



# PENNAR POINT, PEMBROKE DOCK, PEMBROKESHIRE

# AN ARCHAEOLOGICAL DESK-BASED ASSESSMENT AND WALK-OVER SURVEY



Report No. 2002/47

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## CAMBRIA ARCHAEOLOGY

## REPORT NO. 2002/47 PROJECT RECORD NO. 45078

**JUNE 2002** 

# PENNAR POINT, PEMBROKE DOCK, PEMBROKESHIRE ARCHAEOLOGICAL DESK-BASED ASSESSMENT AND WALK-OVER SURVEY

By

Duncan Schlee MSc

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ARCHAEOLEG CAMBRIA
Ymddiriedolaeth Archaeolegol Dyfed Cyf
Neuadd y Sir, Stryd Caerfyrddin, Llandeilo, Sir Gaerfyrddin SA19 6AF
Ffon: Ymholiadau Cyffredinol 01558 823121
Adran Rheoli Treftadaeth 01558 823131
Ffacs: 01558 823133
Ebost: cambria@acadat.com Gwefan: www.acadat.com

CAMBRIA ARCHAEOLOGY
Dyfed Archaeological Trust Limited
The Shire Hall, Carmarthen Street, Llandeilo, Carmarthenshire SA19 6AF
Tel: General Enquiries 01558 823121
Heritage Management Section 01558 823131
Fax: 01558 823133
Email: cambria@acadat.com Website: www.acadat.com

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#### 1.0 INTRODUCTION

## 1.1.1 Development proposals

Cambria Archaeology Field Operations was invited, by Pembroke Design Limited on behalf of Erringham Investments Limited, to undertake an archaeological desk-based assessment of a proposed new housing development at Pennar Point, Pembrokeshire. A specification for the project was submitted to Pembroke design by Cambria Archaeology (Field Operations) on 31 October 2000. The quote was accepted by Achillion Limited and instruction given to proceed on 23 rd May 2002 and work started 27th May 2002.

## 1.2 Project objectives

- 1.2.1 To assess the character, extent, significance and vulnerability of the archaeological resource within the proposed development area.
- 1.2.2 To identify new archaeological sites, features and deposits within the project area, and to assess their character, significance and vulnerability.
- 1.2.3 To identify sites, features and deposits that require further archaeological investigation to fully assess their character, extent, significance and vulnerability.
- 1.2.4 The preparation of a report fully representative of the information recovered during 1.2.1 1.2.3, which places the archaeological resource of the project area within its local, regional and national contexts.

## 1.3 Project Methodology

The project methodology included the following procedures:

- 1.3.1 A search of the County Sites and Monuments Record and the National Monuments Record for information of known sites within and around the project area.
- 1.3.2 A search of cartographic sources held in national and county records offices and other repositories for archaeological information.
- 1.3.3 A search of primary historic documents held in national and county records offices and other repositories.
- 1.3.4 A search of secondary published sources.
- 1.3.5 The examination of relevant aerial photographic coverage.

- 1.3.6 A field visit to review the current state of the sites and features identified during the documentary searches and to identify any new features of significance. In addition, to assess their vulnerability and to undertake rapid recording of features by photography, site notes and sketch plans where necessary.
- 1.3.7 To liaise with Roger JC Thomas, English Heritage.
- 1.3.8 The production of this report.

## 2.0 THE ARCHAEOLOGICAL RESOURCE

#### 2.1 A review of the sources

This section is a brief description of the sources used, and an assessment of their usefulness and/or limitations.

## 2.1.1 Published and Unpublished Documents

Various published and unpublished documents were available at the Sites and Monuments Record. Other useful documents were obtained from Haverfordwest Public Library and the National Library of Wales, Aberystwyth. These provided background information on the history of Pembroke Dock and Pennar.

The Pennar Barracks and Mining Establishment is included in a number of recent surveys concerned with various aspects of the historic environment of the area. These include: A Survey of 19th and 20th Century Military Buildings of Pembrokeshire by Roger J. C. Thomas 1994, commissioned by Pembrokeshire Coast National Park and Preseli and South Pembrokeshire District Councils, and Coastal Survey 1997-8, Lower Milford Haven, Pembrokeshire 1998, grant aided by Cadw, undertaken by Cambria Archaeology. Archive material for these surveys was referred to in compiling this report. Pennar is also included in The Historic Landscape characterisation of the Milford Haven Waterway 2002 prepared by Cambria Archaeology for Cadw for the Register of Landscapes of Outstanding Historic Interest in Wales. An extract from this is included as an appendix in this report. The History of Pembroke Dock by Mrs. S. Peters (1905) includes an interesting passage on the Submarine Mining Establishment while it was still in operation. Jottings on the History of Pennar by B.H.J. Hughes (1995) is a small leaflet giving a brief summary of the history, development and notable events in and around Pennar. The Book of Pembroke Dock: The Story of a Town Created to Build Ships by P. Carradice (1991) provides interesting information on the development of the Dockyard and Pennar, with some references to the Pennar Barracks. The Fortification of Milford Haven and Pembroke Dock by N.J. Wheeler (PCNP) is a useful pamphlet providing information on the numerous changes in the defensive fortifications associated with the Dockyard. The Industrial Capacities of South Wales by J. Symons, is an article in The

Cambrian Journal 1854 Vol. 1 which contains a quote from G. Owen in A History of Pembrokeshire (1596).

Very few sources were located that provided detailed information about Pennar Barracks specifically, or the military technology of the period. Some such information was kindly provided by Roger Thomas of English Heritage during telephone conversations. More lengthy and detailed research, beyond the scope of this project, would undoubtedly reveal other useful resources. Numerous records including plans of the Barracks and other documents are known to be held at the Public Records Office at Kew.

## 2.1.2 Historic Maps

Although Pennar is identified on the Saxton map of 1578 and Speed's 1610 map of Pembrokeshire, they are of little use for a detailed consideration of the project area.

The Pembroke St Mary's tithe map of 1841 (Map 1) was the earliest available useful map for the purposes of this project. It provides detail of field boundaries and settlement and the tithe schedule indicates land ownership and occupation and often indicates either field names or land-use.

