the Parish Tithe map of 1841. These records provide a rare example of the medieval field system surviving into modern times, and this survival surely explains Hyde-Hall's description of them as 'ragged lines of earth which by the courtesy of the place pass for fences' (Hyde-Hall 1811, 262). Further west, Porthdinllaen itself appears to have been an open field, and the fields to the south have the regular rectangular field pattern indicative of 18th and 19th century enclosure. These lie outside the boundaries of the old borough of Nefyn and suggest different arrangements of land tenure.

4.2.5 Early-Modern/Modern

Nefyn had a flourishing herring fishing and boat building industry in the late 18th and 19th centuries (Hyde-Hall 1811, 261), centred at both at Penryn Nefyn and at Porth Dinllaen. These were some of the smaller ship building centres of Gwynedd, but locally significant, and the last ship was built in 1880 (Eames 1977, 170). Small concentrations of housing and localised industry were built at the ends of each of the roads leading to the beach, in particular at Porth Nefyn, Bwlch y Bridyn and Porth Dinllaen. In the early 19th century a watch tower was built upon the motte in Nefyn, probably in connection with the herring fishery (RCAHMS 1964, 84).

The settlement at Porthdinllaen consists of a small settlement within the natural harbour on the east side of the promontory. The village at Porthdinllaen is known to be in existence by the 18th century, and developed along with Nefyn as a significant regional centre of fishing and shipbuilding. Between 1770 and 1890 58 vessels are recorded as having been built at Porthdinllaen (Eames 1977, 169). It underwent a certain amount of development in the early years of the 19th century under the guidance of William Madocks in anticipation of it being chosen as the terminus for the Irish trade, and in 1807 a new pier and inn were built. The former customs house and boat sheds help to give the area its maritime character. The two main buildings are the 19th century Ty Coch Inn, and 50m south of it the White Hall, a Grade II listed building (SH 31003930; PRN 4221). The hall forms part of a 'U' shaped complex of buildings with slate close-eaved roofs and stone and rendered stacks. The White Hall was an inn in 1900 (OS 1:2500 2nd ed.). The isolated coastal nature of this fishing community is enhanced by the fact that it can only be accessed by a narrow trackway from the turnpike road across the golf course down onto the seashore. A possible feature associated with the large fishing and boatbuilding industry shipbuilding once located here consists of a straight, double linear feature over 100m long and lying parallel to the shore at around the low water mark in the bay (SH 2774 4122; PRN 16610), and it may have been a slipway. Two lime kilns, of probable 18th or early 19th century date, are noted on the Porthdinllaen foreshore on the tithe map of 1841, although these were not noted on the ground.

In the early 19th century the borough became the focus for a proposed scheme to provide a rail and ferry route to connect London with Ireland, via Porth Dinllaen, through mid-Wales. Such a mail route had already been in use via the road and there had been improvements to turnpikes and the harbour from the 1770s (Davies 1977, 173). To this end a new turnpike road was built from Porthmadog to Porth Dinllaen, providing a focus for the settlement of Morfa Nefyn to develop at the point where the new turnpike crossed the early road from Nefyn to Aberdaron. Figures were produced which attempted to show that the route through Porth Dinllaen would be faster, taking the combined time of rail and sea journeys into account (Dodd 1933, 115), and several plans were produced for the development of the harbour (Elis-Williams 1984). However, the north coast route eventually won, and when the rail connection to Holyhead was completed in 1850 following the opening of the Britannia Bridge at Bangor, Porth Dinllaen lost all hope of becoming the principal port for Dublin.

The 1841 tithe map of Edern (Fig. 4) shows a pier or similar structure where the breakwater (Feature 2) is located now. This is probably the ‘intended pier’ noted on an undated plan belonging to the Glynllifon estate (Gwynedd Archives XD2A/1259, Fig. 3), which was probably built in the early years of the 19th century by the Porthdinllaen harbour company. A stub wall, about 3m high, extending for about 7m of this pier survives, incorporated into the 20th century breakwater. An extract covering the area of Porthdinllaen from the schedule associated with the tithe map of the parish of Edern, dated to 1841, is given below. The lifeboat station and slipway are located on fields 111 and 119 which were waste land and therefore no tithe was payable. At this time all the land was the property of the Griffith Wynnes of Cefnamwlch, who leased the land for the construction of the lifeboat house and slipway.

Landowner	Occupier	Plan No.	Name and Description of Land and Premises	State of Cultivation	Quantities in statute measures A R P
			<i>Porthdinllaen Farm</i>		
Charles Wynne Griffith Wynne Esq	Margery Williams	106	Tenabergeirch	Arable	19 1 24
		108	Cas cosyn	-	21 2 6
		109	Penrhyn bach	Pasture	9 1 14
		109a	Rough land in Penrhyn bach	“	1 2 21
		110	Gallt y mor	“	21 1 38
		120	Cae pen'rallt	Arable	9 3 1
		121	Cae pant y fuchas		5 - 39
		122	Cae pengul		7 2 27
		123	Cae lon fawr		18 1 33
	Griffith Hughes	180	House		2
		119	Waste		3 2 -
		118	“		1 3 -
		182	Lime Kiln		2
	William Foulk	117	Henblas		20
	Margery Williams	190	Cae lon las	Arable	4 2 30
		191	Cae rhos isa	“	15 - 38
		193	Bryn marchog	Arable	17 2 23
		194	Bryn y Fran		8 - 1
		111	Waste		21 2 -
	Reverend John Parry Jones Parry	116	Waste		2 - -
		115	House and Waste		- - 20
		114	“		- - 20
		113	“		- - 20
		112	“		2 2 20
	Margery Williams	175	House, Garden, yard etc.		7 - 22

		176	Cae'r Odyn		16 1 12
		177	Cae'r gwynt		8 1 24
		178	Cae rhos ucha		24 1 35
		179	Cae pant'r erbun		8 - 36
		181	Cae newydd		10 1 -
			<i>Impalment</i>		
	John Thomas and Dorothy Thomas	183a	House and garden		- - 8
		184	Cae nesa i'r ty		1 2 4
		185	Cae groes ffordd		- 2 10
		186	Gors nessa	Pasture	1 1 16
		187	Gors bella		- 3 13
		183a	House and quillet {Anne Williams}		- 1 -
			<i>Lon las fawr</i>		
	Robert Jones	188	Two cottages and garden	Arable	- - 13
		189	Field		2 1 2

