First World War Military Sites: Operations

Report and Gazetteer

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Project No. G2180

Report No. 1424

Event PRN 45217

Prepared for: Cadw

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Cover photograph: A depth charge exploding as seen from a US Motor Launch Hunting Flotilla (Holyhead Maritime Museum)

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(photograph courtesy of Bill Haughton)

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FIRST WORLD WAR MILITARY SITES: OPERATIONS
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SUMMARY

This report describes the results of a study, carried out by Gwynedd Archaeological Trust and grant aided by Cadw, of First World War sites in north-west Wales coming under the theme of "operations". It focuses largely on the naval base at Holyhead, as other operational sites in the area, i.e. the airship station at Llangefni and the airfield near Bangor have been covered in previous phases of this project. A history of the naval base and the associated Irish Sea Hunting Flotilla is presented with an assessment of which sites within the harbour and town were specifically associated with the naval base during the First World War and which still survive. The report also considers related sites such as a motor launch base at Menai Bridge and war signal stations. The opportunity has been taken to include some up-dates on sites from previous themes. The work for this project was undertaken in the financial year 2017-18.

Mae'r adroddiad hwn yn disgrifio canlyniadau astudiaeth a gynhaliwyd gan Ymddiriedolaeth Archaeolegol Gwynedd, a gafodd gymorth grant gan Cadw, o safleoedd Rhyfel Byd Cyntaf yng ngogledd-orllewin Cymru sy'n dod dan y thema "gweithrediadau". Mae'n canolbwyntio i raddau helaeth ar ganolfan y llynges yng Nghaergybi, gan fod safleoedd eraill yn yr ardal sy'n gysylltiedig â gweithrediadau, h.y. yr orsaf awyrlongau yn Llangefni a'r maes awyr ger Bangor, wedi cael eu hastudio yn ystod camau blaenorol y prosiect hwn. Cyflwynir hanes canolfan y llynges a'r Irish Sea Hunting Flotilla cysylltiedig gydag asesiad i ddangos pa safleoedd yn yr harbwr a'r dref a oedd â chysylltiad penodol â chanolfan y llynges yn ystod y Rhyfel Byd Cyntaf a pha rai sydd yno hyd heddiw. Mae'r adroddiad hefyd yn ystyried safleoedd cysylltiedig, megis canolfan cychod modur ym Mhorthaethwy a gorsafoedd rhybuddio o'r rhyfeloedd. Manteisiwyd ar y cyfle i gynnwys diweddariadau ar safleoedd o themâu blaenorol. Cynhaliwyd y gwaith ar gyfer y prosiect hwn yn ystod y flwyddyn ariannol 2017-18.

1. INTRODUCTION

This project is part of a pan-Wales initiative to identify and record the most significant elements of twentieth century military architecture across the country and to inform designation and management priorities. With the centenary of the First World War sites of this period are the focus of the project for 2014 to 2018. The 2013-14 phase of the project comprised a programme of baseline data collection and a pilot field study. From 2014 the project is to focus each year on a theme identified in the CBA publication *Modern Military Matters* (Schofield 2004). These are listed as:-

      Military landscapes
      Research and Development and manufacturing
      Infrastructure and support
      Operations
      Commemoration

For the year 2017-18 the theme was Operations. All military operations active in north-west Wales were related to countering the threat of German submarines to shipping. This included an airship station near Llangefni and an airfield near Bangor from which airships and aeroplanes searched for submarines. These sites were considered under the Research and development theme and are included in Kenney 2016. This year's report therefore concentrates on the naval base established at Holyhead, from which boats actively hunted for submarines, swept for mines laid by submarines and escorted shipping to protect them from submarine attack. Sites related to the naval base were also investigated, such as a motor launch base at Menai Bridge and war signal stations. In addition the opportunity has been taken to include up-dates on sites from previous themes at the end of the report.

The aim of the project is to locate sites related to this theme, establish their history and determine whether physical remains still survive. As there is relatively little available on the history of the naval base much of the report concentrates on a history derived from original documents. The gazetteer lists specific sites identified. Many of these no longer survive but a small number still exist.

2. METHODOLOGY

2.1. Report

The work started with the compilation of material from the Gwynedd Archaeological Trust Historic Environment Record (HER) and National Monuments Record (NMR). These were combined into a database with grid references allowing comparison to other source material through a Global Information System (GIS), in this case MapInfo. The third edition County Series maps were used to check the location and extent of sites just before or after the First World War. The information in the basic database was supplemented by and checked against available primary and secondary sources.

A search was made of Bangor university Library catalogue for material on Holyhead Harbour, but very little covering the First World War was found. The full run of Transactions of the Anglesey Antiquarian Society was also checked for relevant papers. Welsh Newspapers Online was searched but unlike previous phases of this project very little was found specifically relating to the naval use of Holyhead harbour or other operations.

Secondary published sources, especially local histories, were consulted. Roberts (1920) was very useful but most other local histories (such as Lloyd Hughes and Williams 1981, 155) seem to have used his information and do not add much to this. Map evidence was used to try and locate buildings mentioned as used in the First World War.

Holyhead Maritime Museum kindly allowed Jane Kenney access to their archive. This consists mostly of photographs. Some images of the packet steamers during the war were found but little else relating to the use of the Harbour in the War and nothing on the Irish Sea Hunting Flotilla. Richard Burnell was very helpful in relation to the Flotilla as he had obtained some images of the American motor launches that formed part of the Flotilla. These were obtained from a relative of one of the American seamen. Most of the historical information was obtained during a visit to the National Archives in Kew on 7th and 8th March, where original documents about the naval base were consulted.

A visit to Holyhead harbour was made on 5th September 2017 with the assistance of John Cave and Richard Burnell of Holyhead Maritime Museum. Sites probably used in the War were inspected and John and Richard passed on their knowledge of the harbour.

During the year some information has been received on sites relating to themes covered in previous years of the project. The opportunity has been taken to include up-dates on these themes at the end of this report.

The present report incorporates a gazetteer of sites (appendix I), which has been generated from the Access database accompanying this report. The database is designed to aid input into the HER and includes Welsh translations for site names and for the site summaries.

The digital archive generated from the project will be archived with the RCAHMW, who share with Historic Scotland a facility for the active curation of files. This archiving will be carried out at the end of the whole project in 2019.

2.2. Outreach

The outreach element of the project this year has concentrated on disseminating the results of the project by giving talks to local groups. Eight talks were given throughout the year in locations varying from Llangefni to Blaenau Ffestiniog reaching approximately 220 people.

A trip to Holyhead Harbour was also arranged for the Young Archaeologists Club on 2nd December 2017 (plate 1). The aim was for the young people to do a photographic record of Marine Yard (plates 2 and 3) while being given a tour of the site and told about its history by John Cave of Holyhead Maritime Museum. We also got a chance to visit the memorial arch on Salt Island and to go into the Harbour Offices to look at the clock with its long pendulum and set of bells. The trip was arranged in conjunction with Stena Line and Alan Williams, the Port Services Manager, kindly arranged for a bus to take us through the port to and from Marine Yard and Salt Island, as well as sharing with us his own knowledge of the history of the port. The young people thoroughly enjoyed the day and many thanks are due to John Cave, Alan Williams and Stena Line.

Photographs taken during this visit are included as appendix II.

Plate 1. The Young Archaeologists Club (YAC) trip to Marine Yard, Holyhead (photograph by John Cave)

Plate 2. YAC members doing photographic recording (photograph by John Cave)

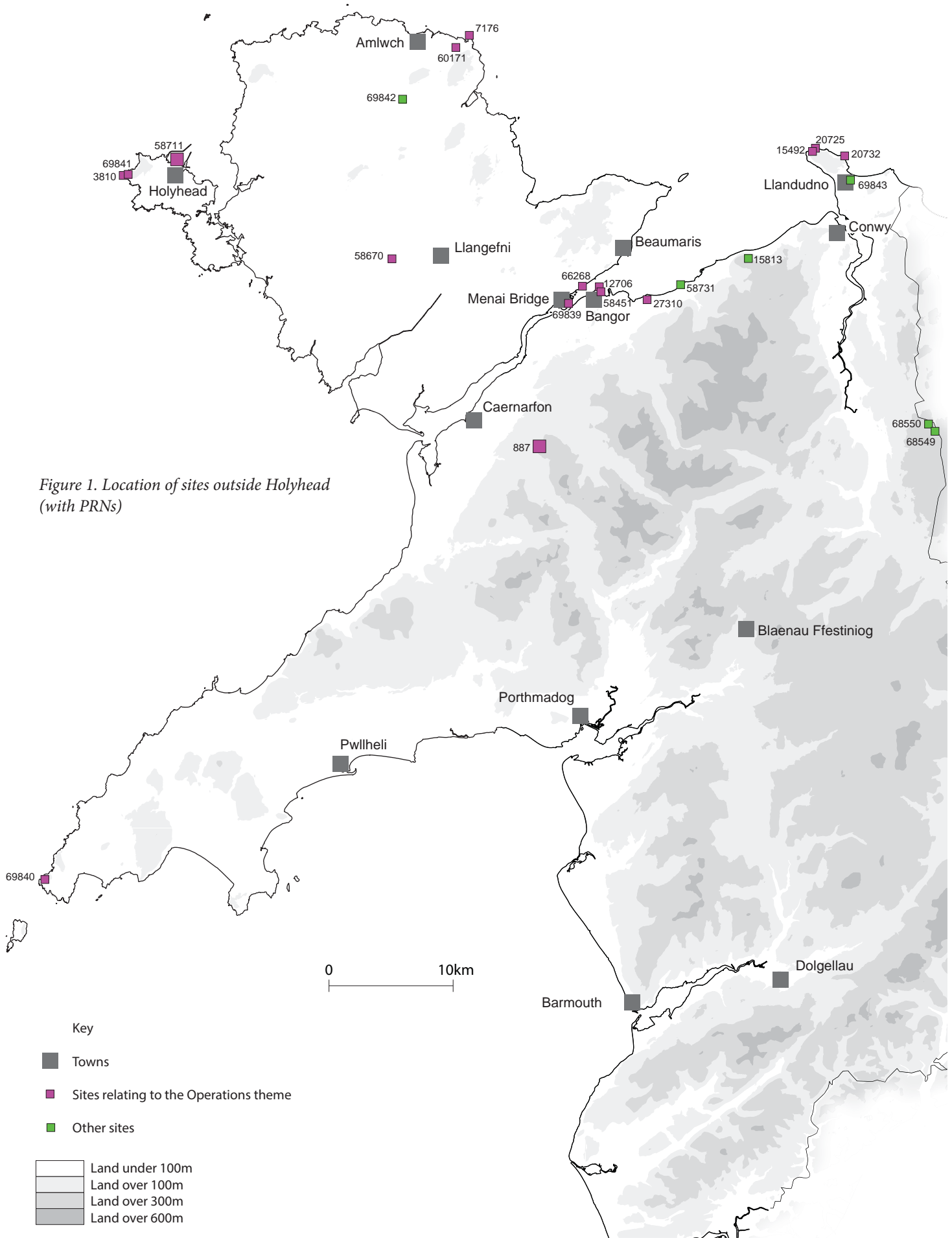*Plate 3. Bethan Jones of GAT training YAC members in the use of a SLR camera (photograph by John Cave)*

*Figure 1. Location of sites outside Holyhead
(with PRNs)*

Key

Towns

Sites relating to the Operations theme

Other sites

Land under 100m
Land over 100m
Land over 300m
Land over 600m

3. RESULTS

3.1. Introduction
See figure 1 for location of sites outside Holyhead and figures 2 and 3 for sites in Holyhead.

On 4th February 1915 German High Command announced that merchant shipping around Britain and Ireland was a legitimate target and started the U-boat campaign. The international outcry after the sinking of the Lusitania, a passenger ship, on 7 May 1915 caused the Germans to restrict their attacks to military targets. By February 1917 Germany was under pressure from British blockades and retaliated by declaring unrestricted submarine warfare (Eames 1981, 509, 522). The aim was to sink enough merchant shipping to starve Britain out of the war, and as Britain relied heavily on imported food and other supplies this was a realistic possibility (Sloan 2001, 87; Phillips 2010, 21). In spring and summer 1917 the naval blockade of Britain by the Germans was at its height and the high loss of ships with their cargo did bring the country close to running out of food (Stammers 2012, 74; Van Emden and Humphries 2003, 190).

In 1917 a barrage was built across the Straits of Dover to prevent U-boat access into the English Channel, and to avoid this the U-boats sailed around Scotland and attacked the west coast. Liverpool had previously been a major target as much of Britain's food came from America, but the barrage led to further concentration by the U-boats on the shipping lanes leading into the port. The waters around Holyhead therefore took the brunt of the submarine attack at this point in the war (De Sausmarez 1920, 44, 45).

An idea of the threat from submarines can be gained from records of losses in the Irish Sea. In 1915 the submarine threat was relatively low with only 8 ships sunk from 29th January to 13th July 1915 (National Archives; ADM 137/1057), but 1917 and 1918 saw much more intensive attacks. From 24th March to 30th December 1917 26 ships were sunk (National Archives; ADM 137/1362) in the Irish Sea, in January and February 1918 17 ships were sunk (National Archives; ADM 137/1514), and in March 1918 alone 19 ships were sunk (National Archives; ADM 137/1515). The loss of shipping improved a little after that with 20 ships sunk between the start of April and end of June, but this period included the worst day recorded for loss of shipping in the Irish Sea. On the night of 30th May 1918 submarines attacked fishing boats off the Irish Coast. Ten fishing boats were sunk that night in the space of a few hours (National Archives; ADM 137/1516). Between July and November 1918 inclusive only 14 ships were sunk in the Irish Sea but one of those was the RMS Leinster torpedoed on 10th October with the loss of over 500 lives (National Archives; ADM 137/1517).

The submarines attacked by firing torpedoes but they had other methods of attack. In some cases boats were boarded and a bomb placed on the boat then detonated (National Archives; ADM 137/1516). Gunfire was also used to sink small ships and boats (National Archives; ADM 137/1515). In the early stages of the War crews were given warning before their ships were sunk so that they could get into lifeboats, or occasionally were taken on to the submarine. This was the "gentlemanly phase of the war" (Eames 1981, 508-9) was generally abandoned after February 1917 with much greater loss of life, though the crews of the fishing boats attacked on 30th May 1918 were allowed time to get into lifeboats or were picked up by the submarine and released on board nearby Irish boats rather than being taken prisoner (National Archives; ADM 137/1516).

The level of threat meant that protecting shipping in the Irish Sea from submarines was a high priority. From the start this was intended as a combined effort from both sea and sky. Warships were the only effective way to attack submarines but they were relatively slow and their ability to spot submarines was limited. Destroyers were also in short supply, especially earlier in the war, so trawlers were often adapted to hunt for and attack submarines.

5

Airships could spot submarines from above and signal their location to the ships, as well as providing some bombing capability (Phillips 2010, 24).

The Irish Sea was patrolled by airships from stations at Luce Bay, Wigtown and Llangefni, Anglesey (Sloan 2001, 87-88), with a mooring out station set up at Malahide, County Dublin for the Anglesey airships. There was also an airship station on Walney Island near Barrow but this was mainly a construction site. Royal Naval Air Station (RNAS) Llangefni or RNAS Anglesey (PRN 58670) was formally commissioned on 26th September 1915 (Phillips 2010, 25, Delve 2007, 204), and the history of this site is covered in a previous report in this project (Kenney 2016). From summer 1918 aeroplanes were also used to assist in submarine spotting and these were based at a small airfield east of Bangor, near Abergwyngregyn (PRN 27310) (Kenney 2016). Naval bases were situated around the Irish Sea at Kingstown, Queenstown, Liverpool, Milford Haven, and from August 1915 at Holyhead.