The Ordnance Survey 25" First and Second Edition maps, of 1863 (Map 2) and 1908 (Map 3) respectively, show the area in great detail. The 6" First and Second Edition maps show essentially the same detail as the 25" maps but at a smaller scale. On some editions of these maps the Submarine mining establishment was blanked out for militar y security reasons, but a 1908 edition of the 25" Second Edition map held at the Royal Commission on the Ancient and Historic Monuments of Wales at Aberystwyth, shows the Mining Establishment in useful detail, soon after it was decommissioned.

Later maps show the Barracks site after its conversion to a Holiday Camp, but the scale and degree of detail limit their usefulness. Copies of some relevant maps are reproduced within this report, and form part of the project archive.

## 2.1.3 Aerial photographs

Aerial photographs are an important source of archaeological information, particularly in rural areas. Buried features can show as crop or parchmarks, and earthworks are strongly revealed when the sun is low on the horizon. When dated, they also indicate subs equent development. The National Monuments Record (Royal Commission for Ancient and Historical Monuments (Wales), Aberystwyth and the Sites and Monuments Record for Carmarthenshire, Ceredigion and Pembrokeshire have extensive collections of aerial photographs that were consulted during this project. Additional aerial photograph from the Pembrokeshire Coast National Park were also available at RCAHMW. The following aerial photographs were available:

Sortie No.	Frame No.	Flight No.	Date
106G/UK/1629	3134	N/A	July 1946
106G/UK/1399	4209	N/A	April 1946
106G/UK/1625	4362-4363	N/A	July 1946
Meridian 25435	190/200	N/A	1955
58/2985	292-293	F21	1959
P.C.N.P. 50/83	199-201	N/A	1983
Wild 328 87209	055-058	N/A	1986
39 RAF 6152 V2	223-224	N/A	1993

The aerial photographs indicate that there was little additional building work at the barracks during the Second World War although there were presumably alterations to existing buildings. All of the additional buildings that are present on the site when it was used as a holiday camp were built after 1959. Other significant observations from the aerial photographs are the WWII defences such as trenches and gun emplacements. The foreshore features are also significantly mostly absent from the WWII photographs, suggesting a later date for their construction.

An aerial photograph of unknown date, taken by the 'Aerofilms Library' (Ref No.A233028) was available at Haverfordwest Library, showing Pennar Point when the site was in use a holiday camp.

## 2.1.4 Other Photographs

Roger Thomas took photographs of the site while it was still used, in 1993 for the Survey of 19<sup>th</sup> and 20<sup>th</sup> Century Military Buildings. These are not reproduced in this report but are held at the Royal Commission in Aberystwyth.

The Sites and Monuments Record holds a collection of photographs taken by the Joint Receivers for South Pembrokeshire District Planning Authority in 1995. Some of these are reproduced in this report. The photographs show the buildings at Pennar Point in a derelict state in 1995, presumably shortly before most of them were demolished. Additional Photographs were taken for the purposed of this report. These show the surviving buildings at Pennar Point in their present condition.

#### 2.1.5 Field Visits

The project area was visited on two occasions in May and June 2002. The condition of archaeological sites, features and deposits identified during the documentary research was noted and new sites, features and deposits were identified. All were recorded via photography and site notes, and their condition and vulnerability was assessed.

## 2.1.6 Previous archaeological work

No archaeological fieldwork has been carried out within the project area, although the site has been included in several recent surveys (see section 2.1.1).

## 2.1.6 Geotechnical work

No geotechnical work has been carried out at Pennar Point as far as Cambria Archaeology are aware.

#### 2.2 Gazetteer of Sites

This section contains a brief description of the historic buildings and feature s within the project area at Pennar Point, and relevant sites and features immediately beyond. They are listed by their type and individual Primary Record Number (or PRN) as allocated in the Sites and Monuments Record for Carmarthenshire, Ceredigion and Pe mbrokeshire. Some features are also allocated RT numbers which relate to the archive for the Roger Thomas survey. Also included are the map reference for each feature. Refer to Fig. 2 for the location of the PRNs listed in this gazetteer. All sites and features have been allocated a condition statement. The codes are as follows:

Building

- A building

Other Structure

- Built structures that are not buildings

Earthwork

- A feature constructed from or cut into earth or geology.

A - intact

B - slightly damaged or altered

C - derelict/damaged

D - substantial destruction

E - entirely destroyed

R - restored

V – condition variable

U – condition unknown

Sites within the proposed development area are:

RT SITE NO: N/A

**PRN**: 34,989

NGR: SM 9446 0282

CONDITION: Other Structure/A

FUNC. TYPE: Slipway

**DESCRIPTION:** 

A modern concrete slipway that does not appear on WWII aerial Photographs. Constructed on the same site as a 19th century Pier of which nothing appears to survive.

Possibly originally had similar function to Pier PRN 26278. Structure at shore end on WWII aerial photographs and 1908 map may be similar feature to PRN 45083.

RT SITE NO: N/A

**PRN:** 34,990

NGR: SM 9445 0285 CONDITION: Building/C FUNC. TYPE: Unknown

**DESCRIPTION:** 

A modern building constructed from breezeblocks, probably Holiday Park accommodation. Now becoming derelict. Built on top of a brick built and cement rendered structure with a flat concrete roof supported on iron girders (visible in post WWII aerial photographs. Now forming a basement below the existing building. Accessed via manhole outside house. This is probably of early 19 th century origin, but may have been altered during WWII. A revetment runs between this structure and PRN 45086.

RT SITE NO: N/A

PRN: 34,992

NGR: SM 9435 0302

CONDITION: Earthwork/B FUNC. TYPE: Trackway

DESCRIPTION:

Track terraced into the hillside, running around the headland. Probably a modern or late 19<sup>th</sup> century military feature, now disused and overgrown.

RT SITE NO: N/A

PRN: 34,993

NGR: SM 9464 0275

**CONDITION:** Other Structure/B

FUNC. TYPE: Jetty DESCRIPTION:

Concrete and steel pier/jetty and concrete sea defence and other steel stanchions. The jetty is attached to a stone built sea wall/pier base. Some of the stonework is late nineteenth century in origin but re-built and now appears to be mostly twentieth century. The jetty slopes into the water.