The first lifeboat house was built within the bay beyond the village of Porthdinllaen in 1864 at a cost of £140, and the slipway was lengthened in 1876 (Fig. 5). A new lifeboat station was built at a cost of £1200 in 1888, and a special 15 ft boarding boat was built for the station (Morris, *pers. comm.*). In 1894 it was decided to erect a watch house on the higher ground of Porthdinllaen itself (Feature 7; SH 2745 4138) to give advance warning of ships in trouble at sea and a lean-to shed at the site of the lifeboat house. The breakwater (Feature 2) was constructed to the north of the lifeboat station between 1918 and 1927 (Plates 5, 6), and the boathouse extended and substantially rebuilt in 1925 and 1926 (Morris 1992; RNLI plan 893c, Gwynedd Archives XD/32/469, Plate 1). The boathouse crew room and garage for the inshore lifeboat were extended in 1991, and the slipway walkway was added along with the boathouse dormer window in 1993 (Plate 3).

The internal and roof structure is thought to date from the 1925 to 1926 rebuilding (Plates 7, 8), and consists of four bays with 'A' frame trusses (RNLI plan 893c). Within the boat house a number of commemoration boards recording past rescues and other memorabilia are retained from the earlier boat house. The boat house contains the standard RNLI hydraulic winch and 1000 gallon fuel tank.

In 1911 the Porthdinllaen estate, the property of the Wynne-Finches of Cefnamwlch consisted of 11 tenements, including the White Hall and the Ty Coch Inn (NLW Voelas and Cefnamwlch FB 20 and 21). 'The Life Boat Institution' paid 2s 6d in rent to Cefnamwlch, who owned the land on which the lifeboat house stood. It is now the property of the National Trust.

4.3 Statutory and non-statutory designations

The former Whitehall Inn, Porthdinllaen is a grade II listed building (Ref: 4221). Porthdinllaen is the property of the National Trust, and the area lies within the Llyn Area of Outstanding Natural Beauty (AONB).

4.4 The Archaeological Survey (Fig. 2)

Feature 1 Lifeboat House and Slipway

SH 2778 4192

Period: Modern

Category: B Impact: Considerable

A lifeboat house and slipway, built originally in 1864, however most of the surviving material dates from a substantial rebuild of the station in 1925 to 1926. It is a rectangular building with a cross gable, built of granite from Trefor quarry. It has undergone a number of phases of significant redevelopment and alterations, the most recent being in 1993.

Recommendations for further assessment: None

Recommendations for mitigatory measures: Level 2/3 record and partial Watching Brief

Feature 2 Breakwater

SH 2783 4194

Period: Modern

Category: B Impact: None

A substantial breakwater, situated approximately 50m north of the lifeboat station, and built to protect it between 1918 and 1927. It is constructed of irregular coursed shale blocks, approximately 1m high, capped with concrete, adding an additional 1.2m to its height. It has a substantial batter on its northern side. At approximately 3.3m from the low water mark, it incorporates a fragment of walling that formed part of an early 19th century pier towards its seaward end.

Recommendations for further assessment: None

Recommendations for mitigatory measures: None

Feature 3 Porthdinllaen Promontory Fort PRN 421

SH 2750 4160

Period: Late Prehistoric

Category: B Impact: Slight

Promontory fort. Banks and ditches project an area of about 14 acres. The western half of the southern defences are preserved for a length of 130', consisting of a flat bottomed ditch 12m wide with an inner side 1.8m high and a rounded counter scarp bank 5m wide and 1m high. 70m north of this bank lay the northern defences (only the east half remains) of a bank 40m long and 12m high from the outer side, 2m high from the inside. To the north lie two enclosures which are the result of turf cutting. A golf green has been constructed over the eastern part of the inner rampart. A track to the beach has been cut between the ramparts. Ramparts of this fort have been badly mutilated by the golf-course. Dinllaen is the ancient name of the fort, from which is derived from that of the commote in which it stands. Fragments of flint "struck off by human agency" from water-worn pebbles from the shore have been found at Porthdinllaen, on the cliffs from inside and outside the camp.

Recommendations for further assessment: None

Recommendations for mitigatory measures: None

Feature 4 Stone Tool Findspot PRN 2210

SH 2750 4150

Period: Unknown

Category: C Impact: None

A stone tool of unknown date was found at this spot.

Recommendations for further assessment: None

Recommendations for mitigatory measures: None

Feature 5 Carreg Oysters Fish Trap PRN 14614

SH 2770 4160

Period: Possibly Medieval, or a Natural Feature

Category: E Impact: None

Carreg Oysters is a large outcrop forming a small island off Porth Dinllaen. A bank of sand land joins this to the beach. This appears to be natural but could be artificial. There is however no conclusive reason to believe that it is a fish trap, although it has been interpreted as such.

Recommendations for further assessment: None

Recommendations for mitigatory measures: None

Feature 6 Possible Shipbuilding features PRN 16,610

SH 2774 4122

Period: Early Modern

Category: B Impact: None

A straight, double linear feature over 100m long lying parallel to the shore at around the mean low water mark in the bay. There was a large fishing and boat-building industry here, and there are boat sheds on the nearby promontory and a former customs house. The parallel track nature of this feature suggests it might have been a slipway but on the other hand it does not run into deeper water and seems to be too far out to connect to the land, possibly it could have been some kind of mooring device.

Recommendations for further assessment: None
Recommendations for mitigatory measures: None

Feature 7 Watchtower

SH 2745 4138

Period: Modern

Category: C Impact: None

A watchtower, built on Porthdinllaen headland, to provide early warning to the lifeboat station of ships in trouble at sea.

Recommendations for further assessment: None
Recommendations for mitigatory measures: None

Feature 8 Former pier or slipway

SH 2775 4164

Period: Early Modern

Category: E Impact: None

A double line of stones extending eastwards into the bay. It is visible on the aerial photographs examined (106G/UK/469 frame 3009) dating back to 1945 (Fig. 9), and is located on the 2nd edition Ordnance Survey map of 1900 (Fig. 6) but not the first edition of 1889 (Fig. 5). A pier can be seen at this location on the tithe map of 1841 (Fig. 4), and the earlier Glynllifon estate map (Fig. 3), where it is referred to as the 'old pier'. There is a building located on the foreshore on the tithe and subsequent maps that was probably formerly a warehouse. It is likely that the origins of this pier date to the early 19th century and was constructed by the Porthdinllaen Harbour Company.