The airships were under naval command as the RAF was not formed until April 1918. Even after this date overall command for submarine hunting activities in the Irish Sea was vested in the Senior Naval Officer of the Irish Sea Hunting Flotilla. This enabled the airships, aeroplanes and boats to work closely together. A sketch plan for a week in April 1918 with routes of the airship patrols showing how they covered the north coast of Wales, and the routes into Liverpool as well as the route of the mail boats to Ireland, supporting the efforts of the naval patrols, which could extend further out into the Irish Sea (National Archives; ADM 137/634, p156) (plate 4). The aeroplanes from Bangor Airfield were even more restricted and could not go more than 10 miles from shore. They patrolled sea lanes from Point Lynus to Liverpool Bar (National Archives; ADM 137/1518, p322).
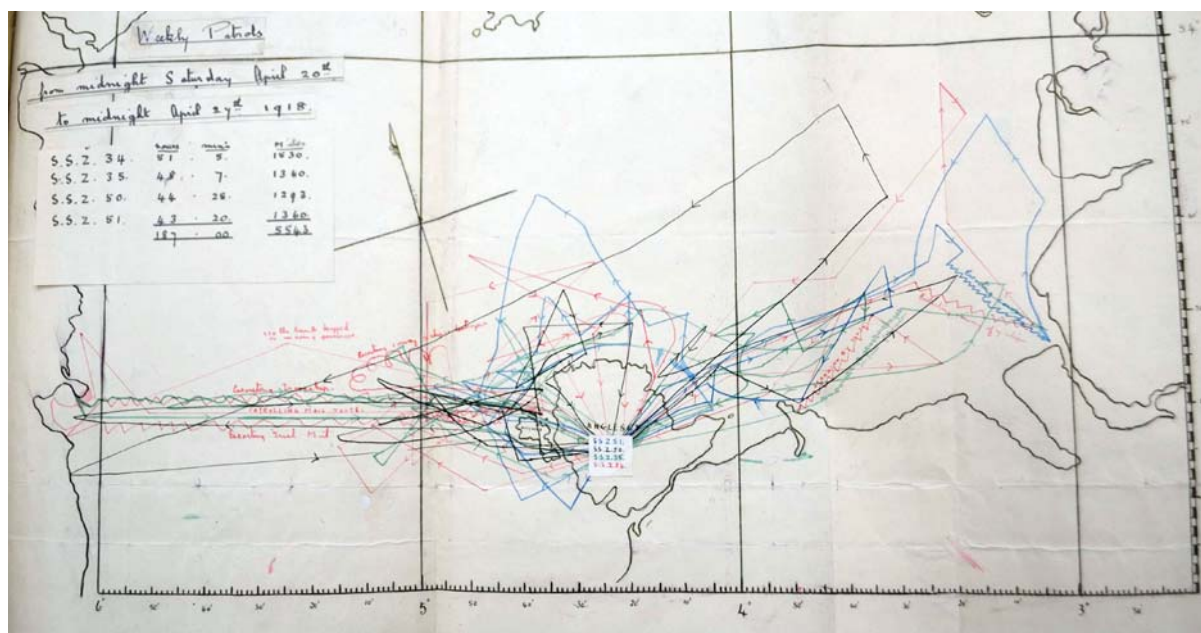
Plate 4. Routes of the airships taken during patrols during one week in April 1918
(National Archives, ADM 137/634, p156)

The airship station was also involved in nationally important research. Trials with a hydrophone towed under water on a long line from an airship were carried out in May 1917. The trials went well and it was recommended to issue hydrophones to airships across the country (National Archives; AIR 2/39/Air601926/17).

As well as naval operations taking place from Anglesey Holyhead contributed both ships and men to the War. The four mail boats from Holyhead to Dublin became armed boarding vessels, with two later becoming hospital ships (Davies 2013, 193). The boats were converted in the Holyhead boatyards. As well as serving on many other ships in the navy Holyhead men largely staffed the former mail boats and suffered when those were attacked. Of the mail boats the Hibernia, renamed HMS Tara, was sunk off Tripoli on 5th November 1915 and the surviving crew were taken prisoner by Senussi tribesmen and not rescued until March 1916 (plate 5) (Eames 1981, 510-15; www.angesey.info). The RMS Connaught was sunk in the English Channel by a submarine while acting as a troop carrier and the HMHS Anglia was sunk off Folkestone when it hit a mine while transporting wounded soldiers from France (Eames 1981, 516; www.angesey.info).

Plate 5. The survivors from the sinking of the Tara outside Holyhead Railway Station (Courtesy of Anglesey Archives (WM/1088/38))

3.2. Holyhead Naval Base

Plate 6

Naval Base

A short history of Holyhead Naval Base was written by Lieutenant Commander R De Sausmarez (in Roberts 1920, 44-48). This has the great advantage of being written shortly after the War by someone who served at the naval base but it is quite brief and concentrates on certain aspects, especially De Sausmarez's role in setting up the Hunting Flotilla. Other authors have relied entirely on De Sausmarez (e.g. Jones 2012), and no other history of the base rather than the ships of Holyhead could be found. After a rapid search through the documents held in the National Archives a history will be attempted drawing on De Sausmarez and on the original documents. However much more detail could be extracted from the documents and this must be considered only an outline history.

In 1908 the Holyhead Urban District Council tried to convince the Admiralty that they should set up a naval base at Holyhead and station a battleship or cruiser there. It had never occurred to the Admiralty to consider Holyhead for a naval base and they were not open to the suggestion (National Archives; MT/10/1145/25). By 1915 things had changed considerably and the submarine threat made Holyhead an ideal location. Auxiliary Patrol Vessels based at Kingstown (now Dun Laoghaire) were already patrolling the western Irish Sea (Auxiliary Patrol Area XVI) and vessels from Liverpool patrolled the eastern Irish Sea (Mersey Area) but it was clear that additional help was needed to cover this large and important area. A new auxiliary patrol area (Area XXII) was set up to be covered from a naval base at Holyhead and vessels were transfer from Kingstown to Holyhead. As early as 13th March 1915 it was proposed to station two destroyers at Holyhead (National Archives; ADM 137/1057, p358-361), but boats did not start arriving at Holyhead for naval service until August 1915. On 1st August 1915 12 indicator net

Plate 6. Postcard showing Holyhead Harbour before modern development of the Stena Terminal (Courtesy of Anglesey Archives (WSD/245))

drifters sailed from Kingstown to Holyhead (National Archives; ADM 137/1127, p391-2). By 19th August the drifters had been joined by 18 trawlers and a little later by two armed trawlers, one of which had a wireless set; these formed the core of the naval base, and were later joined by six motor launches. The yacht HMY Amethyst III was the parent ship for the boats attached to the base (National Archives; ADM 137/1127, p394, 400). The number of vessels seems to have varied slightly during the war. In 1916 there are generally about 25 trawlers and drifters listed plus the yacht the Amethyst III, in December 1917 35 vessels are said to be attached to the base and in the week ending 23rd February 1918 there was 1 yacht, 17 trawlers, 14 drifters and 6 motor launches (National Archives; ADM 137/599, 186; ADM 137/942, 392; ADM 137/634, 64). Drifters were robust fishing boats, similar to trawlers but designed to use drift nets. This made them ideal to deploy anti-submarine indicator nets and many were built by the Navy during the War (Wikipedia).

The first commander of the Holyhead naval base was Captain AR Raby (De Sausmarez 1920, 44). He was also placed in control over the Naval Air Stations at Llangefni and that at Barrow (National Archives; ADM 137/1127, p472-475), enabling the close functioning of the sea and air patrols. Area XXII covered all the Irish Channel and Cardigan Bay east of a line from Luce Bay to Strumble Head, except for the Mersey Area (plate 7). The area included the Lancashire and Cumbria coasts and there was a sub-base at Fleetwood for this area. It also covered the Isle of Man (National Archives; ADM 137/1186, p408). In 1917 the limits were altered so the eastern limit was defined by a line from Selker Point to Great Ormes Head (National Archives; ADM 137/1361, p178).
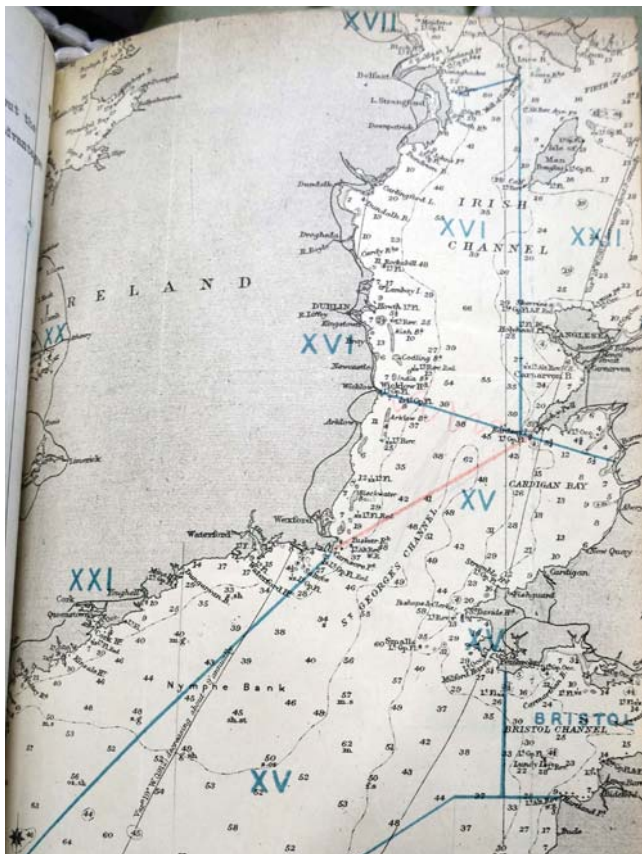
Plate 7. Auxiliary Patrol Areas in Irish Sea and South-west Approaches
(National Archive; ADM 137/1361, p363)

The auxiliary patrol vessels from Holyhead had several functions in relation to combating the submarine threat. One of the aims of the German U-boats was to lay mines and the auxiliary patrol vessels were responsible for mine sweeping in Area XXII to create a safe route round Anglesey and through to Liverpool (National Archives; ADM 137/1250, p339-380; ADM 137/942, p139)). Plate 8 shows the swept route around Anglesey in late April/ early May 1917. The plan also shows routes to "dumping grounds", but it is unlikely that the mines were dumped in such shallow water, and these may indicate safe routes kept open to areas for general dumping of waste in Red Wharf Bay and Beaumaris Bay.

The auxiliary patrol vessels also escorted shipping to and from Liverpool through their area, passing the ships on to the Kingstown or Milford Haven patrols at the western and southern limits of the area. At least in 1915 and 1916 this was done by escorting individual vessels rather than convoys (National Archives; ADM 137/1186, p414-7;
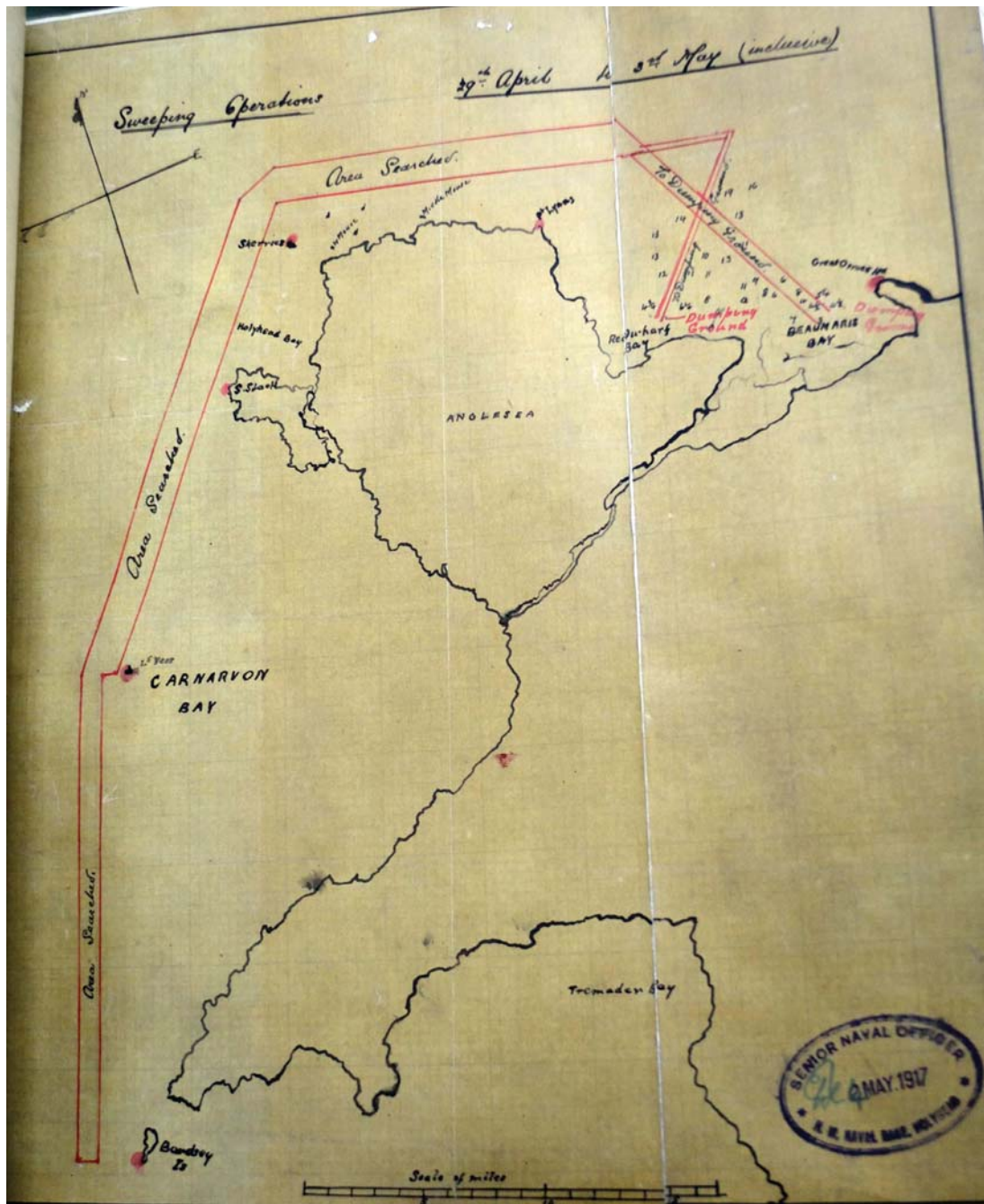
Plate 8. Plan of mine sweeping operations 29th April to 3rd May 1917
(National Archives; ADM 137/942, p139)

ADM 137/942, p9). The auxiliary patrol vessels were also used to enforce orders issued by Admiralty to fishing boats and other shipping, e.g. when shipping was ordered to stay in port when a submarine is present (National Archives; ADM 137/599, p134-5). The drifters deployed Indicator Nets to provide obstacles for submarines and to allow for their detection. These were often placed in the St George's Channel, and in 1915 when insufficient indicator nets were available some of the drifters had to use ordinary fishing nets (National Archives; ADM 137/1057, p429). Net drifters were also used on other frequented routeways such as off South Stack and off the Calf of Man (National Archives; ADM 137/942, p9).

Destroyers and other fast vessels were needed to protect the convoys so Auxiliary Patrols had to rely on smaller boats, particularly trawlers and motor launches. These had their problems as the trawlers were slow and the motor launches could only be used in fine weather (Jellico 1921, 178). The ability of the auxiliary patrol vessels to engage submarines was limited, although they had mines, depth charges and guns (National Archives; ADM 137/1186, p428), but they could force a submarine to stay submerged, where it could not use its torpedoes, or

force it to submerge by firing on it so preventing further attacks (National Archives; ADM 137/1518, p236). The boats had an important role in saving survivors after and attack but one of their main roles was to actively hunt for submarines and to warn shipping of their presence.

Motor launches were in use from at least early 1916; one commissioned to work with the Llangefni airship station and one to serve the harbour. In September and October 1916 6 new MLs arrived at Holyhead and the vessel serving the RNAS was replaced. Not all the motor launches were stationed at Holyhead, although under the command of the naval base. The launch working with the RNAS was stationed at Bangor but several of the Holyhead boats were stationed near Barrow in Furness to assist the airship station on Walney Island which came under Area XXII (National Archives; ADM 137/599, p306, 327, 363). In 1917 three motor boats were based at Douglas to patrol around the Isle of Man (National Archives; ADM 137/1520, p105, 126). The motor launches were faster than the other vessels so they investigated submarine sightings and attended the locations of ships attacked by submarines, searching for the submarine and picking up survivors (National Archives; ADM 137/942, p40).

Two of the trawlers were already armed when they were sent to the Holyhead base but the rest of the vessels were gradually fitted with guns. By October 1916 some drifters had 6 pound guns and some trawlers had 3 pounders. At least some of the motor launches were fitted with guns by spring 1916 (National Archives; ADM 137/599, p153, 342, 435). In June 1917 there were experiments with 3 pound Russian guns on drifters (National Archives; ADM 137/942, p177).

The priority was to locate U-boats, and especially before hydrophones were widely available all available information was used to detect them, including radio transmissions, shore listening stations, aircraft patrols and distress calls from attacked ships (Friedman 2014, 310-312). Patrol types include anchored patrol, created a fixed barrier line across the route of the submarine, drifting patrol which shifted silently with the current, or running patrol which could search a large area or ahead of a convoy. On a running patrol the ships periodically shut down so they could listen for the submarine. Once a submarine was located they switched to pursuit tactics, and followed the submarine by sprint and drift, i.e. travelling fast then stopping to listen. It needed two or more boats to hear the submarine to locate it. As the submarine could hear the boat engines and would try and move only when the boats moved one boat would start its engines after the others and would listen for the submarine (Friedman 2014, 310-312). When found submarines could be attacked with depth charges even by small trawlers and motor launches. However at the start of 1917 there was a shortage of depth charges so these could not be used as required, as an alternative the submarines were hunted till their batteries ran out, forcing them to the surface where they could be attacked by destroyers (Jellico 1921, 33).