RT SITE NO: N/A

PRN: 45,081

NGR: SM 9438 0287

CONDITION: Other Structure/C

FUNC. TYPE: Jetty DESCRIPTION:

A jetty approximately 1m wide, 30m long now collapsed accessed from shore by a flight of concrete steps. Constructed from concrete slabs with a steel frame. Not visible on WWII aerial photographs, so presumably associated with the Holiday Park.

**SITE NO:** N/A **PRN:** 45,082

NGR: SM 9439 0286

CONDITION: O. Structure/C

FUNC. TYPE: Jetty DESCRIPTION:

A jetty approximately 1m wide, 30m long now collapsed accessed from shore by a flight of concrete steps. Constructed from concrete slabs with a steel frame. Not visible on WWII aerial photographs, so presumably associated with the Holiday Park.

RT SITE NO: N/A

PRN: 45,083

NGR: SM 9436 0290

CONDITION: Other Structure/B

FUNC. TYPE: Pool DESCRIPTION:

A rectangular pool or tank associated with Pier 26278. Possibly held seawater in which mining cables were stored to prevent corrosion. The end wall has been removed so that it can no longer hold water.

RT SITE NO: N/A

PRN: 45,084

NGR: SM 9444 0282

**CONDITION:** Other Structure/A **FUNC TYPE:** Swimming pool

**DESCRIPTION:** 

A sub-circular probable swimming pool constructed from cement rendered breezeblocks, presumed to be associated with the Holiday Park.

RT SITE NO: N/A

PRN: 45,085

NGR: SM 9456 0279

**CONDITION:** Other Structure/D **FUNC. TYPE:** Tramway network

DESCRIPTION:

A network of 18" gauge tramlines associated with the Mining establishment, used to transport mines. The rails connected various building in the complex and ran along the shore to Pier PRN 26278 from where mines were loaded. Most of the tram way appears to have been removed but some survive within the building s and can also be seen on the eroding shore.

RT SITE NO: N/A

**PRN**: 45,086

NGR: SM 9440 0282

CONDITION: Other Structure/A

FUNC. TYPE: Magazine

## **DESCRIPTION:**

Possible magazine building constructed from red brick. Entered via a short corridor with two iron blast doors. Not a large enough structure to be the main magazine for the mining establishment. A revetment runs eastward from here to PRN 34990.

RT SITE NO: N/A

PRN: 45,087

NGR: SM 9440 0299

**CONDITION:** Other Structure/E **FUNC. TYPE:** Gun Emplacement

**DESCRIPTION:** Two oval gun emplacements identified on WWII aerial photographs. Not located on the ground and presumed to have been destroyed by terracing for static

caravans.

RT SITE NO: N/A

PRN: 45,088

NGR: SM 9436 0289

**CONDITION:** Other Structure/A

FUNC. TYPE: Slipway

**DESCRIPTION:** Slipway south of PRN 40583. Of post-WWII origin.

RT SITE NO: N/A

PRN: 45,089

NGR: SM 9468 0278 CONDITION: Building/E FUNC. TYPE: Workshop

**DESCRIPTION:** Brick built, partially cement rendered workshop of same build as neighbouring PRN 26270. With doorway and two windows and circular ventilator in east and west elevations. Originally there was no access between the two buildings, later two doorways were created, one at each end of the shared wall. Recently demolished.

RT SITE NO: N/A

**PRN:** 45,090

NGR: SM 9458 0280 CONDITION: Building/B FUNC. TYPE: Unknown

**DESCRIPTION:** Small rectangular brick built building to the west of PRN 26274, with no windows but a skylight at the apex of the slate gabled roof. Associated with the

Mining establishment.

RT SITE NO: N/A

PRN: 26,211

NGR: SM 9468 0294

**CONDITION:** Other Structure/E **FUNC. TYPE:** Barrage Balloon Site

**DESCRIPTION:** 

1940-44, Air Defence Barrage Balloon, now demolished. Central cable loop set in a concrete block, encircled at 45 degree intervals by eight concrete tethering blocks.

RT SITE NO: 062/001

PRN: 26,254

NGR: SM 9476 0295

**CONDITION:** Other Structure/B **FUNC. TYPE:** Water Tower

DESCRIPTION:

Rectangular steel water tank (bearing date of 1901), elevated on brick base carried on brick piers which are linked forming round headed arches. Tank has now been removed.

**RT SITE NO: 062/002** 

PRN: 26,255

NGR: SM 9474 0296 CONDITION: Building/E

FUNC. TYPE: Married Quarters

**DESCRIPTION:** 

Two storey, brick built, semi-detached, square plan houses. Hipped slate roof, brick porch entrances in east and west walls. Demolished.

**RT SITE NO: 062/003** 

PRN: 26,256

NGR: SM 9468 0296 CONDITION: Building/E

FUNC. TYPE: Married Quarters

**DESCRIPTION:** 

Two storey, brick built terrace of eight paired houses with rear service ranges. Slate roofs.

RT SITE NO: 062/004

PRN: 26,257

NGR: SM 9464 0296 CONDITION: Building/E FUNC. TYPE: Barracks

**DESCRIPTION:** 

Two storey, brick built terrace, six shop, units at ground floor, with flats over. Marley tile gabled roof. Substantially altered from original appearance. Originally built with gabled slate roofed brick porches to ground floor. Demolished.

**RT SITE NO:** 062/005

PRN: 26,258

NGR: SM 9460 0296 CONDITION: Building/E FUNC. TYPE: Barracks

**DESCRIPTION:** 

Two storey, brick built structure. Shop units on ground floor with flats over. Marley tile gabled roof. Substantially altered from original appearance. Demolished.

**RT SITE NO: 062/006** 

PRN: 26,259

NGR: SM 9466 0298 CONDITION: Building/E FUNC. TYPE: Laundry

**DESCRIPTION:** 

Single storey, brick built, small rectangular structure. Gabled slate roof with decorative ridge tiles. Single brick chimneystack with four flues. Demolished.