Recommendations for further assessment: None
Recommendations for mitigatory measures: None

5. SUMMARY OF ARCHAEOLOGICAL POTENTIAL

5.1 Location Summary

Porthdinllaen consists of a small settlement within the second natural harbour on the east side of the promontory, about a mile west of the town of Nefyn (Fig. 1). It is located within the historic parish of Edern, but the current Nefyn community. The lifeboat station is located within the furthestmost bay at NGR SH 2778 4192. The settlement is associated with the large fishing and boat-building industry located here in the late 18th and 19th centuries. The former customs house and boat sheds help to give the area its maritime character. In addition to the lifeboat station, the two main buildings are the 19th century Ty Coch Inn, and 50m south of it the White Hall, a Grade II listed building (PRN 4221), and former inn.

5.2 Aerial Photographs

Thirty-seven vertical aerial photographs taken by the RAF, dating from 1945 to 1956 were examined at the NMR in Aberystwyth. These include 106G/UK/655 4214-4215 taken on 13th August 1945, 106 3G/TUD/UK/172 frame 5134 taken on 3rd May 1946 and 106 58/2196 frames 290-292 taken on 14th June 1957. The lifeboat station is clearly shown, as is the peninsula of Porthdinllaen itself..

5.3 Environmental Remains and Soil Morphology

As the proposed works involve the demolition and rebuilding of an existing structure, there will be limited disturbance of potential archaeological deposits as the building footprint will be larger than that of the current building (Hillyer 2009), the potential for the recovery of interesting environmental remains and soil morphology is therefore thought to be low to moderate.

5.4 Artefactual Potential

The potential for the recovery of archaeological artefacts is thought to be low; however there is the possibility that artefacts might be recovered from the foreshore or during groundworks during the construction of the new lifeboat house.

6. ARCHAEOLOGICAL ANALYSIS AND LEVEL 2 PHOTOGRAPHIC RECORD

6.1 Site Description

The lifeboat station at Porthdinllaen is a rectangular gabled building built of irregular Trefor granite blocks (Plate 1). This building owes its current appearance to the rebuilding work carried out in 1925-6 (NLW Voelas C8197a, RNLI plan 893c) when the boathouse was extended for the first motor lifeboat and the slipway was extended to about 35 metres (Plates 2, 3), with the replacement of timber portions to the slipway with concrete (Gwynedd Archives XD/32/469). The south elevation has a doorway to the west and five irregularly spaced eight panel wooden framed windows, approximately 3.2m high to the eaves. A cross-gabled wing was noted, rising to a height of approximately 5.5m, with one of the five windows centrally placed at first floor level, which was added in the 1925-6 reordering. Battered buttresses present at the eastern end of the boathouse (Plates 2 and 4). The eastern gable has wooden folding doors rising to eaves height. There is tongue and groove gable infill with single light opening above (Plate 4). The cross gable extends northwards for approximately 2.8m, with a gable to both north and south.

The inshore lifeboat is stored at ground floor level, behind a doorway opening 2.1m high, above which is a dormer window, added in 1993 (Plate 4). The upstairs room forms an office and canteen space, re-ordered in its current form in 1987 (Lewis and Duvivier plan 1233A/35). The eastern gable contains a first floor six pane opening. All windows have shallow voussoirs of six stones. The Penrhyn slated roof is protected by wooden slats and wire netting (Plates 1, 6). The slipway is constructed of concrete and wood, and is about 120m long, making it one of the longest in use by the RNLI (Morris, *pers. comm.*, Plate 5).

A small tool shed is located to the north east of the lifeboat station (Plate 7). The breakwater, built to the north of the lifeboat house between 1918 and 1927 (Plates 8-11), consists of concrete capped local stone, about 2m high. Steps lead from it onto the rock outcrop at its western end (Plate 12).

Internally the boathouse consists of four bays, containing three 'A' frame trusses and one king post truss at the western end of the building (Plates 15, 19). These were constructed as part of the re-ordering of the lifeboat house in 1925, which also involved the building of the gabled cross-wing of the building (Plate 18).

The current lifeboat fills most of the internal space within the main building (Plates 13, 17), however at the western end of the building a 1000 gallon fuel tank, the winding gear and generator are located (Plate 16). The inshore inflatable is housed on the ground floor of the 1925 northern addition to the boathouse (Plate 20), with crew room above.

6.2 Discussion

Although the lifeboat station was first built on this site in 1864 (Morris 1992, 1), the lifeboat station in its current form is substantially similar to the rebuild carried out in 1925 to 1926 when it underwent 'extensive alterations' (NLW Voelas and Cefnamwlch C8197a). It is an interesting example of a boathouse built of Trefor Granite, from a local stone quarry about 5 miles away, which was very active in supplying building materials at that time. The various modifications that have taken place since that date do not detract from these characteristics.

7. SUMMARY OF RECOMMENDATIONS

7.1 Summary

Feature Number	Name	PRN	Importance	Impact	Recommendation for further evaluation	Mitigation recommendations
1	RNLI Boathouse and Slipway		B	Considerable	None	Level 2 Photographic Building Recording (already undertaken) Partial Watching Brief
2	Breakwater to the north of Lifeboat house		C	None	None	None
3	Porthdinllaen Promontory Fort	421	B	None	None	None
4	Stone tool findspot	2210	C	None	None	None
5	Carreg Oysters (Fish Trap)	14614	E	None	None	None
6	Possible shipbuilding features	16610	E	None	None	None
7	Watchtower		C	None	None	None
8	Former pier or slipway		E	None	None	None

7.2 General Recommendations

Whilst the footprint of the building is likely to be larger than the existing boathouse, some of this will be taken up by an additional length of boathouse seaward (Hillyer 2009, 9). This area has already been significantly disturbed by the building of the slipway, therefore it is thought that the likelihood of uncovering archaeological remains is limited, though minor alterations in geomorphological processes may take place. It is recommended that further archaeological mitigation be carried out in the form of an occasional watching brief during the construction activities.

8. CONCLUSIONS

The demolition of the lifeboat station at Porthdinllaen will cause a direct impact on the cultural heritage of Porthdinllaen. This has been mitigated by carrying out a survey of the lifeboat house in advance of demolition. Direct disturbance to potential archaeological features during construction is thought to be limited, but the slight potential for the uncovering of archaeological remains during the construction process means that a partial watching brief (as and when seems appropriate) should be maintained during construction works.