Hydrophones greatly improved the patrol's submarine hunting abilities as they could move and listen at the same time. By July 1916 hydrophones were available and Holyhead requested that they be supplied with portable hydrophone sets, as other bases had (National Archives; ADM 137/599, p252). In January 1917 a hydrophone was fitted to one of the Holyhead drifters (National Archives; ADM 137/942, p40). In June 1917 these hydrophones were replaced by directional hydrophones and another drifter was fitted with Shark Fin hydrophones in July of that year. In September and October 1917several more boats had hydrophones fitted, some with plate hydrophones and some with directional ones. The portable hydrophones could be used on the motor launches and any other available vessel and were subsequently much more regularly and widely used (National Archives; ADM 137/942, p177, 209, 269, 282, 291-2). Directional hydrophones became available in 1917 and their use improved the performance of submarine hunting vessels (Jellico, 62-63, 64). The use of the hydrophones required considerable training and practice, with gramophone records being used to familiarise trainees with the sounds to listen for. Crews at the Holyhead base initially found the use difficult and especially struggled to master the directional hydrophones but in November 1917 suspicious sounds were detected and when investigated a newly laid mine field was found that would otherwise have gone undetected. This demonstrated the value of the hydrophones, and encouraged their more extensive use. At the end of December 1917 there were 35 vessels attached to the Holyhead base and the aim was to train 3 listeners on each vessel to use the hydrophones requiring 102 listeners to be trained, but it was suggested that one instructor could train 50 listeners at a time (National Archives; ADM 137/942, p317, 332, 384, 392).

Training in all other aspects of the auxiliary patrol vessels roles was also vital. In April 1916 a trainer came from Milford Haven to instruct crews in the use of the mine sweep (National Archives; ADM 137/599, p159), and the vessels were to practice using the mine sweeper once a week (National Archives; ADM 137/1186, p429). There was also regular practice in loading and sighting guns, laying depth charges and rifle aiming at sea, as well as

signalling classes (National Archives; ADM 137/599, p72; ADM 137/634, p71). At the end of each quarter a competition was held where the gun crews of each boat competed for a prize. Both accuracy and rapidity of fire were to count in the competition (National Archives; ADM 137/1186, p429), which used a target representing the conning tower of a sub towed by a drifter (National Archives; ADM 137/599, p124).

Despite initial resistance from the Admiralty the institution of the convoy system where merchant ships were grouped together and defended by destroyers proved to be the best way to defeat the submarine threat. The convoys were little easier for submarines to find in the expanse of the sea than individual ships and could be defended. Holyhead played its part in the convoy system as a rendezvous point. From September 1918 the outer harbour was used to assemble vessels into small convoys. An area of the outer harbour was designated for ships awaiting convoy to anchor (National Archives; ADM 137/1520, p169). Seven to eight large vessels would anchor there for a few days until a convoy could be got together and then sailed for Milford Haven with trawlers or drifters as escorts to detect submarines. At Milford Haven they joined the trans-Atlantic convoys. This use of Holyhead increased the risk to the harbour as it became a more important target so two trawlers or drifters were on continuous patrol between the Skerries and South Stack to watch out for submarines (De Sausmarez 1920, 47; Eames 1981, 530).

Troop Crossings and the Easter Rising
Holyhead Harbour was of considerable importance in the War as it was on the route to Ireland. Troops crossed to Ireland for training and to suppress revolt but there were also many Irish volunteers crossing to England to join the army. Some of these troops travelled on the regular mail boats but there were also special steamer crossings just to carry troops. Either when the special crossings were being made or troops were being carried on the mail boats the route was guarded by auxiliary patrol vessels (National Archives; ADM 137/599, p115, 252). The route was also patrolled by the airships from Llangefni (National Archives, ADM 137/634, p156). The numbers of troops moved could be very large. From 4th to 19th January 1917 17,919 troops crossed "To England" and 15,975 to Ireland between Dublin and Holyhead. In addition horses, guns, vehicles, bicycles, carts and baggage were also transported (National Archives; ADM 137/1361). During July 1917 6,946 troops travelled from Holyhead to Kingstown and 13,252 to Dublin, some on special troop steamers (National Archives; ADM 137/1361, p220-1). In April and May 1918 troop movements on the Holyhead-Dublin route totalled 6,842 (National Archives; ADM 137/1518, p279).

This route was of particular importance for getting troops to Ireland during the Easter Rising of 1916. By 8.30am on 24th April 1916, very soon after the Rising had started, Holyhead heard by wireless message that there were "serious riots" in Dublin and steamers were sent to Liverpool for troops. Ships to Ireland, except troop ships, were prevented from sailing until 26th April (National Archives; ADM 137/599, p159). During the week ending 8th May 1200-1300 Sinn Fein prisoners arrived at Holyhead on three different vessels and were sent off to jails in England (National Archives; ADM 137/599, p167-8), some subsequently being sent to Frongoch Camp near Bala (Kenney and Hopewell 2015, 25-6). There is a tradition that most prisoners were brought on cattle ships and landed at the cattle quay at Holyhead but this does not confirm or deny that. During the week ending 15th May there were still over 800 prisoners passing through Holyhead (National Archives; ADM 137/599, p175). The Irish problem did not go away and 45 Irish political prisoners were landed at Holyhead on 18th May 1918 (National Archives; ADM 137/634, p173). These prisoners included Eamon de Valera, then president of Sinn Fein, and Arthur Griffiths, the founder of Sinn Fein (Cambria Daily Leader, 21st May 1918, p1).

In 1915 there was resistance from the Admiralty to providing an armed escort for the mail boats, which were considered to be protected by their speed. The City of Dublin Steam Packet Company pointed out the Lusitania, sunk on 7th May 1915, was a much faster ship than the steamers and could still be hit by a torpedo, but the Admiralty just recommended that the stammers zig-zag (National Archives; ADM 137/1057, p224). Routine protection for the mail boats, when not carrying troops, was not established, though the route does seem to have been patrolled and checked for submarines by the auxiliary patrol vessels (National Archives; ADM 137/942, p9). The danger of the submarines to the mail boats despite their speed was proved when the Leinster was sunk on 10th October 1918.

Irish Sea Hunting Flotilla
The Auxiliary Patrol Vessels had so many roles that they could not concentrate on actively hunting for submarines. On 27th February 1918 a decision was made to create a hunting flotilla for the Irish Sea to combat the still serious threat of submarines in the area. The new Irish Sea Hunting Flotilla was to be under command of the Commander in Chief of the Irish Coast, based at Queenstown (now Cobh, County Cork) and Holyhead was chosen as the most suitable base rather than Kingstown or Belfast. The Flotilla was to include "older type destroyers" but these were

much faster than the trawlers and drifters of the Auxiliary Patrol. Some of the destroyers came from Orkney in March 1918 (National Archives; ADM 137/1518, p410, 424).

The Hunting Flotilla was composed of 11 destroyers and 16 motor launches. By July 1918 there was also 1 yacht and a drifter attached to the flotilla. Five destroyers were based at Kingstown and six at Holyhead. The motor launches were based at Holyhead though for administrative purposes they were on the books at Queenstown and Kingstown. HMS Patrol was the ship of the Senior Naval Officer commanding the Flotilla (plate 9). HMS Patrol was based at Holyhead but if there was submarine activity it went out to sea to direct the hunting. Part of the New Harbour at Holyhead was reserved for the use of the Hunting Flotilla. This was described as west of a line from Mackenzie Pier to the City of Dublin Moorings (National Archives; MT 10/1979/8). The HMS Patrol did not arrive at Holyhead until 14th May 1918 and the orders specifying the role of the Hunting Flotilla did not come into force until 15th May so the flotilla was not fully commissioned and active until May 1918 (National Archives; ADM 137/1518, p230-1, 290). By June the Flotilla was fully operational and was being referred to by the name of the "Irish Sea Hunting Flotilla" (National Archives; ADM 137/634, p205, 219).
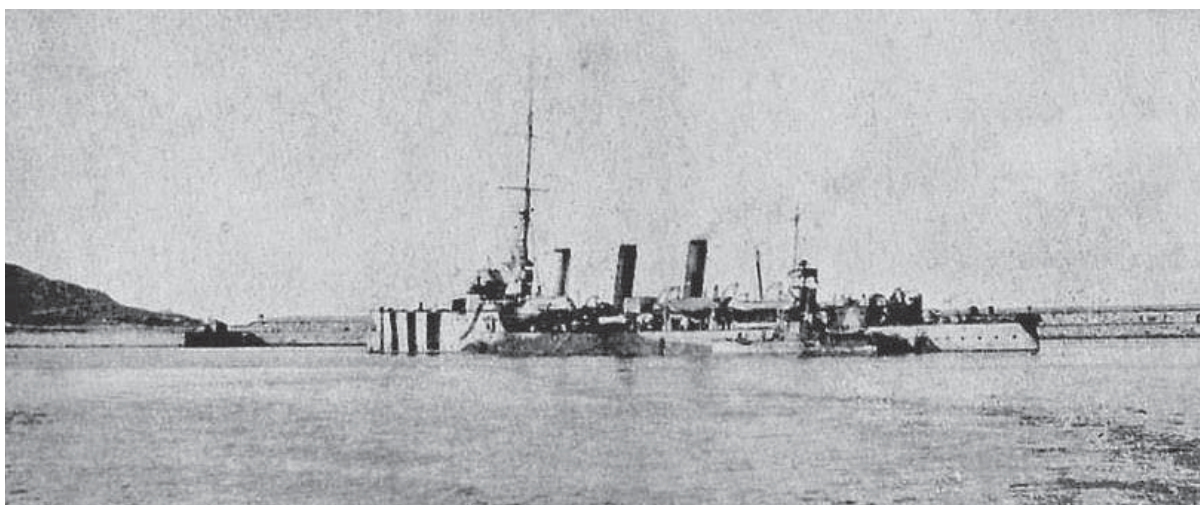
Plate 9. HMS Patrol in Holyhead Harbour (Holyhead Maritime Museum)

All the Flotilla, whether based at Holyhead or Kingstown, were under the command of Captain Gordon Campbell, who in turn received his orders from the Commander-in-Chief of the Coast of Ireland, Admiral Lewis Bayly, based in Queenstown. Lieutenant Commander Norcock commanded the motor launches under Captain Campbell. Captain (later Vice-Admiral) Gordon Campbell VC DSO (plate 10) was appointed to command the Irish Sea Hunting Flotilla in March 1918. He had already had a renowned career as a captain of the deceptive Q-ships, winning his VC by a daring manoeuvre in a Q-ship tempting a submarine in close enough to be attacked and sunk, and he got his DSO after sinking another submarine (vconline.org.uk; Campbell 1937). Campbell's service
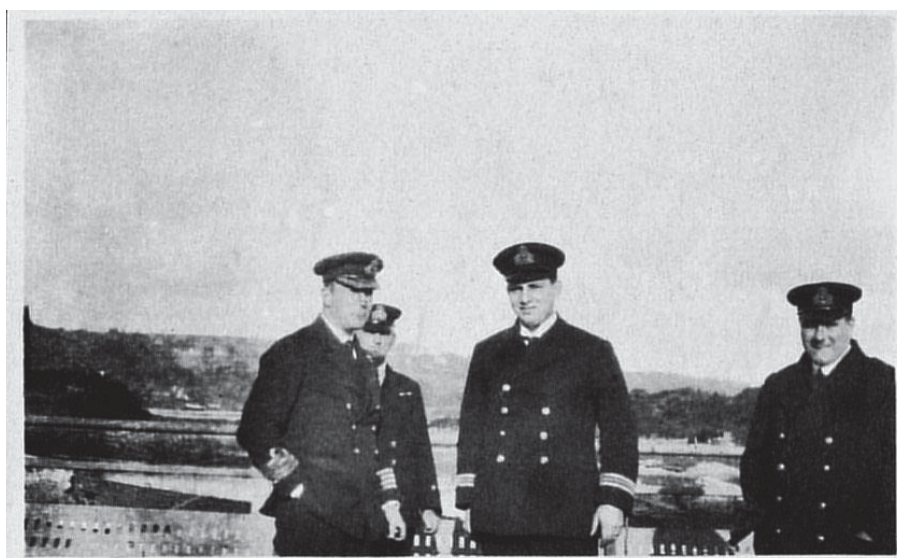
Plate 10. Photograph of commanding officers at Holyhead naval base including Captain Campbell (on left) who commanded the Irish Sea Hunting Flotilla (photograph Holyhead Maritime Museum)

record is full of praise, including an early record describing him as "exceptionally zealous and capable" (National Archives; ADM 196/50/80) and Admiral Bayly described him as "gifted with tact" (National Archives; ADM 137/1518, 247). Campbell looked after his men, or at least the officers, for example in obtaining permission for them to use the tennis court at Government House, not previously available to the navy (National Archives; MT 10/1985/16). Captain Campbell's base was HMS Patrol and although a shore base was discussed this mobile base seems to have been maintained. This meant that if necessary the Hunting Flotilla could be moved elsewhere, as was suggested in July 1918 when it was intended that if there was not much submarine activity in the Irish Sea then the Patrol and her destroyers would move down to the Bristol Channel to help hunting there (National Archives; ADM 137/1518, p287).

The Hunting Flotilla was faster than the auxiliary patrol vessels and operated over the whole Irish Sea from their central base. They patrolled in much the same way as the auxiliary patrol vessels but if a submarine was spotted they could quickly concentrate on that area and support the local boats and actively hunt down the submarine. The limit of operations for the Irish Sea Hunting Flotilla was between the Mull of Kintyre and St David's, covering several sea areas, merging Auxiliary Patrol Areas XV, XVI and XXII. The senior officers of these areas still commanded their own vessels for harbour duties, minesweeping and escort duties but once they were hunting submarines they came under the command of the Irish Sea Hunting Flotilla (National Archives; ADM 137/1518, p237-8, 264). The Flotilla was therefore additional to, and run largely in parallel to, the vessels of the naval base. This could potentially lead to inefficiencies, especially as the airships were initially under the command of Holyhead naval base. There was some discussion about the possibility of a single commanding officer for the whole Irish Sea (National Archives; ADM 137/1518, p237-8, 242, 247). In June 1918 Lewis Bayly, Commander-in-Chief of the Coast of Ireland, requested that the airships at Llangefni and Barrow be put under his command so that Captain Campbell could issue orders as to where they were to patrol (National Archives; ADM 137/1518, p235). The situation was improved when in July 1918 Admiral Bayly was given command of the aircraft stationed in Ireland and those commanded by Holyhead and Fishguard (National Archives; ADM 137/1518, p276). This meant that Captain Campbell could direct the patrols of the Llangefni and Barrow airships. At this time there were 6 airships and 36 aeroplanes under command of Holyhead (National Archives; ADM 137/1518, p276). The latter must have been flying from the airship station as the Bangor airfield was only just being set up.

The complications of operations in the Irish Sea were added to by at least two US destroyers working in the Irish Sea as a hunting flotilla, which had to be kept informed of submarine sightings and other activity (National Archives; ADM 137/1518, 253). On 12th October 1918 4 US motor launches arrived at Holyhead and by 19th October there were 6 "US Chasers", which became part of the Hunting Flotilla (National Archives; ADM 137/1520, p176; ADM 137/634, p388, 404).

Motor Launch Base
Motor launches connected with the Airship Station had been based at Bangor or the Menai Strait from 1915 and motor launches from Holyhead were repaired at Bangor (National Archives; ADM 137/599, p26-7; ADM 137/599, p363)), so there was an existing association between naval motor launches and Bangor. However on 12th September 1918 there was a proposal to move the 16 motor launches that were part of the Hunting Flotilla to the Menai Strait, though the Holyhead naval base motor launches remained in Holyhead. The work of the Motor Launch Hunting Flotilla at Holyhead in July and August 1918 was considered to be "a remarkable performance" as they maintained a nearly continuous patrol, often 50 to 70 miles out in the middle of the Irish Sea (National Archives; ADM 137/1520, p156), but this meant that they had been at sea for nearly 2 months and all the boats required refitting, which was ideally to be done over winter. Holyhead could not carry out complete refits on these vessels so they had been sent to Rowlands Shipbuilding Yard at Bangor (PRN 58451). It was considered that during the winter travelling from Holyhead to Bangor may result in the launches being trapped by the weather at either end of the journey, so it was suggested that a base be set up at Menai Bridge where the trip to the boat yard could be easily carried out in all weathers. There were also problems at Holyhead as westerly and north-easterly gales prevented the motor launches from refuelling (De Sausmarez 1920, 47). The Menai Strait was ideal for the motor launches because when on manoeuvres they could exit the Strait by either end, depending on the weather conditions, making both sides of Anglesey accessible.

The proposed site at Menai Bridge was to consist of a pier, jetty with buildings suitable for stores "a small concert hall suitable for offices, and a mens recreation room and also excellent lavatories". The pier was St George's Pier (PRN 69839) owned by the Menai Urban District Council, but they were persuaded to give it to the Admiralty on condition that any damage would be repaired before its return; the prospect of having nearly 300 men based in the town being a factor in their decision (National Archives; ADM 137/1520, p153-4). The two buildings on the pier

were empty and one was to be used as a store and magazine, the other as a hydrophone instruction room and office (National Archives; ADM 137/1520, p176). A horse-drawn tank wagon was to be sent from the Anglo American Oil Company Depot at Caernarfon to Menai Bridge with petrol for the motor launches, though the weight limit on the Menai Bridge restricted the volume of petrol that could be moved by road. A pipe was also to be laid at Carnarfon to the landing stage so launches could refuel directly there (National Archives; ADM 137/1520, p158).