**RT SITE NO: 062/007** 

PRN: 26,260

NGR: SM 9451 0297 CONDITION: Building/E

FUNC. TYPE: Married Quarters

**DESCRIPTION:** 

Two storey, rendered brick built, 'T' plan, detached house. Service range to south, gabled slate roof to main range, hipped slate roof to service range. Flat roof over 2 storey porch in re-entrant angle of west elevation. Glazed timber porch to ground floor. Demolished

**RT SITE NO: 062/008** 

PRN: 26,261

NGR: SM 9447 0298 CONDITION: Building/E FUNC. TYPE: Officer's Mess

**DESCRIPTION:** 

Two storey, rendered brick, 'T' plan detached house, service ranges to rear (east), hipped slate roof. 5 bay main elevation (west), 1st. floor. 1-3-1 fenestration. Centrally set entrance porch flanked by two large canted bay windows to ground floor only. Demolished.

**RT SITE NO:** 062/009

PRN: 26,262

NGR: SM 9459 0293 CONDITION: Building/E FUNC. TYPE: Headquarters

**DESCRIPTION:** 

Single storey, 'H' plan, rendered brick (originally fair faced), cross wings with tall three light stone mullioned windows in eastern elevations. Slate gabled roof with decorative terracotta ridge tiles. Altered from original appearance, veranda enclosed. Demolished.

**RT SITE NO:**062/010

PRN:26.263

NGR:SM 9464 0290

CONDITION: Building/E FUNC. TYPE: Barracks

**DESCRIPTION:** 

Single storey, painted fair-faced brick, rectangular plan, raised on a plinth due to falling ground to south, central gabled cross passage flanked by four bay range to either side, hipped slate roof with decorative ridge tiles. Concrete steps rise to cross passage in the south elevation. Doorway in north elevation level with parade ground. Demolished.

**RT SITE NO: 062/011** 

PRN: 26,264

NGR: SM 9468 0290 CONDITION: Building/E FUNC. TYPE: Barracks

**DESCRIPTION:** 

Single storey, painted fair-faced brick, rectangular plan, raised up on a plinth due to falling ground to south. Central gabled cross passage flanked by a four bay range to either side, hipped slate roof has been removed. Concrete steps rise up to the cross passage in the south elevation. Doorway in north elevation level with parade ground.

**RT SITE NO:** 062/012

PRN: 26,265

NGR: SM 9466 0288

**CONDITION:** Other Structure/E **FUNC. TYPE:** Ablutions Block

**DESCRIPTION:** 

Single storey, painted fair-faced brick, rectangular plan, mansard slate roof, small louvred ventilator over eastern bay, large louvred ventilator in centre of ridge. Veranda carried on four cast iron columns protects three doorways in the north elevation. Demolished.

**RT SITE NO:** 062/013

PRN: 26,266

NGR: SM 9468 0281 CONDITION: Building/E FUNC. TYPE: Quarters

DESCRIPTION:

Single storey, rendered brick, 'L' plan, 3 bay main elevation (south), central bay occupied by a brick porch with a shallow pitched slate roof, flanked by bow windows. Hipped slate roof with plain ridge tiles over main structure.

**RT SITE NO:** 062/014

PRN: 26,267

NGR: SM 9466 0282 CONDITION: Building/E FUNC. TYPE: Unknown

**DESCRIPTION:** 

Two storey (originally single storey), rendered brick, rectangular plan, gabled slate roof. Main elevation in southern gable.

RT SITE NO: 062/015

PRN: 26,268

NGR: SM 9462 0289

CONDITION: Other Structure/E

FUNC. TYPE: Latrine DESCRIPTION:

Single storey, brick built, rectangular plan, doorway in each end wall, originally the urinal was open to the elements and the water closet had a flat concrete roof which supported a steel water tank. Now roofed with corrugated sheeting.

**RT SITE NO:** 062/016

PRN: 26,269

NGR: SM 9466 0273

CONDITION: Building/B FUNC. TYPE: Workshop

**DESCRIPTION:** 

Single storey, 3 bay plan, cement rendered pier and panel brick construction, four light sash window per bay, gabled slate roof on timber king post trusses. Round head arched double timber doors in each gable allow access for 18 inch gauge tramway.

**RT SITE NO: 062/017** 

PRN: 26,270

NGR: SM 9468 0278 CONDITION: Building/B FUNC. TYPE: Workshop

**DESCRIPTION:** 

Single storey, double pile (PRN 45089), fair faced brick, pier and panel construction with gabled slate roofs, south range on light bolted steel trusses. South range, flat arched double doors west gable, depressed arched double doors in east gable to allow access for 18 inch gauge tramway.

RT SITE NO: 062/018

PRN: 26,271

NGR: SM 9470 0278 CONDITION: Unknown FUNC. TYPE: Building/U

**DESCRIPTION:** 

Plotted off aerial photographs. Not located on ground due to undergrowth.

**RT SITE NO: 062/019** 

PRN: 26,272

NGR: SM 9461 0281 CONDITION: Building/B

FUNC. TYPE: Loading Room

#### **DESCRIPTION:**

Single storey, rectangular plan, red brick constructed interior with coursed limestone rubble cladding with ashlar quions to corners, gabled slate roof with skylights. 2 double doors, those to north blocked with red brick, those to south with breeze blocks. A circular ventilator in E gable, matching arrangement in W gable. Two 18 inch tramways pass through the building.

RT SITE NO: 062/020

PRN: 26,273

NGR: SM 9459 0281 CONDITION: Building/B

FUNC. TYPE: Loaded Mine Store

#### **DESCRIPTION:**

Single storey, rectangular plan, coursed rubble with ashlar quoins c ladding interior of red brick construction, gabled slate roof. Large depressed arched double doorway in E gable permits access for 18 inch gauge tramway, concrete foundations for generator (?) on floor but no other internal features. Circular ventilator in gable above the doorway. Internal door in west wall leads to adjoining room PRN 26274, of same construction.

RT SITE NO: 062/021

PRN: 26,274

NGR: SM 9458 0281 CONDITION: Building/B FUNC. TYPE: Unknown

#### **DESCRIPTION:**

Single storey, rectangular plan, coursed rubble with ashlar quoins cladding interior of red brick construction, gabled slate roof with two steel trusses. Ashlar chimney stack interior of red brick construction in ridge of east gable. Three windows in southern elevation. One window and one door (to outside) in west elevation. Doorway in east elevation adjacent to fireplace, leading to adjoining room PRN 26274.