9. ARCHIVE

The archive consists of historic maps, plans and aerial photographs, along with notes and 112 digital images taken on the field visit.

Three copies of the bound report will be sent to the client, a copy to Ashley Batten at GAPS, and a further copy sent to the HER Archaeologist at the curatorial division of Gwynedd Archaeological Trust, Bangor, for deposition in the Regional HER. A copy of the report will be provided to the National Monument Record, Royal Commission on the Ancient and Historic Monuments of Wales, Aberystwyth.

10. REFERENCES AND OTHER SOURCES CONSULTED

Bassett, T.M. and Davies, B.L. (eds.) 1977 *Atlas of Caernarfonshire* (Caernarfon)

Davies, B.L. 1977 'Communications: Railways' in Bassett and Davies (eds.) 1977, 173-176

Dodd, A.H. 1933 *The Industrial Revolution in North Wales* (Reprinted 1990)

Eames, A. 1977 'Ships and Harbours', in Bassett and Davies (eds.) 1977, 169-172

Elis-Williams, M., 1984 *Packet to Ireland: Porthdinllaen's challenge to Holyhead* (Gwynedd Archives).

Hemp, W.J. 1923 'Miscellanea', *Arch. Camb.* LXXVIII, Part I, 143-176

Hopewell, D. 2003 *Nefyn Waste Water Treatment Scheme (Revised Route). Archaeological Assessment: Trial Excavation Report* (Unpublished GAT Report No. 509)

Hyde-Hall, E. 1952 *A Description of Caernarvonshire, 1809-1811* (Caernarvonshire Historical Society Rec. Ser. 2 (Caernarfon))

Jones-Pierce, T. 1957 'The Old Borough of Nefyn, 1355-1882', *Trans. Caernarvon Hist. Soc.* Vol. 18, 36-53

Morris, J. 1992 *The History of the Porthdinllaen Lifeboats*

Morris, J. 2010 Unpublished letter dated January 17th 2010

Pennant, T. 1783 *A Tour in Wales, 1770, Vol. II* (Reprinted 1991, Wrexham)

Pritchard, R.T. 1959 'The Porthdinllaen Turnpike Trust', *Trans. Caerns. Hist. Soc.* 20, 87-98

RCAHMW 1964 *An Inventory of the Ancient and Historical Monuments of Caernarfonshire: Vol III West* (HMSO)

GAT Historic Environment Record

Gwynedd Archives, Caernarfon

XD2A/1259 nd. *Plan of an intended pier at Porthdinllaen*

XD/32/469 1923 *Letter from the Mercantile Marine Department to the Voelas Estate Office concerning alterations to the Porthdinllaen slipway*

National Library of Wales

Voelas and Cefnamwlch MSS C8197a 1923 *Letter from George Shee of the RNLI to George Bovill of the Porthdinllaen Harbour Company*

Voelas and Cefnamwlch MSS FB 20-21 *Abstract of Account of the Porthdinllaen Estate Rental 1911*

Royal National Lifeboat Institution Archives, Haywards Heath

RNLI Plan 893c 1924 *Proposed additions and alterations to adapt Porthdinllaen boathouse for motor life boat*

Lewis and Duvivier Plan 1233A/35 1987 *Porthdinllaen internal re-ordering*

Posford and Duvivier Plan 1233A/53A 1996 *Porthdinllaen Slipway Extension*

RCAHM Wales Aberystwyth

Verticals

RAF

Aerial Photographs

106G/UK 1642 frame 3079 taken 10th July 1946
106G/UK 1469 frame 3009 taken 4th May 1946
106G/UK 1469 frame 3048 taken 4th May 1946
106G/UK 1469 fame 3050 taken 4th May 1946
106G/UK 1469 fame 4139 taken 4th May 1946
106G/UK 1469 frame 3921 taken 5th May 1946
82 RAF/1369 F22 frame 101 taken May 1957

APPENDIX 1

Sites Located on the Gwynedd HER within 1km of Porthdinllaen Lifeboat Station						
PRN	NPRN	SITENAME	NGR	CLASS	SITETYPE	PERIOD
421	56399	PROMONTORY FORT, TRWYN PORTH DINLLAEN	SH27504160C	Defence	PROMONTORY FORT	Roman
1850	59986	RADIOCARBON DATE, PORTH DINLLAEN, LLYN	SH27504150A	Unassigned	NATURAL FEATURE	Prehistoric
2210	56329	STONE TOOL - FINDSPOT, HEN BLAS, PORTH DINLLAEN	SH27644113	Object	FINDSPOT	Unknown
14614	0	CARREG OYSTERS UNCONFIRMED FISH TRAP	SH27704160	Agriculture and Subsistence	FISH WEIR	Medieval
16610	0	POSSIBLE SHIPBUILDING FEATURES, PORTH DINLLAEN	SH27744122A	Maritime	SHIP YARD	Probably Post- Medieval

APPENDIX II

Definitions of Impact; Evaluation and Mitigation techniques

Definition of Impact

The impact of the road development on each site was estimated. The impact is defined as *none, slight, unlikely, likely, significant, considerable or unknown* as follows:

None:

There is no construction impact on this particular site.

Slight:

This has generally been used where the impact is marginal and would not by the nature of the site cause irreversible damage to the remainder of the feature, *e.g.* part of a trackway or field bank.

Unlikely:

This category indicates sites that fall within the band of interest but are unlikely to be directly affected. This includes sites such as standing and occupied buildings at the margins of the band of interest.

Likely:

Sites towards the edges of the study area, which may not be directly affected, but are likely to be damaged in some way by the construction activity.

Significant:

The partial removal of a site affecting its overall integrity. Sites falling into this category may be linear features such as roads or tramways where the removal of part of the feature could make overall interpretation problematic.

Considerable:

The total removal of a feature or its partial removal which would effectively destroy the remainder of the site.

Unknown:

This is used when the location of the site is unknown, but thought to be in the vicinity

Definition of field evaluation techniques

Field evaluation is necessary to fully understand and assess most class E sites and to allow the evaluation of areas of land where there are no visible features but for which there is potential for sites to exist. Two principal techniques can be used for carrying out the evaluation: geophysical survey and trial trenching. Topographic survey may also be employed where sites are thought to survive as earthworks.

Geophysical survey most often involves the use of a magnetometer, which allows detection of some underground features, depending on their composition and the nature of the subsoil. Other forms of geophysical survey, including resistivity survey and ground penetrating radar might also be of use.