Rowlands Yard, which later became Dickies Boat Yard in Bangor and is now a new housing development, had its work cut-out refitting all the motor boats. The yard could accommodate three or four launches at a time, so only a small number were out of action at any one time. The yard had no machine shop or fitters, but a building next to the jetty was to be converted into a fitters shop (National Archives; ADM 137/1520, p153-4). Bangor pier (PRN 12706) was also used by the motor launches, especially when being refitted. There is a report of a fire in one of the launches while it was tied up to Bangor Pier. The Pier Master was concerned about possible damage to the pier as the launches carried explosives but the navy insisted that they needed to use the pier to refit vessels and promise to repair any future damaged caused (North Wales Chronicle, 6th December 1918, p7).

The motor launch base was being set up in September 1918 (National Archives; ADM 137/634, p333) and the first vessel arrived there on 27th September (De Sausmarez 1920, 47). Twenty motor launches were to be stationed at Menai Bridge from 15th October 1918 throughout the winter, under the command of Acting Lieutenant Commander Colin Campbell (National Archives; ADM 137/1520, p170-1). Captain Gordon Campbell was still in overall command and when he visited the station he stayed at Plas Rhianfa, Cwm Cadnant (PRN 66268) (North Wales Chronicle, 29th November 1918, p2). As the war finished before the winter of 1918 the base was not needed for long for operations but there were naval motor launches stationed there until January 1919, when the pier was handed back to civilian use (North Wales Chronicle, 17th January 1919, p4). On demobilisation the Motor Launch Flotilla left Menai Bridge for Portdinorwic, before going on to Holyhead, Southampton or other ports (North Wales Chronicle, 17th January 1919, p4).

Not all the men left Menai Bridge; one of the men who served on the motor launches is buried on Church Island (plate 11). He was Philip Corliss Gannaway, born in New Zealand, who joined the Royal Naval Volunteer Reserve (RNVR) and came to the Menai Strait to serve on the boats. He died on 6th November 1918 of pneumonia following flu and was buried on Church Island on 9th November. The funeral was attended by Capt. Campbell with 50 officers and 179 men from the hunting flotilla (North Wales Chronicle 15th November 1918, p8). The grave was identified and researched by Bridget Geoghegan of Menai Heritage. The influenza epidemic that hit during 1918 was very disruptive to the naval base. In some cases vessels had to be laid up because all their crews were ill (National Archives; ADM 137/634, p238).

Plate 11. The grave of Philip Corliss Gannaway on Church Island (photograph by Bridget Geoghegan)

End of the War

At 6.30 am on 11th November the wireless operator on HMS Patrol was one of the first people in the country to hear about the Armistice (Roberts 1920, 54). The US motor launches also received specific instructions that hostilities were to be suspended and submarines were not to be engaged (plate 12). Passengers passing through the port and station saw the celebrations and spread the news (North Wales Chronicle, 15th November 1918, p5). The boats were bedecked with flags and celebrations began (plate 13). However routine patrols continued until 13th November before being with-drawn. Mine sweeping continued until 15th December 1918, when all mines had been removed and the drifters and trawlers were available for demobilisation. The US motor launches seem to have already left by 23rd November (National Archives; ADM 137/634, p444, 459). On 13th November there was a parade and service for all naval personnel on Turkey Shore (De Sausmarez 1920, 47).

Plate 12. Wireless message to the US submarine chasers
announcing the end of the War (Holyhead Maritime Museum)

Plate 13. US motor launches decorated with flags to celebrate the
end of the war (Holyhead Maritime Museum)

Breakwater Lighthouse

Ynys Gybi / Holy Island

Breakwater

Outer/New Harbour

Jetty

Marina

Landing Stage

Soldiers Point

Swimming Pool

Trefenfan Farm

Landing Stage

Slipway

Porth-y-felin House

Slipway

Boat Yard

Newry Beach

Slipway

LB Sta

Pier

Mackenzie Landing

CG Lookout

Graig Ddu

Graig Ddu Landing Stage

Ship/Ferry Terminal (Vehicular)

Ynys Halen
Salt Island

Porth-y-felin

Coastguard Slipway

Cus Ho

Mast

Old Harbour Lighthouse

Car Ferry Terminal

Car Ferry Pier

34030

Mud

Old Harbour

Cycle Track

Public Park

60187

Gorsedd Circle

Liby

Ysgol

69834

69831

Landing Stage

Pipes

South Pier

34007

Tyddyn Bach

Ysgol

ROMAN FORT

34033

Ferry Terminal

16083

34004

Peibio

69835

69833

Inner Harbour

Ysgol

Ind Est

Ppg Sta

Sports Ground

Ynys Peibio

Holyhead Station

69832

Morawelon

Ysgol Llanfawr

Carreg Hanner-trai

Stryd

Black Bridge

HOLYHEAD C

69836

Playing Field

Allot Gdns

Bonc Holland

Ysbyty Penrhos Stanley Amb Sta

Mynydd-celyn-bach

Tros y Garreg

Parkfield Houses

Treseifion Estate

Industrial Units

Ysgol Morawyn

Yr-Ogof

Kingsland

Ysgol Kingsland

Pont Cyttir

Car Park

Gruganedd

Playing Field

Cae Gwyn

Underpass

Parc Busnes Penrhos / Penrhos Business Park

Sewage Works

Porth Dafarch

Cae'r-bothan

Ty Mawr Standing Stone

Car Park

SH

Figure 2. Location of sites in Holyhead Harbour and town
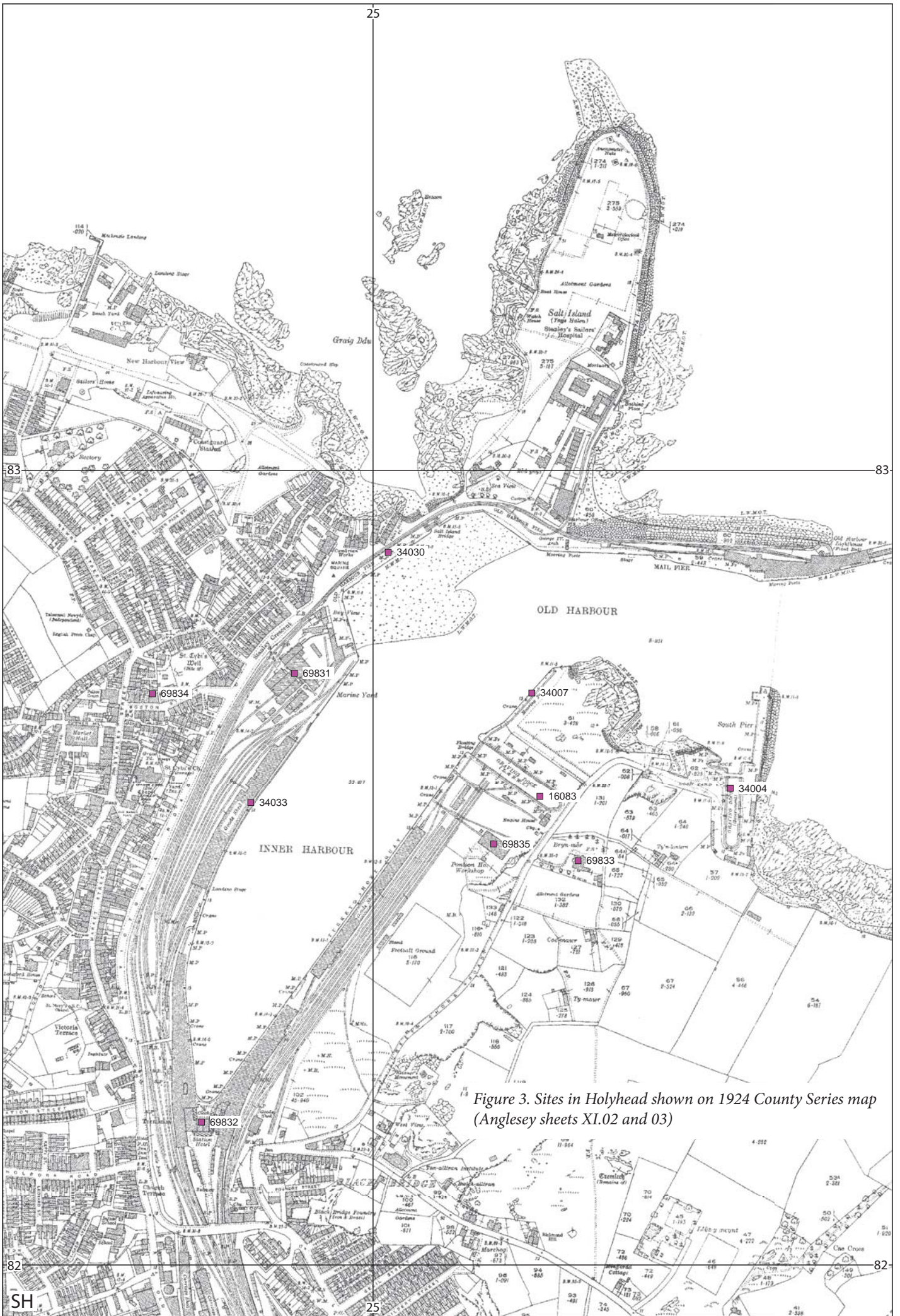
Figure 3. Sites in Holyhead shown on 1924 County Series map (Anglesey sheets XI.02 and 03)

3.3. Sites in and around Holyhead Harbour
Figures 2 and 3

Relatively little survives in the harbour that can be clearly linked to use during the First World War. There seems to have been little change to the harbour to adapt it as a naval base. One of the few features adapted specifically for the use of the submarine chasers was a building labelled as the Pontoon House Workshop (PRN 69835) on the 25 inch maps from 1890. During the First World War it was adapted as a fuel store for the submarine chasing fleet. Four large tanks, originally made to lift the ship the Duchess of Sutherland (sunk in 1875), were reused to hold fuel in the workshop. A bund wall was built around the building to prevent the leakage of fuel if a tank burst (plate 14). The building was later used for storage and was demolished about 1994 (John Cave and Alan Williams pers. comm.). The site is now under parking for the ferry port.

Plate 14. The Pontoon House Workshop showing the bund wall around it (image kindly provided by John Cave)

The two dry docks or graving docks, originally built by the L & NW Railway Company, would have been used during the War for repairs and refitting of naval ships and other ships used for chasing submarines. The larger dry dock was known as "Doc Mawr" (PRN 16083), and the smaller on as "Doc Bach" (PRN 34004). The latter was particularly used in the First World War and was probably where the passenger steamers requisitioned by the Admiralty for war use were refitted (John Cave pers. comm.). Doc Mawr was filled in during 2001, though the top of the wall is visible along its full length and the entrance to the dock is visible (plate 15). Doc Bach has been entirely infilled but the remains of the entrance can still just be seen in the present wall (plate 16).

Plate 15. Part of the entrance wall to the large graving dock (PRN 16083)

Plate 16. The infilled entrance to the small graving dock (PRN 34004)

18

Plate 17. View of Marine Yard

*Plate 18. The offices and stores
in Marine Yard*

The docks were used in combination with Marine Yard (PRN 69831), an engineering yard for ship maintenance (plate 17). The buildings in the yard were constructed at various times between 1850 and 1890, with most built by 1874. The complex included a boiler shop, erecting shop, sawmill, foundry, smithy and offices, all of which are grade II listed (Donald Insall Associates 2003, 32-35). These facilities would certainly have been used to refit the steamers for war use and to repair naval vessels in the War. Marine Yard would have been constantly required to service the auxiliary patrol vessels and later the Hunting Flotilla. The records show some vessels each week requiring repairs, most usually boiler cleaning, which presumably took place in the boiler shop at Marine Yard.

The buildings have been restored to a fine condition, retaining the original features. Some buildings are currently used, while others are largely unused, except for casual storage. The office building currently has offices on the first floor and an archive room on the ground floor where the stores would have been (plate 18). The erecting shop is largely empty but with all the original fittings on the walls (plate 19). This leads through to the boiler shop which has a variety of cranes and winches, including ones that run along the length of the building (plate 20). The sawmill still retains the saw (plate 21) for cutting large timbers to length, particularly to make buffers for the sides of ships, and it also has the original radiator. At the quayside the sheerlegs, a type of crane, would have been essential for lifting boilers and other heavy items out of the ships for repair (plate 22). The sheerlegs themselves no longer survive but the engine house that powered them has been well-restored (plate 23) (information from John Cave, pers. comm.; also see appendix II).

The steamer quay was still used for the passenger steamers and mail boats to Ireland throughout the War, but other quays would have been used by the Hunting Flotilla to tie up between missions. A photograph was obtained by the Holyhead Maritime Museum showing one of the American motor launches tied up on mudflats at a quay known as Pelham's Quay (plate 24). The Public Quay on Parry's Island (PRN 34007) must also have been used by the motor launches (John Cave pers. comm.). Despite considerable changes in the area this quay looks much as it would have done with fishing boats moored instead of motor launches (plate 25). There are photographs showing motor launches moored to the quay (PRN 34030) on the south side of Salt Island in the First World War. These probably included the American Naval Motor Launches, and they assisted the Irish Sea Hunting Flotilla in chasing

Plate 19. Erecting shop in Marine Yard

Plate 20. Crane in boiler shop in Marine Yard (photograph by Martin Simpson and Hanna Hillyer)
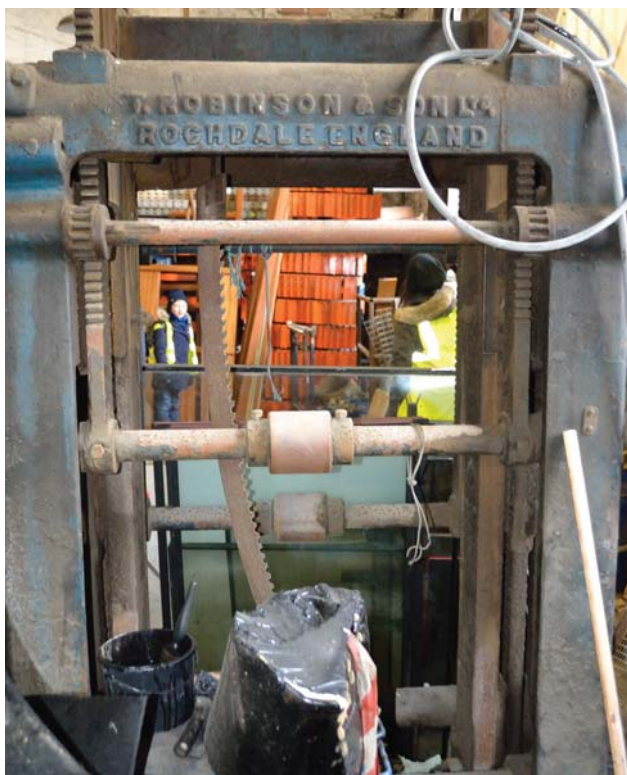
Plate 21. Saw in sawmill in Marine Yard (photograph by Martin Simpson and Hanna Hillyer)

Plate 22. Marine Yard prior to 1914 with the tripod of the sheerlegs towering over the quay in the background (Holyhead Maritime Museum)

Plate 23. Engine house for sheerlegs at Marine Yard (photograph by Martin Simpson and Hanna Hillyer)
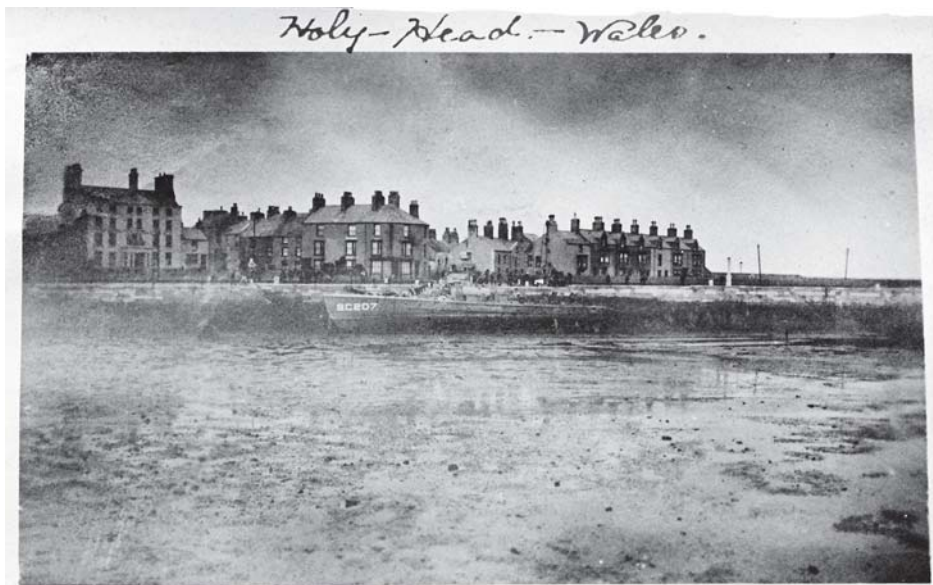
Plate 24. A US Navy motor launch at Pelham Quay, Holyhead (Holyhead Maritime Museum)

Plate 25. The Public Quay with the Custom House and Harbour Offices on Salt Island in the background

Plate 26. Ramp for the cattle quay, near Marine Yard (photograph by Martin Simpson and Hanna Hillyer)

Plate 27. Turret Clock in front of the Stena Line offices

Plate 28. Detail of Bryn y Môr from a photograph of the Pontoon House Workshop (image kindly provided by John Cave)

submarines (John Cave and Richard Bundell pers. comm.).