**RT SITE NO: 062/022** 

PRN: 26,275

NGR: SM 9456 0280 CONDITION: Building/E FUNC. TYPE: Drill Shed

## **DESCRIPTION:**

2 storey circa 1968 (originally single storey in 1903), 9 bay rectangular plan, coursed rubble, ashlar quions, present flat roof circa 1968, original gabled slate. Depressed arched doors for 18 inch gauge tramway per gable wall. South wall has central door flanked by 8 windows. Demolished.

**RT SITE NO: 062/023** 

PRN: 26,276

NGR: SM 9452 0282

CONDITION: Building/E FUNC. TYPE: Unknown DESCRIPTION:

Two storey (originally Single storey), L plan, ground floor coursed rubble, 1st floor cement rendered concrete block, flat roof, originally gabled slate. Demolished.

RT SITE NO: 062/024

PRN: 26,277

NGR: SM 0945 0281 CONDITION: Building/E FUNC. TYPE: Office DESCRIPTION:

Single storey, rectangular plan, rendered rubble with quions, hipped slate roof with plain ridge tiles. Lean-to porch set centrally in South elevation flanked by two windows, chimneystack above west elevation. Demolished.

**RT SITE NO: 062/025** 

PRN: 26,278

NGR: SM 9434 0292

CONDITION: Other Structure/B

FUNC. TYPE: Jetty DESCRIPTION:

Concrete abutment, original timber jetty having been replaced by a lightweight steel jetty with flight of steel steps to permit landing. Metalwork now removed. Only concrete abutment remains. Original 1903 structure possibly altered.

**RT SITE NO: 062/026** 

**PRN:** 26,279

NGR: SM 9461 0286

**CONDITION:** Earthwork/E

FUNC. TYPE: Trench/Air raid shelter

**DESCRIPTION:** 

Zig-zag plan trench, five lengths approximately 10ft (3.05m), destroyed by terracing for caravan hardstandings. Plotted from aerial photograph.

**RT SITE NO: 062/027** 

PRN: 26,280

NGR: SM 9445 0293

CONDITION: Earthwork/E

FUNC. TYPE: Trench/Air raid shelter

**DESCRIPTION:** 

'V' plan, each section approx. 10 feet (3.05m) in length. Destroyed by the construction of a road. Plotted from an aerial photograph.

**RT SITE NO: 062/028** 

PRN:45,079

NGR: SM 9474 0294

CONDITION: Building/ E FUNC. TYPE: Guard House

**DESCRIPTION:** 

Single storey, 5 bay rectangular plan, fair-faced brick, gabled slate roof with off centre brick chimney stack. Veranda to main {east} elevation carried on four cast iron columns. Rectangular flat roofed range to the rear. Plotted off aerial photographs. Demolished.

**RT SITE NO: 062/029** 

PRN: 45,080

NGR: SM 9437 0292

**CONDITION:** Other Structure/E

FUNC. TYPE: Pillbox DESCRIPTION:

Circa 1940s Single storey, irregular hexagon, re-inforced concrete, flat concrete roof. Door in rear (north east) wall, single embrasure in all remaining walls. Over-looked exit off jetty. Plotted off aerial photographs. Demolished. Constructed in site of mining establishment buildings of unknown function.

## 2.3 Categorisation of Archaeological Sites and Features

All sites and features identified within this report have been allocated a category which defines the archaeological importance of that site. The categories are as follows: -

Category A - Sites of national importance

Category B - Sites of regional or county importance

Category C - Sites of district or local importance

Category D - Minor or damaged sites

Category E - Sites needing further investigation

The buildings and structures at Pennar Point have little merit as individual features, but their value is increased when viewed as a group. The Submarine Mining Establishment is a unique feature within Wales, giving it considerable importance. On the other hand, the site has suffered considerably from later alterations, demolition, and decay, all of which have lessened the group value of the buildings. Bearing this in mind, those buildings and features at the site that have been demolished are all allocated to Category D, as are features of post WWII date. The surviving buildings associated with the Mining Establishment are allocated to Category B or C in order to emphasise their significance while recognising that the overall condition of the site does not merit a higher categorisation. The following categories have been allocated:

PRN:	TYPE:	CATEGORY:
34,989	Slipway	D
34,990	Building	В
34,992	Trackway	C
34,993	Jetty	D
45,081	Jetty	D
45,082	Jetty	D
45,083	Pool	В
45,084	Pool	D
45,085	Tramway network	C
45,089	Building	В
26,254	Water Tower	C
26,269	Workshop	C
26,270	Workshop	C
26,272	Loading Room	В
26,273	Loaded Mine Store	В
26,274	Building	C
26,276	Building	C
26,278	Jetty	В

## 3.0 RESULTS OF THE ASSESSMENT

## 3.1 Site Location and Topography

Pennar Point, on the south side of Milford Have n, is a headland forming the east side of Pennar Mouth. West Pennar is located on the headland forming the west side of Pennar Mouth. From Pennar mouth the inlet known as Pennar Gut, leads to the Pembroke River and Pembroke Town. The settlement of Pennar lies to the south of Pembroke Dock and the Defensible Barracks on Barracks Hill. To the east of Pennar Point, on the north side of the Military Road, is the site of the Royal Naval Llanreath Oil Fuel Depot established circa 1927. The focus of this report is upon Pennar Point itself, and will not cover the history of the settlement of Pennar and the Pembroke Docks in great detail.

The site lies within the Milford Haven Waterway Landscape of Outstanding Historic interest in Wales, as identified in the Register of Landscapes of Outstanding Historic Interest in Wales, 1998, produced by Cadw, CCW and ICOMOS UK. This part of the waterway includes many of the aspects which have been identified within the broader landscape description including a chronological range of maritime conquest, settlement, commerce, fishing and defence from prehistoric times to the 20 th Century, exhibiting both continuity and adaption in its exploitation. The Milford Haven Waterway Landscape of Outstanding Historic Interest in which Pennar Point is included has recently been the subject of a landscape characterisation project (Murphy and Ludlow 2002), an extract of which is reproduced in Appendix 4.

## 3.2 Site Description

The proposed development site at Pennar Point covers approximately 8 h ectares. Within this area are the site of Pennar Barracks (the Military Barracks of the Royal Engineers), and a Submarine Mining Establishment. Both were built at the same time circa 1903.

Sites and features identified in the Sites and Monuments Record all relate to these two groups of buildings, and their re-use and adaption up to the present. Many of the Barracks buildings have been demolished and little remains of these but their foundations. Several of the Mining establishment buildings, however, still survive, in a derelict state.