Trial trenching allows a representative sample of the development area to be investigated at depth. Trenches of appropriate size can also be excavated to evaluate category E sites. Trenching is typically carried out with trenches of between 20 to 30m length and 2m width. The topsoil is removed by machine and the resulting surface is cleaned by hand, recording features. Depending on the stratigraphy encountered the machine may be used to remove stratigraphy to deeper levels.

Definition of Mitigatory Recommendations

Below are the measures that may be recommended to mitigate the impact of the development on the archaeology.

None:

No impact so no requirement for mitigatory measures.

Detailed recording:

This requires a full photographic record and measured survey prior to commencement of works.

Archaeological excavation may also be required depending on the particular feature and the extent and effect of the impact.

Basic recording:

Requiring a photographic record and full description prior to commencement of works.

Strip, Map and Sample:

The technique of Strip, Map and Sample involves the examination of machine-stripped surfaces to identify archaeological remains. The stripping is undertaken under the supervision of an archaeologist. Stripping and removal of the overburden is undertaken in such a manner as to ensure damage does not take place to surfaces that have already been stripped, nor to archaeological surfaces that have not yet been revealed.

Stripping is undertaken in as careful a manner as possible, to allow for good identification of archaeological features. A small team of archaeologists will be responsible for subsequently further cleaning defined areas where necessary. Complex sites which cannot be avoided will need to be fully excavated.

Watching brief:

This is a formal programme of observation and investigation conducted during any operation carried out for non-archaeological reasons. This will be within a specified area or site on land, inter-tidal zone or underwater, where there is a possibility that archaeological deposits may be disturbed or destroyed. The programme will result in the preparation of a report and ordered archive. The archaeologist shall establish the scope of the watching brief, whether comprehensive (present during all ground disturbance), intensive (present during sensitive ground disturbance), intermittent (viewing the trenches after machining), or partial (as and when seems appropriate).

Avoidance:

Features, which may be affected directly by the scheme, or during the construction, should be avoided. Occasionally a minor change to the proposed plan is recommended, but more usually it refers to the need for care to be taken during construction to avoid accidental damage to a feature. This is often best achieved by clearly marking features prior to the start of work.

Reinstatement:

The feature should be re-instated with archaeological advice and supervision.



Fig. 4 Extract from Edern Tithe Map of 1841 showing Porthdinllaen. Location of Lifeboat house outlined in red. Map not to scale.



Fig. 5 25 inch 1st edition Ordnance Survey Map of 1889, Carnarvonshire sheets XXXI.8 and 12. The Lifeboat station is shown, but the former pier to the north (Feature 2) is not. Scale 1:5000 @ A4

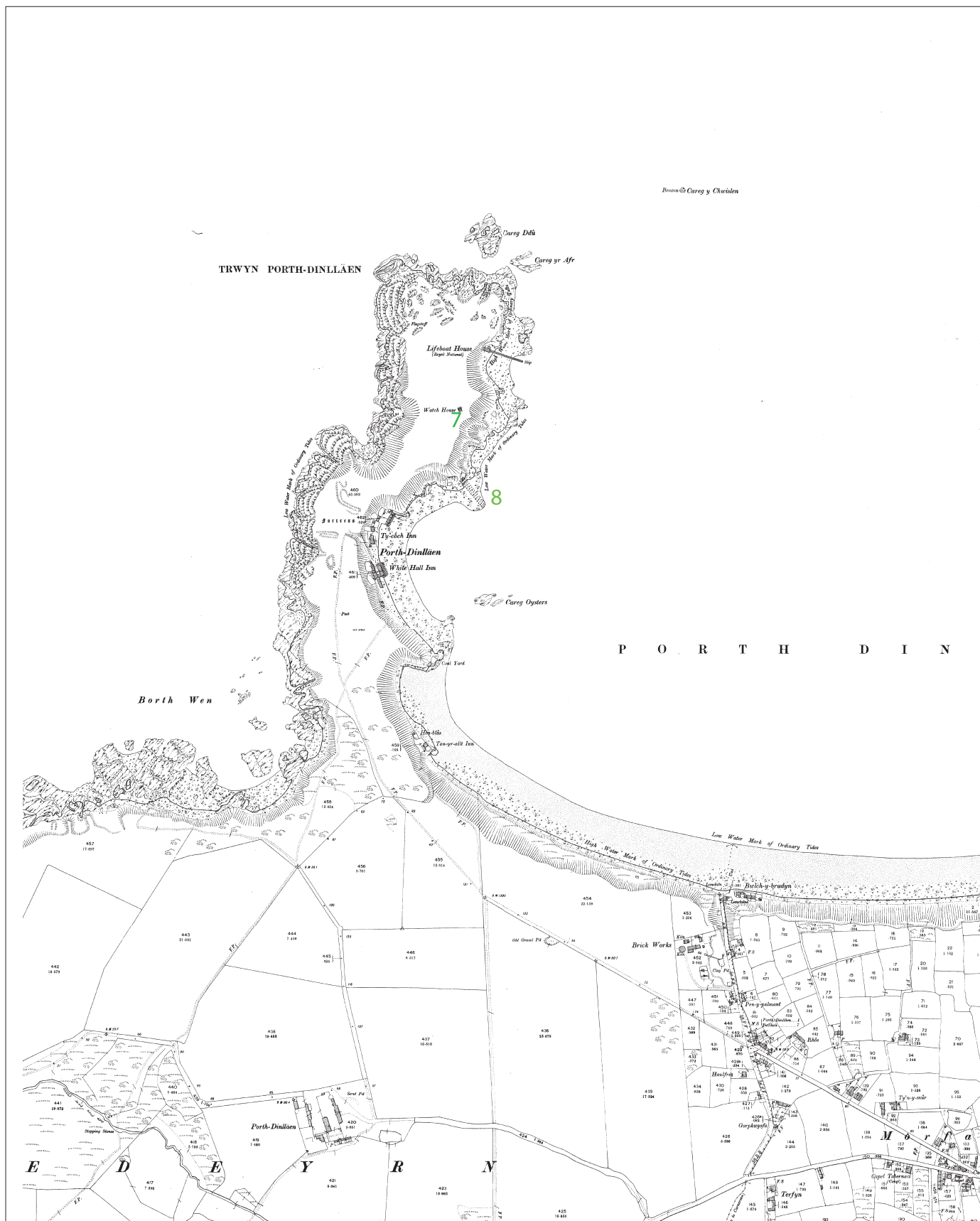


Fig. 6 25 inch 2nd edition Ordnance Survey Map of 1900, Carnarvonshire sheets XXXI.8 and 12. The Lifeboat station is shown, but the former pier to the north (Feature 2) is not. The watchtower, built in 1894 (feature 7) and former pier (feature 8) can be seen. Scale 1:5000 at A4