Though not directly related to the naval activity the Cattle Quay (PRN 34033) was used during the First World War. This was where the cattle ships from Ireland moored and unloaded the cattle, and as in 1916 the Irish who were arrested after the Easter Rising in Dublin were brought from Ireland in cattle ships, they landed at this quay, before being sent to jails in England (John Cave pers. comm.). Very little of this quay can be seen now but the ramp up which the prisoners would have come can still be identified near Marine Yard (plate 26).

Holyhead Station Hotel (PRN 69832) was built in 1878 along with the station. It had red brick facing with black mortar and sandstone dressings. The hotel was demolished by the Sealink British Rail Board in 1978 (NMR NPRN 34616), but the turret clock (PRN 21164) erected to celebrate the extension of the harbour in 1878 still survives. It originally stood between the hotel and the quays, but it has been moved in front of the new Stena Line offices (plate 27), and is now a grade II listed building. The clock would have been seen by soldiers travelling to and from Ireland during the War for training or to control the Irish uprising, but it did not have a specific wartime function. The hotel however was used both for officers travelling through to Ireland and by naval officers, who were accommodated here while they served at the naval base (John Cave pers. comm.; Gareth Huws pers. comm.; National Archives, ADM 137/634, p397). The Drill Hall, Kings Road, Holyhead (PRN 69836) was also used for accommodation for officers from the Naval Base (Gareth Huws pers. comm.). It seems to have been replaced by a modern building on nearly the same footprint.

The offices of the Senior Naval Officer of the Holyhead Naval Base were first located "next door to the Post Office" (De Sausmarez 1920, 44). This may refer to London House, 9-11 Boston Street (PRN 69834), which was then a shop, or it might possibly indicate buildings shown behind the post office on the 1889 and 1900 maps. Church House, Boston Street, was certainly not used as this was not built until shortly before the Second World War. The naval offices were then moved to larger premises at Bryn y Môr (PRN 69835), the official residence of the superintendent of the L & NW Railway Company (De Sausmarez 1920, 44), which also later became the headquarters for the Second World War naval base. Bryn y Môr was demolished after the Second World War and there is now a housing development on the site, but the original house can be seen in the background of the photograph of the Pontoon House Workshop (plate 28).

3.4. Wireless Stations and Other Communications
See figure 1 for location of sites
The submarine hunting activities relied on information from across the Irish Sea and beyond. Much of this information was picked up by wireless stations around the Irish Sea and relayed to Holyhead by telephone or telegraph. Wireless stations were located all around the coast of Britain to collect information about shipping and submarines and it was assumed that some stations would be located within north-west Wales. Jane Phimester has carried out a study of wireless stations during the First World War for Historic England (Phimester 2015). She looked purely at English sites but her notes, very kindly shared with the current author, included some Welsh stations. For north-west Wales these are the Marconi long wave transmitter and receiver stations at Caernarfon and Tywyn (see Kenney 2016, 9-13) and the wireless station associated with RNAS Anglesey (Kenney 2016, 13). Research for this project has tried to find more but these are the only stations that could be found mentioned in the documents consulted. A list of Home Wireless stations (National Archives; ADM 137/4680) includes "Carnarvon" and "Towyn" and the Anglesey NAS but no others; although there was a direction finding (DF) station listed at Rhyl.

A previous report for this project (Kenney 2016, 13-14) identified that an early wireless station (PRN 60187) in Holyhead opened in 1901 and closed in 1903 (Williams 1999, 36) was probably reopened just prior to the First World War for communication with shipping and was presumably used during the War, though no naval documents could be found that referred to it. The wireless station (PRN 60171) associated with the airship station was also used to communicate with the auxiliary patrol vessels. It had a telephone line to the naval base so messages were relayed by telephone then sent out by wireless telegraph. Before July 1916 the wireless station was not sufficiently powerful to do this so messages were relayed via wireless stations in Liverpool or Fishguard, a rather long winded process. The Easter Rising and its aftermath late April and early May 1916 emphasised the problems of using distant wireless stations (National Archives; ADM 137/599, p168), and in July 1916 a request was granted to boost the power of the RNAS wireless station so that it could perform this function (National Archives; ADM 137/1250, p287). However routine communication between Holyhead and the Commander in Chief at Queenstown and commanders of other naval bases was to be mainly by land wire and submarine cable with wireless telegraph used only in emergencies, to help maintain security (National Archives; ADM 137/1518,

p322).

At the start of the war at least, when the use of wireless sets in ships was more limited, semaphore signals were used to communicate with shipping and to allow direct communication between the auxiliary patrol vessels and the airships (National Archives; ADM 137/599, p65, 116). Semaphore was also used to pass messages by some of the War Signal Stations around the Welsh coast. Coastguard signal stations were taken over by the Admiralty for use as War Signal Stations (WS stations). They still reported on the movement of shipping and accidents but this information formed part of the data to be used by the submarine hunting fleets. War Signal Stations listed in north-west Wales were on Mynydd Mawr (Braich y Pwll, near Bardsey Island), South Stack, Port Lynus, Amlwch (presumably Point Lynus), and Great Ormes Head (National Archives; ADM 137/1127, p483; ADM 137/1186, p424). These were based in light houses, with the exception of Mynydd Mawr, which was purely a signal station. There was a semaphore then telegraph station on the Great Orme (NPRN 300829) but this closed in about 1863 and the telegraph was moved to the new lighthouse on the tip of the headland (Rowlands 1892). It would have been this telegraph station in the lighthouse (PRN 20725) that was used as a war signal station. The telegraph equipment was preserved in the lighthouse in 1979 (Hague 1979, 284) but was removed in about 1985 (NPRN 34158). The signal station at South Stack was presumably in the lighthouse (PRN 3810) or one of the associated buildings. There was also a flagpole (PRN 69841) situated on the hill above South Stack that was probably used with the signal station. The telegraph station at Point Lynus near Amlwch was in the lighthouse (PRN 7176) and the 1900 map also shows a semaphore mast next to the lighthouse. This is not shown on the 1924 map but may have been used in the War.

There was a coast guard signal station on Mynydd Mawr at the end of the Llŷn peninsula from the late 19th century (PRN 69840). The 1900 County Series map shows a semaphore pole as well as the signal station building and the semaphore pole is still present on the 1918 map, so semaphore as well as telegraph may have been used by this station to communicate with shipping during the War.

The trans-Atlantic transmitter and receiver stations built by the Marconi Company and taken over by the Admiralty during the First World War have been studied in a previous report for this project (Kenney 2016). Documentation consulted at the National Archives adds a little more information to the Cefndu Long Wave Wireless Transmitter site (PRN 887) (National Archives; CRES 49/954). These show that although work on the transmitter station started in February 1913 the sale of the land and license for a wireless station were not finally confirmed until early 1914.
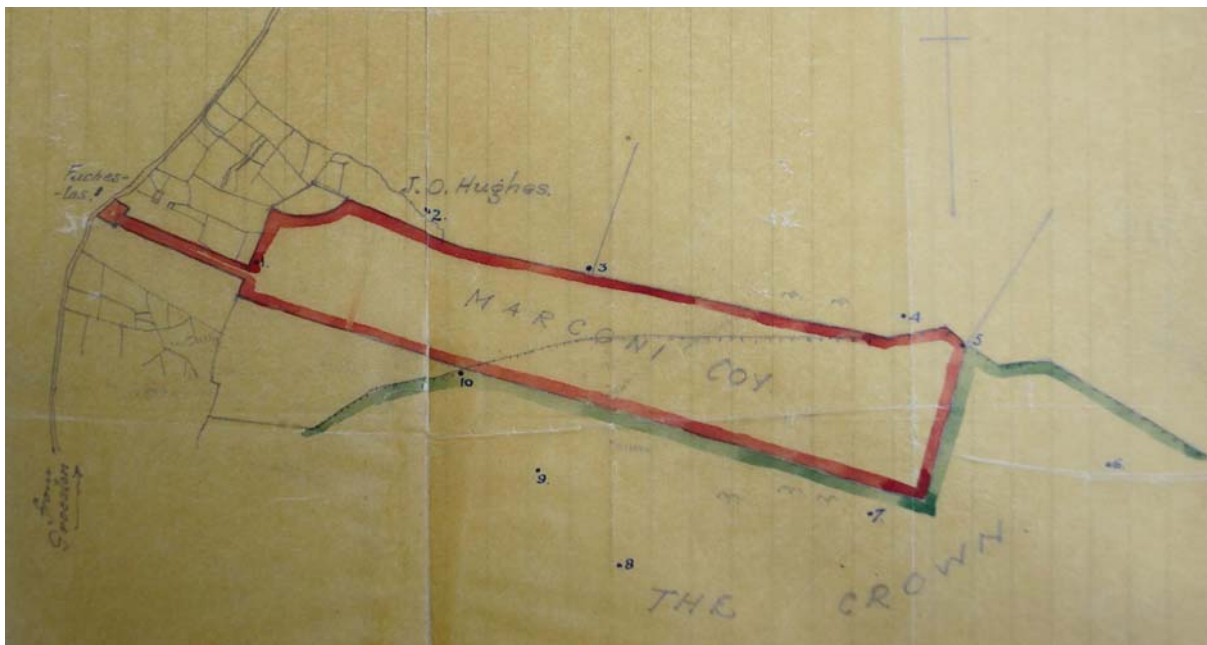

Plate 29. Plan of Waunfawr Wireless Station showing position of blockhouses (numbered 1 to 10) (National Archives; CRES 49/954)

It was suggested in Kenney 2016 (p10) that the brick buildings surrounding the aerial at the transmitter site were blockhouses built to protect the site during the War. This has been confirmed by documents (National Archives; CRES 49/954) that show the War Department built three blockhouses on Cefndu in December 1914 along with a wire fence around the aerial, and more blockhouses were built in March 1915 and a plan of the site marks 10 blockhouses (plate 29), all but one of which can still be identified on the ground. The defence of this site was clearly of considerable importance, with presumably sabotage considered the most likely risk. The ring of blockhouses, from which guards could see the whole perimeter of the site, would make it difficult for a potential saboteur to gain access.

Blockhouses Nos 2 and 4-9 have previously been recorded; they are respectively PRNs 10034, 60212, 60197, 60193, 60192, 60191 and 60190. Blockhouse No. 1 is represented by a concrete pad located next to the Marconi Hall. From the aerial photograph this pad measures 9m by 6m and the blockhouse would have controlled entry to the site. The location is SH 5314960799 and this new site has been allocated PRN 69844. Blockhouse No. 10 is visible on the NextPerspective aerial photographs used by the Gwynedd HER. It is visible as a faint rectangular mark measuring about 9m by 6m and is located at SH 5358160571. This has been allocated PRN 69845. No. 3 could not be seen on the aerial photographs because the area is covered in gorse and would have to be located on the ground. This feature has therefore not yet been given a PRN.

3.5. Pillboxes and Observation Posts

During the scoping phase of this project two sites on the Great Orme, Llandudno were suggested as possible First World War sites. These were an observation post (PRN 15492) and a pillbox (PRN 20732). PRN 15492 is located on the north-western tip of the Great Orme just south-west of the lighthouse. The structure is not shown on the 6 inch map revised in 1938, or on any earlier maps, but is shown on that revised in 1948. This demonstrates that the site belongs with the gunnery school and other Second World War activity on the Great Orme and that it is not First World War in date. PRN 20732 is a partially ruined pillbox next to Marine Drive on Pen Trwyn (plate 30). This was also suggested as a possible look-out post for submarines. It does not appear on any maps until very recently but it was assumed by Jones (1997, 10) to be a Second World War pillbox and this seems the most likely interpretation.

Plate 30. Pillbox (PRN 20732) on the Great Orme (photograph taken 23/11/2013 by Keith Pickering)

3.6. War record graffiti

Normally researching the wartime record of specific soldiers or sailors is the work of historians and involves War Office records and other paper documents. However a discovery in Anglesey Archives revealed a document falling within the archaeologists' field of study. On the wall of a barn (formerly a coach house and stables) at the Rectory, Rhosybol, Anglesey the war time record of several soldiers has been written in pencil. The writing was recorded in 1998, presumably by the owners of the barn, and a transcription and photographs of the graffiti is held in Anglesey Archives (WM/1827) (plate 31). The graffiti includes the war time record of WM Roberts, a rifleman from Saskatchewan, Canada, who seems to have spent most of the war training, especially in Ireland. Lieutenant ED Davies of the Royal Naval Reserve lists the ships he served on and he served with the Dunster Force Persia and the Caspain Naval Force. W Roberts served on the Vimy Ridge and in the Somme Advance, and A G Roberts and J R Dawes are also mentioned. The records extend up to 1919. It is not clear whether it was the men themselves who wrote the graffiti, and if so why in the barn. WM Roberts is listed as "Repatriated to Sask Canada Aug 7 1919" with the use of the past tense suggesting that he had left before the graffiti was written. The Rectory is just the sort of building that was used for auxiliary hospitals, although rather far from a railway station,

but no hospital is known here. The names are all Welsh so they may have been local or had families locally and were visiting at the end of the war. The current condition of the pencil graffiti, which must be very vulnerable, is not known. The graffiti has been recorded as PRN 69842.
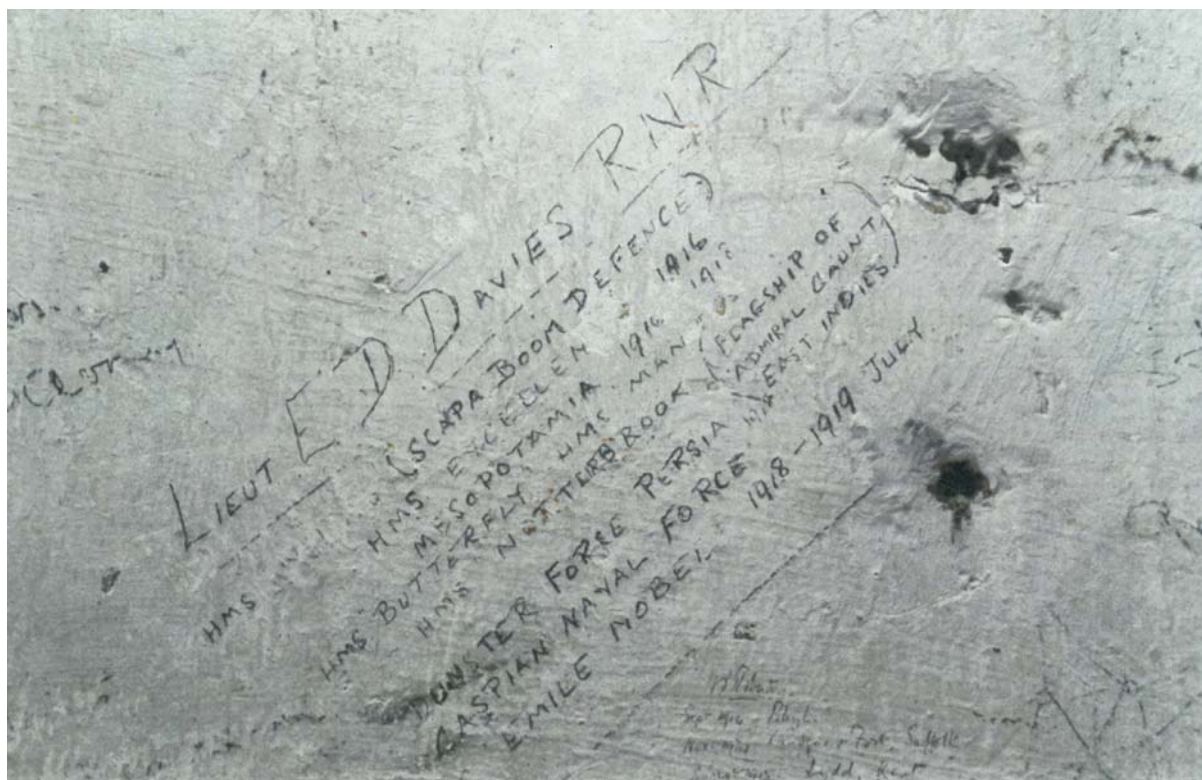
Plate 31. Photograph of some of the graffiti in the barn at the Rectory, Rhosybol (PRN 69842) (Courtesy of Anglesey Archives (WM/1827))

3.7. Updates
As the project has progressed some information has arisen on themes investigated in previous phases. In order for these new discoveries to be recorded they are included in this report and have been added to the database for the HER.