The high ground of the headland (an outcrop of Old Red Sandstone) are covered with the remnants of the demolished Barracks and Holiday Camp buildings. These are overgrown with gorse scrub, making access beyond existing road ways difficult. The slopes of the headland which have been terraced to accommodate static caravans are also overgrown and not easily accessible.

## 3.3 Landscape history and development

## 3.3.1 The prehistoric and Roman periods (8500 BC - c.400 AD)

Despite the strategic advantages offered by the topography of the Pennar Point headland, from where access into Pennar Gut could be controlled, there is no apparent physical evidence of any prehistoric activity at the site. Early maps of the area do not suggest the presence of possible prehistoric features and later developments at the site will have effectively obscured, if not totally destroyed any early features that may have existed there.

It is the West Pennar headland that appears to have been more strate gically important in prehistoric times since there is surviving evidence of two Iron Age hillforts there, the West Pennar Hillfort (PRN 35093-SM 9380 0305), and the West Pennar Rath Hillfort (PRN 3227-SM 9337 0304). There is no evidence of Roman period act ivity at the site.

## 3.3.2 The medieval period (c.400 - 1500 AD)

There is no evidence of Medieval period settlement or other activity at the site.

## 3.3.3 The Post-medieval Period (1500 - 2000 AD)

Pennar is indicated on the Saxon Map of 1578 and the Spee d Map of 1610. These maps are not very detailed and show no indication of any settlement or other activity at Pennar Point. There are, however, a few references to Pennar in accounts of the area.

Oysters were an important export from Milford Haven and som e of the finest were from Pennar Gut. Sir George Owen writing in 1595 states:

'Pennar Mowth is the creeke that cometh up to Pembroke town, this being the greatest and largest creeke in all milford, it passeth up into the land 3 myles....; a bark of 40 or 50 tons may enter this creek at low water and ride at ankher att Crowpool, but no further without helpe of the tyde. The crowe is a hollow or shelf a pretty way within the entrance of Pennar and is neere right against the very entrance and it is an oyster bedd, on the crowe groweth one of the best Oysters of all Milford being a bigg and sweet oyster, the poor people thereabouts are greatly relieved by the oysters there for upon lowe water the bed is drye and the people gather the oysters there without any dredge or other helpe of boate.'

These oysters came to the attention of foreign fishermen and in 1719 William Lloyd, the Deputy Vice Admiral for the County of Pembroke, wrote forbidding them from fishing in the branches and in the Haven itself as they 'employed many other fishing boats to dredge for the same oysters whereby to lade there several ships therewith and the same to export out of His Majesty's dominion'.

The oyster beds and the associated industry declined rapidly from about 1850, possibly due to over exploitation or pollution as the population and industrial activity increased in the area.

Limestone was quarried between Pennar and Pembroke, prompting Morris in 1748 to write:

'The navigation up this river to Pembroke Town is much impeded by the rubbish of the limestone quarries being thrown into the river; which ought to be remedied, or the place will be stopped up in the process of time. Within Pennarmouth a dock might be made which would contain all the vessels in England and which would be perhaps the greatest thing in the world of that kind'.

The Pennar Point headland itself however is formed from Old Red Sandstone so there is unlikely to have been any quarrying activity in the immediate vicinity.

The tithe map of 1840 (Map 1) is the first a vailable map that indicates the land use of the area in any detail. At that time, most of the land was in agricultural use, Pennar Point itself being listed in the tythe schedule as an area of pasture in the ownership of Sir John Owen. The majority of field boundaries in the immediate vicinity of Pennar Point do not appear to have changed appreciably since then. Further east, however, as the importance and size of the Dockyards increased, former agricultural land was developed as the settlement of Pennar grew, the Defendable Barracks were built, and in 1927 the Llanreath Oil Depot was constructed.

It is the history of the Dockyard and the accompanying need to defend it, that eventually led to the building of the Barracks at Pennar Point.

The Royal Naval Dockyard at Paterchurch, later to become Pembroke Dock, was founded in 1814, having been moved from Milford for strategic reasons. It is the development of the Dockyards that were the catalyst for the subsequent growth and development of Pennar and the surrounding area as there was an increase in local population to work in the dockyards. As the dockyards developed and perceived military threats changed, the defence requirements for the area also changed and so were frequently revised and altered.

Pennar Point was included in a 51 acre parcel of land bought in 1822 by the Admiralty from Sir John Owen. This land proved to be of little use to the Admiralty because of its distance from the dockyard. In 1830 the land was given to the army in exchange for 13 acres of land owned by the Ordnance Department that were closer to the dockyard.

Pater Fort at the site of the Dockyards was dismantled in 1837 before its construction was completed. The fort was replaced by the Pater Battery built by the Admiralty from 1840-44. The Battery was subsequently taken over by the Ordnance Department in 1856. The Paterchurch Battery was itself dismantled in 1903. The Pennar Point Barracks had been completed by the time the Battery was dismantled. The Royal Engineers, who were responsible for mine deployment had a Submarine Mining Establishment at the Pater Battery were transferred to the Pennar Point site at this time.

The Submarine Mining Establishment was a complex of buildings built along the coastal strip on the south side of Pennar Point, cut into the rock at the base of the hill slope. From this site technology was developed and mining experiments carried out in the waterway. The mines were constructed to order as required rather than stored in a ready state. The various buildings were each involved in a different stage in the assembly of the mines. The mines were transported on a rail network from one building to another as the assembly was undertaken. The Ordnance Survey 2 nd Edition map (Map 3) shows how the rail system connects the buildings and runs down to the pier at the west end. While some of the original buildings survive intact or in a modified state, others have disappeared or been replaced with different buildings.

## Mrs. S. Peters discussed the Mining Establishment in 1905:

'Near the shore at Pennar Point (or Pennar Gut) are torpedo stores and magazines. Submarine mining experiments have been carried on in connection with this station and all appliances are kept there for mining the Haven in case of need. At present these submarine mining works belong to the War Department, and Royal Engineers are established there. But in the near future it is thought that the Admiralty will take over from the war Department all these works. These arrangements are understood to be part of a new scheme for the defence of Milford Haven, and will probably be developed on lines suggested in a recent Parliamentary statement made by the Right Honourable Arnold Forster, secretary of state for war. If this transfer should take place, it may eventually happen that a torpedo depot will be established in the neighbourhood of Pennar Gut. This has, it is believed, been under consideration, and a part of the Pembroke River already

been surveyed for this purpose. Much money has been expended on the various buildings in connection with this establishment at Pennar, the total cost being £17,000.