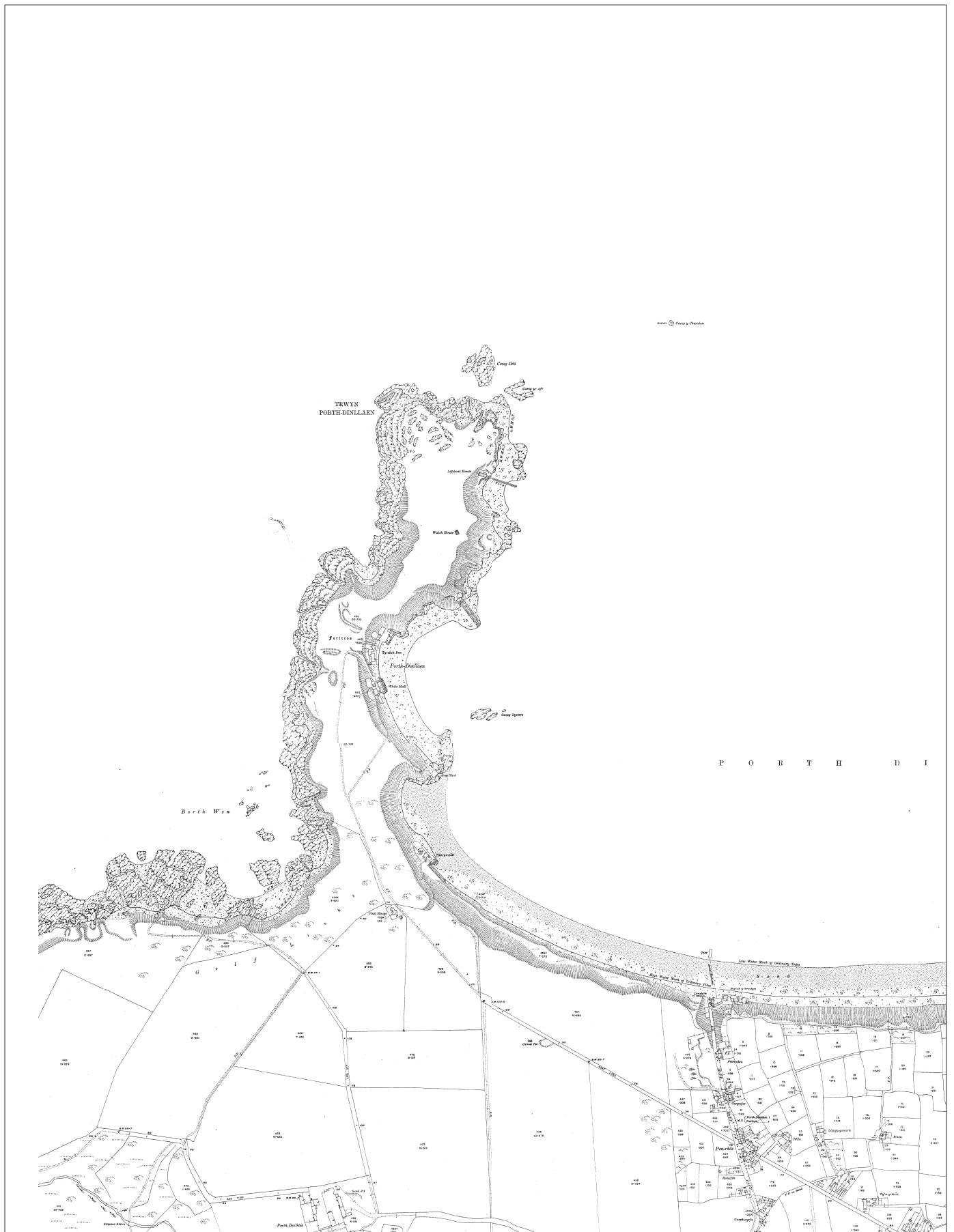


Fig. 7 25 inch 3rd edition Ordnance Survey Map of 1918, Caernarfonshire sheets XXXI.8 and 12. The lifeboat station is shown, but the former pier to the north (Feature 2) is not. Nefyn golf course occupies the peninsula by this time. Scale 1:5000 @ A4

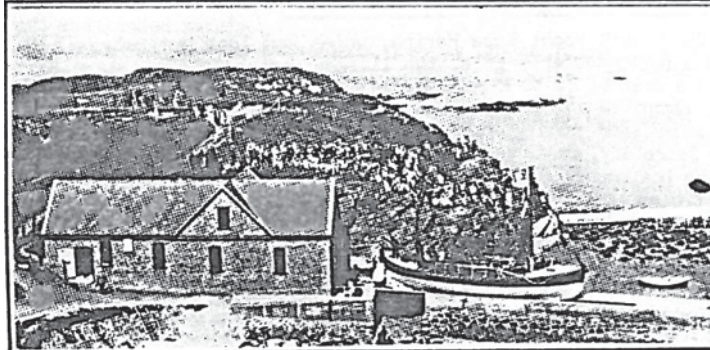


Fig. 8 Porthdinllaen Lifeboat house from the south showing the newly rebuilt station, taken during the naming ceremony of the "M.O.Y.E." on August 12th 1927. Image taken from a postcard.