Hospitals

An additional convalescent home has been identified in Llandudno. Bill Haughton of Creston, British Columbia, Canada contacted the author with the information that his great grandmother, Annie Foulkes, wife of Joseph Foulkes, took in wounded soldiers during the War. Her house was Bon Aire, Oxford Road, Llandudno (PRN 69843). Bill suggests that it was number 5 Oxford Road but the photographs that he sent show that it is now number 8 (SH 78495 81878) (plates 32 and 33). The house is not shown on the 1900 map but was built by 1912, so it must have been quite new at the start of the War. Bill relates that this was where his grandfather, Albert Hobbs, one of the wounded soldiers, met his grandmother, Eliza Foulkes, and they married in 1916 (plate 34). Bill thinks that Annie Foulkes would have been in the local Voluntary Aid Detachment (VAD), which would be very likely as she was running a hospital. There have been some changes to the building, especially the loss of decorative detail, but it is still quite recognisable today.

Plate 32. Bon Aire, Oxford Street, Llandudno (pre-1914). This house was used as a convalescent home during the War (photograph courtesy of Bill Haughton)

Plate 33. Eliza Foulkes with three convalescing soldiers at Bon Aire circa 1916/1917 (photograph courtesy of Bill Haughton)

Plate 34. Picture taken at the wedding of Albert Hobbs and Eliza Foulkes on March 15, 1916 in front of Bon Aire (photograph courtesy of Bill Haughton)

Rifle ranges

Bill Flentje, who assisted with the study of rifle ranges in GAT report 1248 (Kenney and Hopewell 2015) has identified images that show the rifle range at Abergwyngregyn (PRN 58731) was not just used for training local volunteers but was used during the First World War to train regiments from further afield including the Glamorgan Regiment. This suggests that the rifle range was used as an integrated part of the training facilities in the Bangor and Conwy area.

A photograph of the mantlet shows that this was encased in timber and iron plates to protect it from erosion by the sea and coastal weather. The iron plates appear to have been either former iron target plates or parts of iron mantlets, possibly from Conwy Morfa range where in c. 1903 iron targets were replaced by canvas ones and this range also had iron mantlets (Bill Flentje pers. comm.). The images are on the Quiet Woman's Row website (http://quietwomansrow.com/#/the-glamorgans-1914-16/4556248763).

A probable new rifle range has been located on the north-eastern side of a hill called Moel Maelogen to the east of Llanrwst, Conwy. This is an early range and not used in the First World War but is included here for completeness. The 1875 first edition 25 inch map marks a target marked to the south-east of Maelogen Fawr Farm. Next to the track on the north-eastern side of the farm a picket is marked, presumably to warn people when firing was going on.

The 1875 map shows 'Target' only, but not 'Rifle Range', suggesting that the range may have disused by 1875. The nearest Rifle Volunteer Corps was the 8th Denbighshire (Llanrwst) R.V.C., formed in October 1861 and disbanded some time in 1865. This range is only about 5km east of Llanrwst and was probably used by this Corps, and fell into disuse on their disbandment. The map shows a rectangular structure which is labelled "target". This structure is likely not to be a target but to show the mantlet. Aerial photographs, until recently, showed a rectangular stone-built structure, which was probably the remains of this mantlet. Google Earth shows this feature on its 2006 photographs, but by 2009 there is just a slight earthwork detectable and by 2015 there is no trace of this structure. It therefore seems to have been demolished between 2006 and 2009. No firing points are visible on the map or aerial photographs but this to be expected as they were probably just marked with either a wooden peg or a stone marker (Information from Bill Flentje, pers. comm.).

The target has been given PRN 68549 and is located at approximately SH 85265 61666; the picket is PRN 68550.

Plate 35. Female munitions workers at Penmaenmawr Quarry during the First World War (photograph courtesy of Dennis Roberts)

Munition Factories

Only two munitions factories are listed by the Ministry of Munitions in north-west Wales but it would seem likely that other smaller scale production might have been undertaken. Dennis Roberts of Penmaenmawr Historical Society remembered being told by an elderly local resident that there had been munitions workers in Penmaenmawr Quarry (PRN 15813) in the First World War. He has obtained a photograph (plate 35), unfortunately undated and with no other information, that shows female munitions workers in Penmaenmawr Quarry. It is not known where the munitions were made within the quarry. It is likely that this was shell case production using existing lathes in a workshop. Hopefully this slight hint might lead to the identification of other evidence in the future.

4.   CONCLUSIONS AND RECOMMENDATIONS

This project has provided a valuable opportunity to investigate the history of the naval base and Hunting Flotilla at Holyhead. There has been considerable interest in the ships from Holyhead, their actions during the War and especially if sunk in action. The harbour itself and even the structure and function of the naval base have been largely ignored despite the wealth of documentary information available. This report goes some way towards correcting that by identifying the dates that the naval base and Hunting Flotilla were established, the number and type of vessels involved and their functions.

Unlike some of the other phases of this project the number of sites identified has been low with only 43 sites listed, including 6 sites unrelated to the theme and several sites that have previously been recorded in the project. Of those sites many do not survive and of those that do survive the wartime use is a small part of their function and the chance of First World War features surviving is low. The only good survival is Marine Yard, Holyhead, where again the wartime use is only a small part of the history of the buildings. Most of the buildings in Marine Yard are already listed and protected. The engine shed for the sheerlegs is not listed, although Stena Line appears to be treating it as if it is. It would seem sensible to reconsider this omission and to list this building along with the rest.

The confirmation of the buildings around the Cefndu Transmitter Station as First World War blockhouses adds yet more depth to the understanding of this site and confirms the Admiralty's recognition of its importance to the war effort. The whole transmitter station site has previously been recommended for scheduling. None of the other sites can be recommended for scheduling or listing purely on their First World War uses; all the lighthouses listed are already listed.

There are therefore no recommendations resulting from this report but a wider public understanding of the importance of Holyhead during the First World War would be a valuable result from this work. North-west Wales was not distant from the fighting in the War as is often assumed. Holyhead was on a front line in the battle against U-boats and played a substantial part in protecting Britain from starvation through the sinking of merchant ships.

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6.4. Record Offices and Archives

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WSD/272: Postcard of Holyhead, early 20th century
WSD/364: postcard of the new harbour, Holyhead 1907
WSD/245: post card of Holyhead, aerial view, 20th century
WM/1088/38: Photograph of Tara survivors outside Holyhead Station 1916
WSD/541/5: Photograph of Leinster n.d.

6.5. Newspapers
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The Cambria Daily Leader
North Wales Chronicle and Advertiser

7. APPENDIX I: Gazetteer of Operational Sites with Additional Updated Sites

7.1. Holyhead Harbour and Town

PRN 16083
LNWR Graving Dock, Holyhead
NGR: SH25218259
Location: Holyhead, Ynys Mon
Description
This dock, known as "Doc Mawr", was used during the First World War in conjunction with Marine Yard for repairs and refitting of naval ships and other ships used for chasing submarines. It may have been used in refitting the LNWRC passenger steamers requisitioned by the Admiralty for war use (John Cave pers. comm.).
Previous HER description
Graving dock built in the 1870's when the east side of the harbour was being infilled and straightened by the LNWR railway company. It is now filled in, but the top course of the masonry is still visible. <1>
Built c. 1874 - 6 as part of the development of the east side of the dock when the area between Parry's Island and the top of the harbour was in-filled to a new revetment wall. The dock was filled in during 2001, though the top of the wall is visible along its full length, and an alcove remains in the wall under the road with a bollard used for tying ships. The dock was emptied by the adjacent pump house (PRN 16082). (Donald Insall Associates Ltd., 2003).

PRN 34004   NPRN 519067
Graving Dock, Holyhead Harbour
NGR: SH25458260
Location: Holyhead, Ynys Mon
Description
This dry dock, known as "Doc Bach", was used during the First World War in conjunction with Marine Yard for repairs and refitting of naval ships and other ships used for chasing submarines. This dock was particularly used in the War and may have been used in refitting the LNWRC passenger steamers requisitioned by the Admiralty for war use (John Cave pers. comm.).
Previous HER description
A dry dock which formed part of Rennie's original design, though was not constructed until 1825-6, and therefore the final designs are probably by Telford. The lock gates, machinery and crane were provided by William Hazeldine. The dock was emptied by the adjacent steam pump (PRN 16085). The dock is now filled in, and only the south end is visible where a curving row of large limestone slabs can be seen at ground level. (Donald Insall Associates Ltd., 2003).

PRN 34007
Public Quay and Quay Walls, Parry's Island
NGR: SH25208272
Location: Holyhead, Ynys Mon
Description
This quay was used in the First World War by the motor launches, including the American Naval Motor Launches, that assisted the Irish Sea Hunting Flotilla in chasing submarines (John Cave pers. comm.).
Previous HER description
This long side of Parry's Island was used as a quay certainly from the 1820's, and quite possibly before then, being close to where the packet boats moored. It is described as a 'public quay' following the construction of the new SE side of the harbour, and the adjacent graving dock in 1874 - 6. (Donald Insall Associates Ltd., 2003).

PRN 34030
Quay Wall, S of Salt Island
NGR: SH2501982897
Location: Holyhead, Ynys Mon
Description
There are photographs showing American Naval motor launches moored to this quay in the First World War. They assisted the Irish Sea Hunting Flotilla in chasing submarines (John Cave and Richard Bundell pers. comm.).
Previous HER description
Well preserved section of harbour wall south of the bridge to Salt Island and around the inner harbour to Pelham

Quay. Appears to be part of the early 1810-24 works as it is clearly shown on M7 (1826-32). Two sets of steps down to water. (Donald Insall Associates Ltd., 2003).

PRN 34033
Quayside, S of Pelham Quay
NGR: SH2484682582
Location: Holyhead, Ynys Mon
Description
This was the cattle quay where the cattle ships from Ireland moored and unloaded the cattle. In 1916, after the Easter Rising in Dublin, the Irish who were arrested were brought from Ireland in cattle ships and landed at this quay, before being sent to goals in England and in many cases to Frongoch prisoner of war camp, near Bala (John Cave pers. comm.).
Previous HER description
The length immediately south of the quay, fronting the Marine Yard, has been rebuilt. A short length (approx. 50m) remains in situ, with part of the cattle path visible, and steps down to the water. Built late 1870's. The remainder to modern road bridge across the harbour has been strengthened by having stone piled on the harbour side to act as a buttress. Apparently the original wall survives underneath. (Donald Insall Associates Ltd., 2003).

PRN 58711
Holyhead Naval Base
NGR: SH250827 C
Location: Holyhead Urban, Ynys Mon
Description
The naval base was established at Holyhead in August 1915 with trawlers and drifters under the yacht Amethyst III. These were later joined by motor launches. The vessels formed the Auxiliary Patrol for Area XXII in the Irish Sea and they patrolled for submarines, cleared mines laid by submarines and escorted ships to protect them from submarines. In May 1918 the Irish Sea Hunting Flotilla was set up, based at Holyhead, to aid with hunting for and attacking submarines. The Flotilla was under a separate command to the naval base. Routine patrols continued until 13th November and mine sweeping continued into December 1918, but the naval base was then decommissioned, until set up again in the Second World War (National Archives; ADM 137/1127; ADM 137/599; ADM 137/942; ADM 137/634; ADM 137/1518).

PRN 60187
Marconi Wireless Station, Holyhead
NGR: SH24428285 A
Location: Holyhead Urban, Ynys Mon
Previous HER description
Holyhead had one of the first fully operational Marconi wireless stations, which were commissioned by the British Admiralty as coastal stations to communicate with shipping. These were constructed in 1901. The Holyhead wireless station was operated from a house on Queen's Park. The house is now no. 66, but it was originally no. 21, and the mast stood in the paddock next to the house.
This station is generally said to have been closed down in 1903 (Williams 1999, 36) but Carnarvon and Denbigh Herald reported a possibility of it reopening in 1909, to be run by the Post Office, not the Marconi Company, to communicate with shipping. This must have taken place as Mr E Higgins, in a letter to the Daily Post (January 10th 1992), describes the wireless station as still in use until 1920-22.

PRN 69831
Marine Yard, Holyhead Harbour
NGR: SH2490182745
Location: Holyhead Urban, Ynys Mon
Description
Marine Yard is a group of marine workshop buildings, built between 1858 and 1880, but of similar materials and in a complimentary style. Marine Yard was built by LNWR as part of its developments in the harbour with the arrival of the railway. The yard included a smithy, boiler shop, fitting shop, erecting shop, foundry, sawmill and offices, and continued in use into the second half of the 20th century (Donald Insall Associates Ltd., 2003).
During the First World War it would have been used to repair naval vessels based in the harbour and to convert four of the railway steamers to war use. However it was not able to refit motor launches, which had to go to Bangor throughout the War for repairs.

Most of the buildings in Marine Yard are listed and Stena Line have restored many of them without the loss of original features. The main offices are still being used and the store room below is now an archive room.

PRN 69832   NPRN 34616
Holyhead Station Hotel (site of)
NGR: SH2478482180
Location: Holyhead Urban, Ynys Mon
Description
The hotel was built in 1878 along with the station by the London and North Western Railway Company. It had red brick facing with black mortar and sandstone dressings. The hotel was demolished by the Sealink British Rail Board in 1978 (NMR NPRN 34616).
The Station Hotel was erected by the London & North Western Railway and opened with other harbour improvements by the Prince of Wales on 17th June 1880. export The hotel had 75 rooms, 60 staff and its own golf course (http://historypoints.org/index.php?page=site-of-station-hotel-holyhead).
The purpose of the hotel was to provide accommodation for travellers on their way to or back from Ireland. It was used in this way by army officers during the First World War travelling to and from Ireland for training or to control Irish nationalist uprisings (John Cave pers. comm.). The hotel was also used as more long term accommodation for some of the naval officers attached to the Holyhead Naval Base (Gareth Huws pers. comm.).

PRN 69833
Bryn y Môr, Holyhead
NGR: SH2525882509
Location: Holyhead Urban, Ynys Mon
Description
Bryn y Môr was the official residence of the superintendent of the London and North Western Railway Company. In the First World War it was used as offices for the Senior Naval Officer of the Holyhead Naval Base (De Sausmarez 1920, 44). The house is shown on the 25 inch maps from 1889. It was used again in the Second World War as offices for the naval base but has since been demolished.

PRN 69834   NPRN 416072
London House, 9-11 Boston Street, Holyhead
NGR: SH2472282719
Location: Holyhead Urban, Ynys Mon
Description
A building used as a shop on Boston Street.
De Sausmarez (1920, 44) states that during the First World War the offices for the Senior Naval Officer of the Holyhead Naval Base were initially situated "next door to the Post Office", possibly but not certainly meaning London House. The building is shown on the 25 inch maps from 1889. The ground floor is currently a nursery but was presumably a shop for most of its history. The naval offices were soon moved to Bryn y Mor.

PRN 69835
Pontoon House Workshop, Holyhead Harbour
NGR: SH2515282530
Location: Holyhead Urban, Ynys Mon
Description
The Pontoon House Workshop is shown and labeled on the 25 inch maps from 1890. During the First World War it was adapted as a fuel store for the submarine chasing fleet. Four large tanks originally made to lift the ship the Duchess of Sutherland (sunk in 1875) were reused to hold fuel in the workshop. A wall was built around the building to prevent the leakage of fuel if a tank burst. The building was later used for storage and was demolished about 1994 (John Cave and Alan Williams pers. comm.). The site is now under parking for the ferry port. A photograph showing the building before it was demolished, and the rest of this part of the harbour, is kept in Stena House.

PRN 69836
Drill Hall, Kings Road, Holyhead
NGR: SH2452781977
Location: Holyhead Urban, Ynys Mon
Description
The Drill Hall is not shown on the 1900 25 inch map but is on the 1924 map. It must have been built by the First World War as it was used for accommodation for officers from the Holyhead Naval Base (Gareth Hughes pers. comm.). It seems to have been replaced by a modern building on nearly the same footprint.