The Royal Engineers ceased to be responsible for mining in 1907, at which time the Submarine Mining Establishment was closed. By the time of the 1908 2 <sup>nd</sup> edition OS map the site is shown as disused. The Royal Engineers did, however, continue to occupy the site until after WWII.

## 3.3.4 The Barracks During the First and Second World Wars.

During World Wars One and Two, the Pennar Barracks continued to be occupied by the Royal Engineers, and possibly to billet various other military units (R.Thomas pers. Comm.). There was a Barrage Balloon tethering point (PRN 26211) located on the Parade Ground during WWII. And Coastal Artillery Defence Searchlights (R. Thomas pers. Comm.). Although the Mining Establishment buildings were undoubtedly used at this time, since the Royal Engineers no longer undertook mining activities, it is not clear to what purpose they were put.

There are very few major alterations to the Pennar Barracks visible from the WWII aerial photographs or from the remaining architecture, but some alterations are discernable:

PRN 45080 is a WWII Pillbox situated near to the Pier PRN 26278 on the site of some earlier mining establishment buildings. The Pillbox itself has now also been demolished.

PRN 26279 is a 'zig zag' trench identified from aerial photographs that ran from the southwest corner of the parade ground towards the old Mining Establishment. This trench was destroyed by the terracing of the site to accommodate static caravans.

PRN 26280, towards the south west of the headland is another trench or air raid shelter, also destroyed by later terracing.

PRN 45087 are two oval features visible on aerial photographs, but probably now destroyed, or obscured. They were probably gun emplacements.

## 3.3.5 Description of the Pennar Barracks Buildings

The Pennar Barracks site occupied the top of the Pennar point headland while the submarine Mining Establishment was located on the coastal strip at the bottom of the hillside. The Barracks consisted of a collection of buildings grouped around a central parade ground area at the eastern end of the site, with two more buildings located further to the west. All these buildings have been demolished in recent years and were not recorded in detail before this happened. There are, however several photographs of the exterior of these buildings before their demolition, and brief descriptions of their

construction made during the Survey of 19<sup>th</sup> and 20<sup>th</sup> Century Military Buildings (Thomas 1994) are included in the Gazetteer in this report. Photographs of many of these buildings are included in this report, but owing to their later re-use and refurbishment as Holiday Park accommodation, the original fabric and appearance of the buildings is often obscured.

Just inside the present day entrance to the site stand the brick supports for a large water tank (PRN 26254) (Photo. 1). The tank itself, dated 1901 was removed at some time after 1995. This tank, fed by a nearby spring was presumably the main water supply for the barracks.

Close by stood the Guard House (PRN 45079) at the eastern end of the Parade Ground, and two two-storey dwellings designated Married Quarters (PRN 26255) (Photo. 2). Proceeding westward along the north side of the Parade Ground was a terrace of eight two-storey houses (PRN 26256) (Photo. 3), also Married Quarters.

PRN 26257 (Photo. 5) was probably originally a barrack block, but was considerably altered or re-built to provide shop units and accommodation when the Barracks were used as a Holiday Camp after WWII. PRN 26258 (Photo. 6) was likewise extensively re-modeled, and its original function is uncertain. To the north of these buildings is a Laundry building (PRN 26259) (Photo. 4).

At the west end of the Parade Ground is situated the Head Quarters Building (PRN 26262) (Photo. 9). The south side of the Parade Ground is bordered by two Barrack Blocks (PRN 26263 and 26264) (Photos 10 and 11). To the south of these are a Latrine block (PRN 26268) (Photo. 26268) and an Ablutions Building (PRN 26265) (photo. 12).

The Officers Mess (PRN 26261) (Photo. 8), and another Married Quarters building (PRN 26260) (Photo. 7) are situated further to the west.

## 3.3.6 Description of the Submarine Mining Establishment Buildings and Features

At the time of compiling this report, several of the buildings associated with the mining establishment had already been demolished (PRNs 26277, 26276, 26275, 26266, 26267 and 45089). Other buildings, however, (PRNs 26274, 26273, 26272, 26270, 26269 and 45090) were still standing although in a derelict state. Measured sketches of the floor plans of these surviving buildings form part of the archive but are not represented in this report. Photographic evidence of the demolished buildings exists (some are represented in this report) but later modifications often obscure their original appearance. Building PRN 34990 (Photo. 29), survives in a modified form. Structure PRN 26271 was not located.

The Submarine Mining Establishment was concerned with the development, testing, and production of mines for the defence of the Milford Haven waterways. Based on conversations with Roger Thomas, the technology of the day basically involved linked strings of mines, either deployed on the surface, or below the surface, which were linked

by cables to the shore from where their detonation was controlled initially manually, although later systems developed a degree of automation.

The mining establishment buildings are built along the edge of the coastal strip on level ground created by quarrying into the rock hillside. The mines were not stored armed and ready for deployment, but were assembled as required. Each building at the establishment had a specific function in the process of storing components, assembling, arming and deploying the mines. The mines were transported on a system of 18 inch gauge tramways between the locations for each stage in the process. The layout of the complex is clearly represented on the 2<sup>nd</sup> edition Ordnance Survey map, although the exact procedures carried out at each location are not clear. Some stages in the process have, however, been identified by Roger Thomas (pers. comm.). The storage of components and the process of assembly was carried out in the eastern part of the complex, from where the mines were transported on rails to the pier (PRN 26278) at the western end of the site (Photo. 27). From here the mines would have been loaded onto boats for deployment.

PRN 45083 (Photo. 27), located besides the pier (PRN 26278) was probably a tank containing seawater in which cable used for linking the mines was stored. This was necessary to prevent the excessive corrosion that would occur if the cables were frequently immersed in seawater then stored on dry land. The group of small building s immediately to the north of this tank are of unknown function and no trace of them is visible today as a pillbox (PRN 45080), also now demolished, was constructed in the same location during WWII.