Fig. 9 Detail from Aerial Photograph RAF 106G/UK/1642 frame 3079, taken 10th July 1946 showing Porthdinllaen

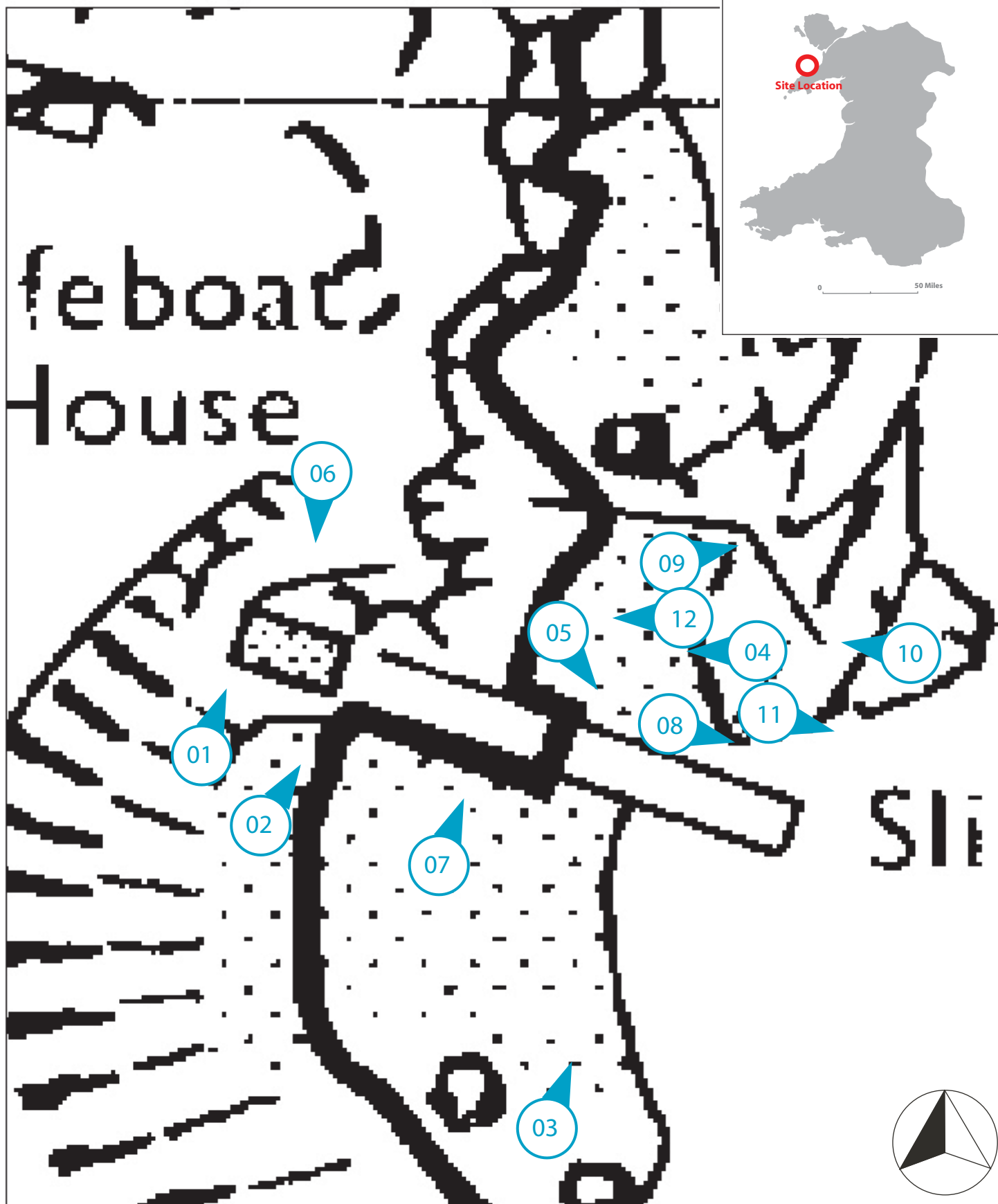


Figure 11: location of plates and direction taken: external elevations
SCALE: 1 to 750@A4

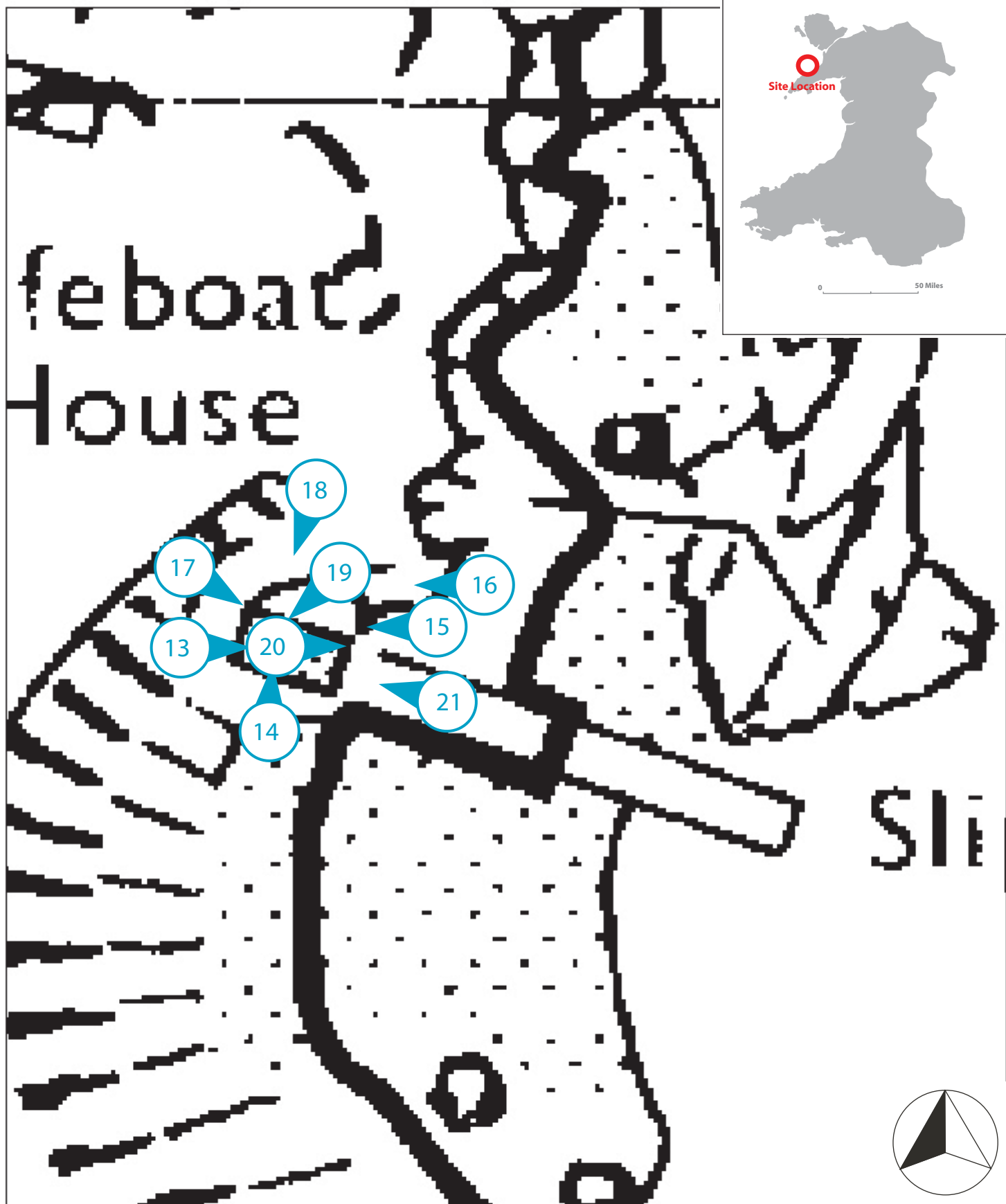


Figure 12: location of plates and direction taken: internal elevations
SCALE: 1 to 750@A4