7.2. Other Operational Sites

PRN 887   NPRN 405838
Marconi Wireless Transmitting Station, Cefndu
NGR: SH534607 C
Location: Llanrug, Gwynedd
Description
Documents in the National Archives (National Archives; CRES 49/954) show that although work on the transmitter station started in February 1913 the sale of the land and license for a wireless station were not finally confirmed until early 1914.
It was suggested in Kenney 2016 (p10) that the brick buildings surrounding the aerial were blockhouses built to protect the site during the First World War. This has been confirmed by documents (National Archives; CRES 49/954) that show the War Department built three blockhouses on Cefndu in December 1914 along with a wire fence around the aerial, and more blockhouses were built in March 1915 and a plan of the site marks 10 blockhouses, all but one of which can still be identified on the ground.
Previous HER description
Building and concrete bases of aerial masts of Marconi's transmitting station on the slopes of Cefndu, Llanrug, near Caernarfon. The transmitters, operated by remote control from the receiving and operation centre at Towyn (PRN 888), were part of Marconi's transatlantic long wave wireless telegraph service from London to New York from 1914 to 1923. It remained in service as a long wave station until 1928 and then used as a relief station to cover heavy traffic peaks. It became redundant in 1939 and was used by the war department, and then as a Catholic hostel. It is now privately owned and called Plas y Celyn.
The transmitter originally comprised a twin wire aerial supporter on lattice steel masts 300ft high lined up in the direction of the American station in New Jersey. According to GEC-Marconi no plan exists of the site but the layout is at least partly preserved by the concrete bases of the dismantled masts.
The area was used by the TA who built huts, bunkers, platforms and causeways across the wet ground, making a very confusing pattern on the map. A site visit is needed to establish exactly which squares on the map are mast base supports. The NW edge of this area was visited in 1988 as part of the upland survey and some of the TA constructions recorded (FW25-46, PRN 10034). Part of the adjacent hillside had been 'drained' by crudely cut machine trenches which were open in 1988. The area of the masts was proposed as a wind farm site in Feb'92. See file T 257. 'Caernarfon remained the most important long wave station in the country up to opening of the post office transmitting station at Rugby in 1924'. <1>
The Transmitting Station was situated the slopes of Cefndu between Llanrûg and Waunfawr. The station buildings included a residential block for staff and the main building containing the transmitter hall (Williams 1999, 68). Remains of the aerial and related structures are extensive and complex. Most of the area was inspected by Oxford North as part of an Upland Survey (Schofield 2008), and they recorded 70 concrete bases. There were several buildings on the fringes of the aerial array, most of which were probably blockhouses for troops guarding the wireless station during the First World War. Several of these buildings are joined by culverts that probably carried power or communication cables. Many of the features recorded by Oxford North as "tracks" are part of a light railway system that was used to carry the materials for the massive masts across the site.

PRN 3810
Lighthouse, South Stack
NGR: SH2023082262
Location: Trearddur, Ynys Mon
Description
Used as a war signal station in the First World War (National Archives; ADM 137/1186, p424).
Previous HER description

Lighthouse (NAT). <1>

South Stack lighthouse, South Stack Island, a tall circular, tapering masonry tower supporting a lantern, completed in 1809. <2> <3>

1809. Tall circular tapering tower supporting lantern with revolving light. Whitened masonry. Engineer, Joseph Nelson. <4>

South Stack lighthouse celebrates its 200th birthday. Light first shone from the structure on 9th February 1809. It cost Trinity House 12,000 to build and boats were used extensively during its construction. A bridge was not built until 1827 to span the 100ft (30m) chasm which separates South Stack from the mainland. No-one has manned the lighthouse since 1984 when it was automated. <5>.

PRN 7176   NPRN 80467
Lighthouse and Telegraph Station, Point Lynas
NGR: SH4795093480
Location: Llaneilian, Ynys Mon
Description
Used as a war signal station in the First World War (National Archives; ADM 137/1186, p424).
Previous HER description
Point Lynas was designed in 1835 by Jesse Hartley in the romantic style with later additions by G. Lyster, and built by Mersey Docks and Harbour Board. Point Lynas was first established in 1779 at a site c.300m to the S of the present tower. It was later decided to abandon the original site and erect a new tower on the present site.
A two storey dwelling surmounted by a square tower 11m high. At the base of this was a projecting semicircular lantern 3.7m in diameter protected by an external ditch. The lantern was flanked by high wall which returned to the S to enclose a courtyard. It had a wall-walk carried on a series of internal arched recesses, now inaccessible. The S curtain was demolished c.1879.
A telegraph station was established here in 1879 and two new cottages erected, necessitating the demolition of the old S wall of the courtyard. Numerous changes to the lantern have taken place. <3>

PRN 10034
Blockhouse, Plas y Celyn
NGR: SH5345360916
Location: Llanrug, Gwynedd
Description
The identification of this building as a First World War blockhouse for guarding the transmitter station has been confirmed by a document which marks 10 blockhouses around the site (National Archives; CRES 49/954). This is blockhouse No. 2.
Previous HER description
Territorial Army constructions to the NNE of Plas y Celyn (formerly the Marconi Club). Ruined square, brick building shown on OS. It is approached and surrounded by a network of raised trackways and made of stone, now partly grassed over. Generally 1m side and 0.3m high, with prominent edging stones. <1>
Brick building with gun loops that is probably a blockhouse for troops guarding the wireless station during the First World War.

PRN 12706   NPRN 34150
Bangor Pier, Bangor
NGR: SH58377335
Location: Bangor, Gwynedd
Description
Bangor Pier was used from about September 1918 by the Motor Launches forming part of the Irish Sea Hunting Flotilla, which searched for and attacked submarines the First World War. In December 1918 a fire in one of the launches is reported next to the pier. The Pier Master was concerned about possible damage to the pier as the launches carried explosives but the navy insisted that they still needed to use the pier to refit vessels and promised to repair any future damaged caused (North Wales Chronicle, 6th December 1918, p7). At this stage the motor launches were probably being repaired and refitted prior to demobilisation.
Previous HER description
Circa 1894, 1550ft long into Menai straits; ornamented iron gates. (RCAHMW, Undated)
The pier was built in 1896, following prolonged discussion over some four years. The engineer and designer was J J Webster, and the contractor Alfred Thorne. It was damaged by a ship in 1914, when the cargo vessel 'Christiana' was driven against it during a severe storm. It was finally rebuilt in 1921. It was closed in 1971 because of poor

condition, and renovated 1982-8, reopening in the final year. The pier is 1550ft long, and claimed to be the longest surviving in Wales. It is supported on steel girders and cast iron columns, many of the original girders having been replaced with galvanised steel. A new deck was installed during the 1982-8 repairs. The pier is entered through ornate wrought iron gates flanked by octagonal kiosks. There are deck widenings at 250 ft intervals containing polygonal timber kiosks with tent-like roofs. An iron staircase at the end, with 6 levels of platforms, led to a former floating pontoon. (Cadw 1988, 30, Dunkerley 1994). (Berks & Davidson, 2007).

PRN 15492
Observation Post, Great Orme
NGR: SH7544484185
Location: Llandudno, Conwy
Description
This structure has been suggested as possibly an observation post to observe U-boats during the First World War. It is not shown on the 6 inch map revised in 1938 but is shown on that revised in 1948 showing that it belongs with the gunnery school and other Second World War activity on the Great Orme and that it is not First World War in date.

PRN 20725 NPRN 34158
Lighthouse, Great Orme's Head
NGR: SH7568084450
Location: Llandudno, Conwy
Description
Used as a war signal station in the First World War (National Archives; ADM 137/1186, p424). The telegraph equipment was preserved in the lighthouse in 1979 (Hague 1979, 284) but was removed in about 1985 (NPRN 34158).
Previous HER description
"A castellated building situated on the steep limestone cliffs of Great Orme's head. Designed by G. Lyster for the Mersey Dock board in 1862, as was the earlier Lynas point. As at Lynas, the lantern is at ground level, with the signal & telegraph room above; this retains all its original equipment, carefully preserved by trinity house who have now taken over the station. "<1>
The light from this lighthouse first shone on 1st December 1862. <2>
On 1889 OS map, labelled 'G. O. H. Lighthouse - fixed, white'. <3>
On 1919 OS map, labelled 'G. O. H. Lighthouse - occulting, white with red sector'. <4>
Full description in listed building list published for Llandudno by Welsh Office, 1976. <5>

PRN 20732
Pill Box, Marine Drive, Great Orme
NGR: SH7803183830
Location: Llandudno, Conwy
Description
"At the site of the now demolished coast guard hut on the Pentrwyn headland, all that marks its location is a pill box, with is solitary loophole, built to repel invaders" (Davidson and Jones 2001, 19). The coast guard hut or station is not represented on any map, but then neither is the pill box. Jones (1997, 10) specifically considers the pill box to date from the Second World War and this date seems most likely. There was a suggestion that this might be an observation post for U-boats in the First World War but this seems unlikely as there are no other First War sites in the area but plenty of Second World War activity.
Previous HER description
Pill box, just west of the coast guard station on the NE side of the Orme, immediately above Marine Drive. Building in near ruinous condition. <1>

PRN 27310 NPRN 407790
Glan Mor Isaf Airfield, Bangor
NGR: SH62207231
Location: Llanllechid, Gwynedd
Description
In August 1918 the Bangor aeroplanes were under the command of Captain Campbell of the Irish Sea Hunting Flotilla. The aeroplanes patrolled from Point Lynus to Liverpool Bar, but were not allowed more than 10 miles from shore. At that date there was no telephone or wireless at the camp, so communication must have been

difficult (National Archives; ADM 137/1518, p322).

Previous HER description

Land on Glanmor Isaf Farm owned by the Penrhyn Estate, was requisitioned in June 1918 for an airfield for spotter planes to support airships from Llangefni in their search for German U-boats (Sloan 2001, 100-101). The landing ground was prepared in July 1918; involving the uprooting of hedges and the erection of four Bessoneau hangars to house the aircraft. The officers and men lived in tents and fuel and bombs were stored in trenches between two small woods.

The 244 Squadron that flew from the airfield disbanded on 19th or 22nd January 1919, in May the land was returned to cultivation, and in June 1919 the hangars were removed (Pratt and Grant 1998, 46; Sloan 2001, 112). Nothing but the slate fences replacing hedges that had been removed is left to give any indication of the existence of the airfield.

PRN 58451

Ship Building Yard, Site of, Bangor

NGR: SH58507294

Location: Bangor, Gwynedd

Description

Prior to Archibald Dickie moving his boat yard from Scotland to Bangor in 1925 the boat yard belonged to Messrs Rowlands (History Points). Rowlands Shipbuilding Yard was used in the First World War by the navy to repair and refit their motor launches stationed at Holyhead and later at Menai Bridge. The location of Rowlands Yard was a critical factor in the decision to set up a base for the motor launches at Menai Bridge in September 1918 as a programme of refitting of all the motor launches was planned over the winter. Rowlands Yard could accommodate 3 or 4 of the naval motor launches at a time but had no machine shop or fitters, so a building next to the jetty was to be converted into a fitters shop (National Archives; ADM 137/1520, p154).

Previous HER description

Plot of land on the foreshore between Garth and Hirael originally leased from the Penrhyn Estate by an Edward Ellis in 1836 where he established a ship building yard. The shipyard was sold in the 1867 to T.P. Parry, who already worked another yard further south on the Hirael foreshore. Pigots Trade Directory for Bangor in 1868 lists Parry & Co, shipbuilders, as premises owners (Ellis-Williams 1988, 96).

There were three shipyards established along the waterfront including the two run by T.P. Parry after 1867 (Figure 05). Between them they built 46 coastal vessels from 1830 to 1879, and were used until the 1890s (ibid. 85-113). The significant quantity of surviving mapping evidence from 1805 to 1914 (Figures 02-08) shows the development of the site, with much of the building and the slipway, with the exception of the land reclamation to the east, complete by 1867. Elements of the boat-building yard, such as the saw pit, are shown on the 1st edition Ordnance Survey map of 1890 (Figure 06). In August 1891 the municipal authorities improved the jetty at Garth, and some land reclamation is thought to have taken place at this time (Ellis-Jones 1986, 79).

Dickies Boatyard opened on the site as a boatyard and chandlery in 1924, and was in use until its closure in 2011 and subsequent demolition. (Evans & Roberts, 2012).

PRN 58670 NPRN 407782

RNAS Llangefni (site of), near Llangefni

NGR: SH4176075578 C

Location: Bodffordd, Ynys Mon

Description

During the First World War the station was involved in nationally important trials involved towing a hydrophone under water on a long line from an airship. The trials went well and it was recommended to issue hydrophones to airships across the country (National Archives; AIR 2/39/Air601926/17).

Previous HER description

The site of the First World War Royal Naval Airship Station Llangefni. Previously recorded as part of PRN 29448. The station was formally commissioned on 26th September 1915, and included a large airship shed (PRN 60182) that could hold four inflated airships. The 260 acre site also included workshops, a gas producing plant, gas holders and accommodation huts (Sloan 2001, 88). The main gate was from the A5 near Druid's Farm and most of the accommodation and other huts (PRN 60183) were restricted to this south-eastern corner of the site.

The airfield was still active in late 1918 but in early 1919 the airships were sold or decommissioned and men released. However the Admiralty did not sell the site until November 1920 when it was bought by Anglesey County Council for an isolation hospital (Sloan 2001, 112). No use was found for the airship hangar so it was dismantled (Sloan 2001, 112), but, probably before 1920, the hangar had been used by a timber merchant to store wood. The construction of runways and hangars for RAF Mona in 1941 removed any remaining traces of the

airship station.

PRN 60171
Marconi Wireless Station, Llain Gors Cottages, Llaneilian
NGR: SH4687592505 C
Location: Llaneilian, Ynys Mon
Description
This wireless station was also used to communicate with the auxiliary patrol vessels from Holyhead naval base. It had a telephone line to the naval base so messages were relayed by telephone then sent out by wireless telegraph. Before July 1916 the wireless station was not sufficiently powerful to do this so messages were relayed via wireless stations in Liverpool or Fishguard, a rather long winded process. The Easter Rising and its aftermath late April and early May 1916 emphasised the problems of using distant wireless stations (National Archives; ADM 137/599, p168). In July 1916 a request was granted to boost the power of the Llaneilian station so that it could perform this function (National Archives; ADM 137/1250, p287).
Previous HER description
A wireless station built by the Marconi Company to provide wireless communications to the airships from RNAS Llangefni (PRN 58670). This was an 'X' type station meaning that it could both transmit and receive. The station was approved by the Admiralty in September 1915 and in use by March 1916. The aerial was in a field to the west of cottages called Llain y Gors. The western-most of the three cottages was used to billet the naval personnel who operated the wireless station (Williams 2015). No remains of the aerial now exist.

PRN 60190   NPRN 505572
Blockhouse, Cefndu Wireless Station
NGR: SH5367960404
Location: Waunfawr, Gwynedd
Description
The identification of this building as a First World War blockhouse for guarding the transmitter station has been confirmed by a document which marks 10 blockhouses around the site (National Archives; CRES 49/954). This is blockhouse No. 9.
Previous HER description
A brick and mortared stone constructed building.
Possibly a blockhouse for troops guarding the wireless station during the First World War, although it could possibly be an engine house to pull wagons along the tramway which it stands next to.
Not inspected on the ground in 2016.

PRN 60191   NPRN 505573
Blockhouse, Cefndu Wireless Station
NGR: SH5387860255
Location: Waunfawr, Gwynedd
Description
The identification of this building as a First World War blockhouse for guarding the transmitter station has been confirmed by a document which marks 10 blockhouses around the site (National Archives; CRES 49/954). This is blockhouse No. 8.
Previous HER description
A brick and mortared stone constructed building.
Possibly a blockhouse for troops guarding the wireless station during the First World War, although it could possibly be an engine house to pull wagons along the tramway which it stands next to.
Not inspected on the ground in 2016.

PRN 60192   NPRN 505577
Blockhouse, Cefndu Wireless Station
NGR: SH5445760272
Location: Waunfawr, Gwynedd
Description
The identification of this building as a First World War blockhouse for guarding the transmitter station has been confirmed by a document which marks 10 blockhouses around the site (National Archives; CRES 49/954). This is blockhouse No. 7.
Previous HER description

A brick and mortared stone constructed building.

Possibly a blockhouse for troops guarding the wireless station during the First World War, although it could possibly be an engine house to pull wagons along the tramway which it stands next to.

Not inspected on the ground in 2016.

PRN 60193   NPRN 505598
Blockhouse, Cefndu Wireless Station
NGR: SH5482660377
Location: Waunfawr, Gwynedd
Description
The identification of this building as a First World War blockhouse for guarding the transmitter station has been confirmed by a document which marks 10 blockhouses around the site (National Archives; CRES 49/954). This is blockhouse No. 6.
Previous HER description
Collapsed building recorded by Upland Survey: "A rectangular structure constructed of mortared stones with brick quoins and located on the summit of Cefndu. It measures approximately 6m long by 4m wide with walls standing up to 1.2m high. The structure has an entrance on the west side with a possible brick and stone blast wall. The structure is mostly collapsed. Some of the collapsed brick walls have shooting slots or ventilation ports in them". The slots are probably gun loops and this is probably a blockhouse for troops guarding the wireless station during the First World War.

A small tramway (PRN 63191) leads to it and was probably used to bring up material to construct the building.

PRN 60197   NPRN 505602
Blockhouse, Cefndu Wireless Station
NGR: SH5462460593
Location: Llanrug, Gwynedd
Description
The identification of this building as a First World War blockhouse for guarding the transmitter station has been confirmed by a document which marks 10 blockhouses around the site (National Archives; CRES 49/954). This is blockhouse No. 5.
Previous HER description
A derelict building probably related to the wireless station. Recorded by Upland Survey: "A ruinous rectangular brick-built building measuring 11m long by 9m wide and upstanding to 2m high. The structure is built on top of an earlier mortared stone (with brick window quoins) building. The earlier building has one cell surviving and is upstanding to the east of the brick structure. The walls have ventilation holes 3/4 of the way up and an entrance on the south side."
The "ventilation holes" are probably gun loops and this is likely to be a blockhouse for troops guarding the wireless station during the First World War.