Plate 01 – Lifeboat station from the southwest



Plate 02 – Slipway from the southwest



Plate 03 – Slipway from the south with breakwater to the rear



**Plate 04 – East facing elevation of lifeboat house
(Ranging pole; 2.0m).**



**Plate 05 – The slipway from the northwest
(Ranging pole: 2.0m)**



Plate 06 – The lifeboat station from the north



Plate 07 – The tool shed from the south



**Plate 08 – The breakwater from the west
(Ranging pole; 2.0m).**



Plate 09 – Detail showing breakwater built around remnants of stub wall (Scale: 2.0m with 0.50m divisions)



Plate 10 - Remnant stub wall of early nineteenth century pier



Plate 11 - Southwest oriented angle in breakwater, built 1918-1927



Plate 12 – Breakwater and lifeboat house from the northeast



Plate 13 – Interior of lifeboat station from northeast, showing lifeboat Helly Rampton



Plate 14 – Hydraulic winding gear and generator



Plate 15 – Detail showing roof trusses



Plate 16 – Winding gear, generator and 1000 gallon fuel tank; view from southwest



Plate 17 – View showing lifeboat house from northwest



Plate 18 – Internal east gable



Plate 19 – Detail of A frame truss; view from northeast



Plate 20 – Inshore inflatable housed in 1925 side addition to lifeboat house

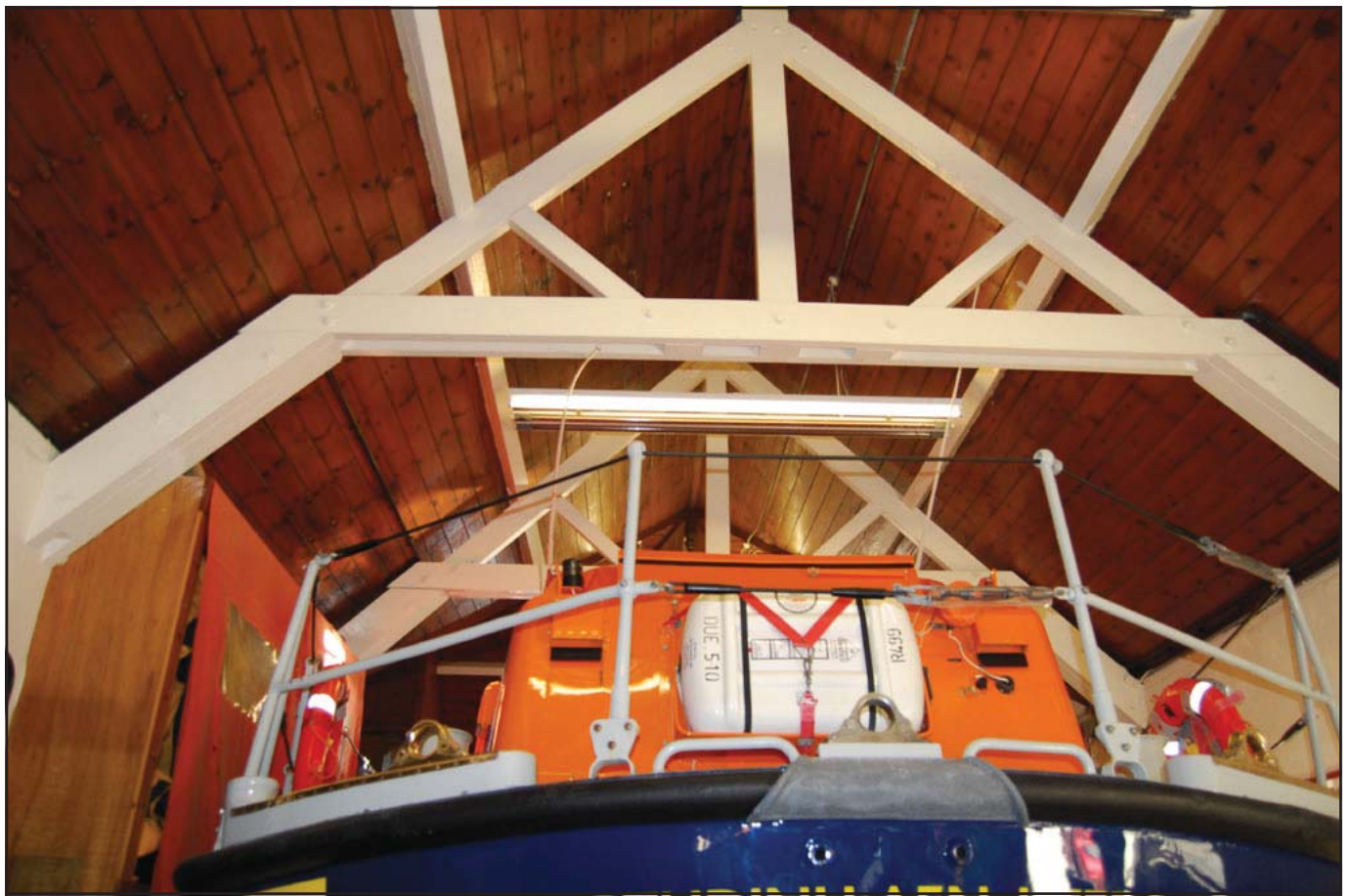


Plate 21 – Detail of roof structure from the east

YMDDIRIEDOLAETH
ARCHAEOLEGOL
GWYNEDD



GWYNEDD
ARCHAEOLOGICAL
TRUST

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