PRN 60212   NPRN 505789
Blockhouse, Cefndu Wireless Station
NGR: SH5447160641
Location: Llanrug, Gwynedd
Description
The identification of this building as a First World War blockhouse for guarding the transmitter station has been confirmed by a document which marks 10 blockhouses around the site (National Archives; CRES 49/954). This is blockhouse No. 4.
Previous HER description
Ruinous foundations of a building, measuring 9m long by 6.5m wide and with walls surviving up to 1m high.
Possibly a blockhouse for troops guarding the wireless station during the First World War, but more likely to be an engine house on incline PRN 60213.

PRN 66268
Plas Rhianfa, Cwm Cadnant
NGR: SH5701473385
Location: Cwm Cadnant, Ynys Mon
Description
Captain Gordon Campbell, commander of the Irish Sea Hunting Flotilla during the First World War, stayed at Rhianfa while inspecting the Motor Launch base at Menai Bridge that formed part of the Flotilla (North Wales Chronicle, 29th November 1918, p2).
Previous HER description
(PRN 4453) Plas Rhianfa, on the Menai Straits between Menai Bridge and Beaumaris, is a Gothic fantasy of the 1850s, built by Sir John Hay Williams of Bodelwyddan to provide a home for his wife and daughters as Bodelwyddan would pass to his brother on his death, since he had no son. The house was designed by the Hay Williamses incorporating ideas they had picked up while travelling in France, and could perhaps be described as 'Chateau Gothic'.
The Gothic mansion was built in the 1850s by Sir John Hay Williams, 2nd Baronet of Bodelwyddan. It is now a luxury hotel known as Chateau Rhianfa.
Rhianfa was used during the First World War by the Menai Bridge and Llandegfan orthopaedic branch of the Queen Mary's Guild to make orthopaedic appliances, mostly from disused materials (North Wales Chronicle and Advertiser 28th June 1918, p4).

PRN 69839   NPRN 41279
St George's Pier, Menai Bridge
NGR: SH5589972025
Location: Menai Bridge, Ynys Mon
Description
Pier shown on 1889 1st edition 25 inch map and largley unchanged on the 1900 map but it had been extended and rebuilt by 1914 with a landing stage and beacon added. The NMR record suggests that this rebuilding was done in 1903.
During the latter part of the First World War, from September 1918, the pier was taken over by the Admiralty, along with adjacent buildings, and used for the Motor Launch Flotilla which searched the Irish sea for U-boats. The pier was handed back to civilian use in January 1919 (North Wales Chronicle, 17th January 1919, p4). There is a photograph dated around 1917 of the launches tied up at the pier.

PRN 69840   NPRN 408643
Mynydd Mawr Signal Station, Aberdaron
NGR: SH1395325861
Location: Aberdaron, Gwynedd
Description
The NMR (NPRN 408643) records that this signal station was used in the Second World War but it was built at the end of the 19th century as it is shown on the 1900 County Series map. This shows a semaphore pole as well as the signal station building. By 1918 an additional small building has been added but the semaphore pole is still there. The station would have been a coast guard station but was used as a war signal station in the First World War (National Archives; ADM 137/1186, p424), as well as being rebuilt for use in the Second World War.

PRN 69841   NPRN 525376
Flagstaff, South Stack
NGR: SH2063182352
Location: Holyhead, Ynys Mon
Description
A flagpole is shown on the 1900 and 1924 County Series maps in this location. The flagpole is a little down the hill on the 1889 map at SH 20551 82305. This flagpole was probably used in conjunction with the lighthouse to signal to shipping. It was probably used as part of the war signal station in the First World War.

PRN 69844
Blockhouse, Cefndu Wireless Station
NGR: SH5314960799
Location: Llanrug, Gwynedd
Description
A concrete pad located next to the Marconi Hall, measuring 9m by 6m. This is the remains of a blockhouse that would have controlled entry to the transmitter station.The identification of this building as a First World War blockhouse for guarding the transmitter station has been confirmed by a document which marks 10 blockhouses around the site (National Archives; CRES 49/954). This is blockhouse No. 1.

PRN 69845
Blockhouse, Cefndu Wireless Station
NGR: SH5358160571
Location: Waunfawr, Gwynedd
Description
Largely buried remains of a building visible on the NextPerspective aerial photographs as a faint rectangular mark measuring about 9m by 6m. The identification of this building as a First World War blockhouse for guarding the transmitter station has been confirmed by a document which marks 10 blockhouses around the site (National Archives; CRES 49/954). This is blockhouse No. 10.

7.3. Sites Belonging to Other Themes

PRN 15813
Penmaenmawr Quarry
NGR: SH70307560
Location: Penmaenmawr, Conwy
Description
There appears to have been a munitions factory in Penmaenmawr Quarry during the First World War. Dennis Roberts of Penmaenmawr Historical Society remembered being told by an elderly local resident that there had been munitions workers in Penmaenmawr Quarry. He has obtained a photograph, unfortunately undated and with no other information, that shows female munitions workers in the Quarry. It is not known where the munitions were made within the quarry. It is likely that this was shell case production using existing lathes in a workshop.
Previous HER description
"Historic background: the present workings at Penmaenmawr continue a tradition of stone-quarrying which begins in the third millennium BC, when Graiglwyd was worked for stone suitable for axe-making. It was the third most productive of the Prehistoric axe-making sites in Britain, after the factories of Great Langdale and Scafell in the Lake District and around St Ives in Cornwall, whose products vied with each other in Neolithic markets throughout the island.
The first leases which indicate modern exploitation of the Penmaenmawr outcrop for stone are dated 1833. In the first instance operations amounted to extracting suitable material from the unconsolidated scree slopes, flaking them into setts, and transporting them as ballast on ships bound for Liverpool. The early extraction pits were surveyed as part of the detailed survey of the north slopes below the Graiglwyd. Within a decade two independent quarries had been developed, one on the Eastern flank (Graiglwyd) and the other occupying the western extremity (Penmaen). Both quarries concentrated on sett production although loose stone for ballast was of increasing importance. Crushing mills were therefore established from the 1890s onwards and production increasingly concentrated on this commodity thus expanding at the expense of the sett making enterprises. The two quarries were amalgamated under the same management in the early part of this century and the joint operations linked by a quarry railway. In the late 1930s the Graiglwyd quarry ceased as a sett production unit and the eastern workings were accordingly abandoned.
The present quarry at Penmaenmawr occupies the western part of the outcrop and concentrates on producing aggregate for road construction and for railway ballast. A new crushing plant was installed in 1983 and the present output of the quarry is 600,000 tonnes per annum. The planned reserve of the quarry concession is approximately 40 million tonnes, giving an estimated life span for the whole operation of sixty years. Since quarrying has been concentrated on the western Penmaen end of the outcrop the summit of the mountain has been reduced by approximately 400 feet and in the process the whole prehistoric hillfort of Braich y Ddinas was consumed in an operation that paid only minimal attention to archaeological detail.
Key historic landscape characteristics: inclines, stepped workings, crushing plant, clock

The quarry site is distinguished by a number of features which can be clearly identified from the road and from the town. These include the substantial clock-face mounted on one of the storage bins in the eastern quarry, the remains of the major crushing plant introduced in the latter years of the nineteenth century, and the impressive series of inclines. A number of items of historic machinery survive in the quarry. The eastern quarry was landscaped in the 1980s. (Gwyn and Thompson, 1999). "

PRN 58731
Rifle Range, Abergwyngregyn
NGR: SH6486873516
Location: Aber, Gwynedd
Description
Bill Flentje has identified images that show the Aber rifle range was not just used for training local volunteers but was used during the First World War to train regiments from further afield including the Glamorgan Regiment. This suggests that the rifle range was used as an integrated part of the training facilities in the Bangor and Conwy area.

A photograph of the mantlet shows that this was encased in timber and iron plates to protect it from erosion by the sea and coastal weather. The iron plates appear to have been either former iron target plates or parts of iron mantlets, possibly from Conwy Morfa range where in about 1903 iron targets were replaced by canvas ones and this range also had iron mantlets (Bill Flentje pers. comm.). The images are on the Quiet Woman's Row website (http://quietwomansrow.com/#/the-glamorgans-1914-16/4556248763).

Previous HER description
Rifle Range shown on 1900 and 1914 25 inch maps but not on 1889 map. Firing positions to 600 yards with the last set out of the line. Backstop and mantlet constructed by 1914. Backstop still survives, quite well preserved. Also some remains of mantlet.

The Bangor Company of Volunteers used a range at Aber, probably on this site, from at least 1861 (North Wales Chronicle 25/05/1861 and 11/10/1862). The range is listed in 1903 as having one iron target (Bill Flentje).

In 1911 the range was converted into a gallery range with 4 penetrable targets. The range was formally accepted in 1913 (CRO XD/35/193).

Repairs were done on the range in late 1918 or early 1919 (CRO XD/35/202).

During WW2 it was still used by the Home Guard and in 1949 it is still listed as a 4-target range (Bill Flentje).

Inspected in June 2005 by Bill Flentje. The mantlet and backstop are clearly visible and possibly supported 2-4 targets. The backstop has concrete foundations on its sea-facing side, and is revetted by railway sleepers on the landward side. The whole backstop is riddled with badger holes.

PRN 68549
Target, Moel Maelogen
NGR: SH8526561666
Location: Bro Garmon, Conwy
Description
The 1875 map shows 'Target' only, but not 'Rifle Range', suggesting that the range may have disused by 1875. The nearest Rifle Volunteer Corps was the 8th Denbighshire (Llanrwst) R.V.C., formed in October 1861 and disbanded some time in 1865. This range is only about 5km east of Llanrwst and was probably used by this Corps, and fell into disuse on their disbandment. The map shows a rectangular structure which is labelled "target". This structure is likely not to be a target but to show the mantlet. Aerial photographs, until recently, showed a rectangular stone built structure, which was probably the remains of this mantlet. Google Earth shows this feature on its 2006 photographs, but by 2009 there is just a slight earthwork detectable and by 2015 there is no trace of this structure. It therefore seems to have been demolished between 2006 and 2009.

No firing points are visible on the map or aerial photographs but this to be expected as they were probably just marked with either a wooden peg or a stone marker.

(Information from Bill Flentje).

Previous HER description
A target is marked on the Ordnance Survey 1875 map, and is indicative that there was a firing range at Maelogen. A rectangular structure is marked on modern aerial photographs at SH8529961684. This may either be the site of the target, or a supporting structure that could have protected those who would administer the targets, which are shown on the OS map to the west of this structure. (Kenney, 2017).

PRN 68550
Picket, Moel Maelogen
NGR: SH8474062256
Location: Bro Garmon, Conwy
Description
Picket 1070.8 marked on Ordnance Survey first edition map of 1875, probably a sentry post to control access when the rifle range, represented by target PRN 68549, was in use. Bill Flentje, an expert on rifle ranges, has commented that he has not seen a similar feature marked on other rifle ranges, but some WelCAAP members were able to find examples.

PRN 69842
First World War Graffiti, barn adjacent to Rectory, Rhosybol
NGR: SH4259888382
Location: Rhosybol, Ynys Mon
Description
The war time record of several soldiers of the First World War has been written on the wall of a barn (formerly a coach house and stables) at the Rectory, Rhosybol. The writing was recorded in 1998, presumably by the owners of the barn, and the record including photographs of the graffiti is held in Anglesey Archives (WM/1827). The graffiti includes the war time record of WM Roberts, a rifleman from Canada, who seems to have spent most of the war training, especially in Ireland. Lieutenant ED Davies of the Royal Naval Reserve lists the ships he served on and he served with the Dunster Force Persia and the Caspain Naval Force. W Roberts served on the Vimy Ridge and in the Somme Advance. The current condition of the pencil graffiti, which must be very vulnerable, is not known.

PRN 69843
Bon Aire, Oxford Road, Llandudno
NGR: SH7849581878
Location: Llandudno, Conwy
Description
Bon Aire was used as a convalescent home in the First World War. Bill Haughton of Creston, British Columbia, Canada contacted Jane Kenney with the information that his great grandmother, Annie Foulkes, wife of Joseph Foulkes, took in wounded soldiers during the War. Her house was Bon Aire, Oxford Road, Llandudno. Bill suggests that it was number 5 Oxford Road but the photographs that he sent show that it is what is now number 8 (SH 78495 81878). The house is not shown on the 1900 map but was built by 1912, so it must have been quite new at the start of the War. Bill relates that this was where his grandfather, Albert Hobbs, one of the wounded soldiers, met his grandmother, Eliza Foulkes, and they married in 1916.
There have been some changes to the building, especially the loss of decorative detail but it is still quite recognisable today.

8. APPENDIX II: Recording Marine Yard, Holyhead Harbour by the Young Archaeologists Club

Record of Marine Yard, Holyhead made by the Young Archaeologists Club on 2nd December 2017.

Plan of Marine Yard with functions of the buildings shown (from Donald Insall Associates 2003, 32)

Plate appII.1. Engine house for sheerlegs (PRN 33999)

Plate appII.2. Large doorway giving access into the stores (PRN 11826)

Plate appII.3. Wall with paint from cleaning brushes used to paint the ships, end wall of smithy (PRN 11828)
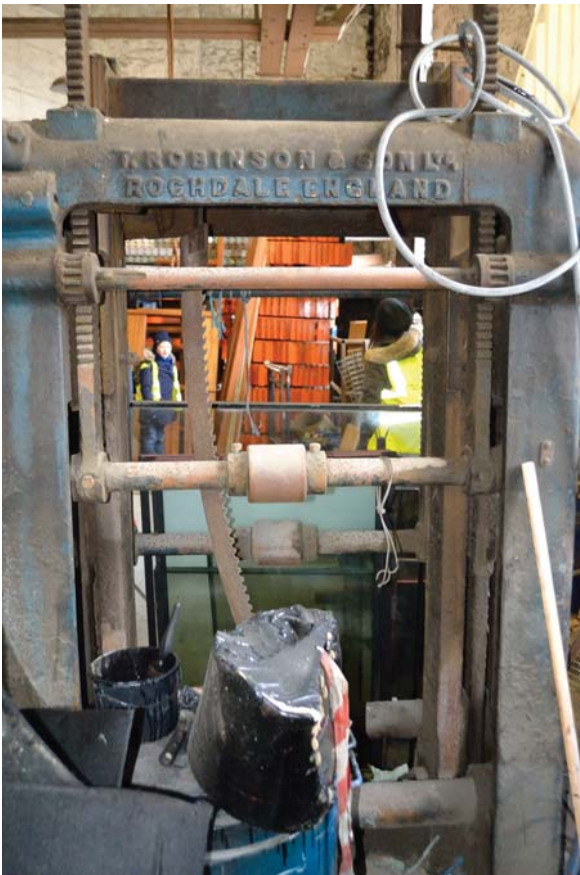
Plate appII.4. Door to sawmill (PRN 11827)

Plate appII.5. Old timber saw in sawmill (PRN 11827)

Plate appII.6. Radiator in sawmill (PRN 11827)

Plate appII.7. Radiator flue in sawmill (PRN 11827)

Plate appII.8. Crane in boiler shop (PRN 11824)

Plate appII.9. Winch on east elevation of boiler shop (PRN 11824)

Plate appII.10. Winch on north-east elevation of boiler shop (PRN 11824)

Plate appII.11. Stairs leading to crane in boiler shop (PRN 11824)
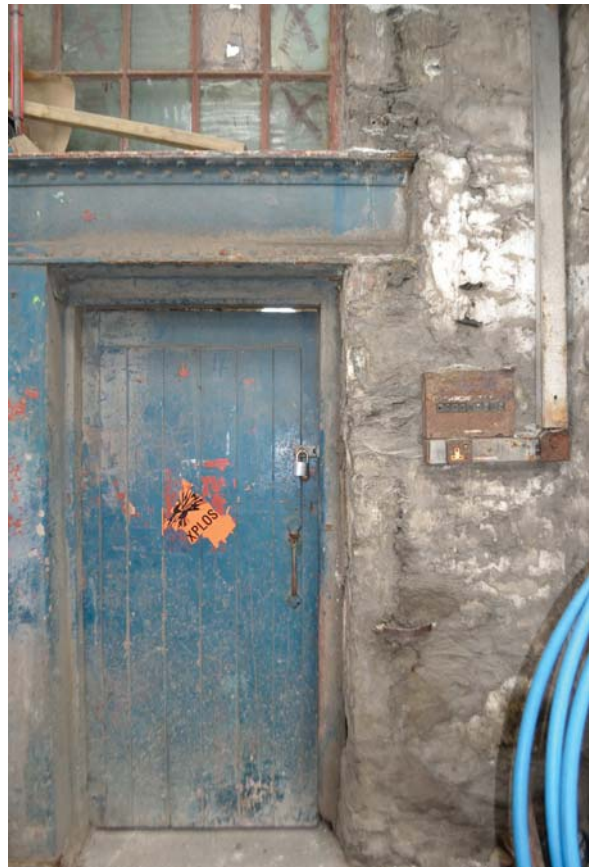

Plate appII.12. Door to plumbers' workshop from erecting shop (PRN 33998)

Plate appII.13. View down erecting shop (PRN 33998)

Plate appII.14. Hooks for block and tackle in erecting shop (PRN 33998)