Proceeding eastward along the line of the tram rails is a small brick built room, PRN 45086. This is interesting because its design, with an entrance corridor and with heavy iron blast doors, suggests it may have functioned as a magazine for storing explosives. The size of the building, however, is too small to have been the main magazine for the Mining Establishment. From here, a cement rendered revetment wall continues eastward to the derelict remains of PRN 34990 (Photo. 29). At first glance this appears to be a cement rendered breezeblock built holiday cottage, constructed at some time after WWII since it is not visible on the 1946 aerial photographs. This is, however, is built upon the brick built remnants of an earlier structure, presumably contemporary with the mining establishment. This structure has a flat concrete roof supported with iron girders, and it now forms a large cellar-like feature upon which the later building is constructed, and which is accessed from a manhole. The original function of this building is not known and it may have been further modified during WWII.

PRN 34989 is a concrete slipway constructed in the same location as an earlier pier of which no remnants survive. This pier may originally have had a similar function to PRN 26278, although by the time of it was mapped, there were no rails linking it to the rest of the complex.

PRN 26277 (now demolished), is identified by Roger Thomas as an Office (Photo. 20). It was built in the same manner and style as other buildings in the complex, with a limestone exterior cladding and red brick internal construction.

PRN 26276 (now demolished) was originally a single storey building of similar construction to the other buildings of the mining establishment, but which was later heavily modified (Photo. 19). Its original function is unknown but it may have been administrative since it was not linked by tramway to the rest of the complex.

PRN 26275 (now demolished) was originally a range of buildings, identified by Roger Thomas as a 'Drill Shed' of the same construction as the other original establishment buildings, with a gabled slate roof, depressed arched doors in each gable end through which a tramway ran the length of the building, and with eight windows and a central door in the south elevation. The drill shed was where training in the assem bly of mines was carried out, and where strings of mines were linked up. Two circular features at the eastern end of the Drill Shed were possibly tanks in which cable was stored. The building was later heavily modified circa 1968 (Photo. 18).

Set back from the Drill Shed, and on a different branch of the tramway network was another range of buildings. PRN 26272 (Photo. 21) was the Loading room, where explosives were loaded into the mines. This building has no windows, but two skylights in the roof. From the Loading Room the tramlines led to the Loaded Mine Store (PRN 26273) where mines were temporarily stored before being linked together into strings in the Drill Shed (Photo. 17). Attached to the loaded mine store was another room (PRN 26274) of uncertain function, but which may have been administrative (Photo. 17). A small detached building immediately to the west (PRN 45090) is also of uncertain function. It is of brick construction but is not stone clad, has no windows but has a central skylight in the roof.

At the eastern end of the complex are three buildings identified as Workshops (Photo. 16), and storage buildings (PRNs 26269, 26270 and 45089). All three are of brick construction, some are partly cement rendered. PRN 45089 has recently been demolished (Photo. 22). Interestingly, each of these buildings have doors at each end through which tramways could run, though it does not appear that this was ever the case. This may suggest that there were plans to expand the mining establishment that were never realised before its closure.

To the north of these workshops were located a detached house (PRN 26267) (Photo. 14) and a bungalow (PRN 26266) (Photo. 15) both of which have been demolished. The cartographic evidence shows numerous other buildings and stru ctures within the Mining Establishment, of unknown function, and of which nothing survives.

One structure that has not yet been identified at the site is the Magazine, where explosives would have been stored. This building would have had specific design characteristics to ensure against accidents, but no appropriate building appears to have existed on the site. Bearing in mind the short lifetime of the site, it is possible that a proper Magazine building was never constructed, and other buildings were utilised as temporary magazines in the meantime.

A flight of steps leads down to the foreshore at the eastern end of the mining establishment where there are the remains of a stone built sea wall. Although there appears to have been a boathouse and slipway here at the time of the mining establishment, the structures existing today (PRN 34993) are of later construction (Photo. 23).

It was apparent during undertaking the research for this report that there is more documentary evidence that could be located and consulted given more time and resources than appropriate for this report. Further research would be likely to clarify many details about the layout and functioning of the Mining Establishment.

## 3.3.7 Description of the Holiday Camp Buildings.

At some time after WWII the Barracks was converted to a Holiday Camp. This appears to have remained in business until the mid 1980s. All the existing military buildings of the Barracks and the Mining Establishment continued in use but were converted for a variety of leisure purposes. In addition the slopes of the headland surrounding the barracks were terraced to accommodate static caravans (Fig. 2). This process will have effectively obliterated any traces of any earlier archaeological features that may have existed on the headland.

Scrutiny of the WWII (and later) aerial photographs indicates that additional buildings were constructed during the lifetime of the Holiday Park. Photo. 30, shows a terrace of houses to the south of the former Head Quarters building, and two large buildings on the Parade Ground. Neither of these developments was visible on the wartime aerial photographs.

Aerial photographs from the 1980s also show that an open -air swimming pool complex (see Photo. 9) was built between PRN 26262 and PRN 26260, and additional houses along the northern and western edges of the crest of the headland. No other photographic evidence of these latter buildings has been located.

## 3.3.8 Foreshore Features

There are numerous features on the foreshore on the southern side of Pennar Point. The earliest of these are Pier (PRN 226278) and Tank (PRN 45083) (Photo. 27), Pier (PRN 34989) and Jetty (PRN 34993) (Photo. 23).

The concrete abutment for pier PRN 226278 is possibly original but appears likely to have been re-rendered at some time. Originally there was a pier probably of metal and wooden construction and carrying the tramway, that extend from the abutment. WWII aerial photographs show that this pier extension was rebuilt at least once before its final removal. Closely associated with the pier abutment is Tank PRN 45083 that appears on the 1908 map but is no longer complete. This may have held seawater in which cable

(used to link mines in strings) was stored to prevent corrosion. Adjacent Slipway PRN 45088 does not appear on the WWII aerial photographs and so is presumed to be associated with the Holiday Camp phase.

Jetties PRN 45081 and PRN 45082(Photos 25 and 26) are not present on WWII aerial photographs and are assumed to belong to the Holiday Camp phase. Likewise, Pool feature PRN 45085 (Photo. 24), which is constructed from cement rendered breezeblocks appears to be a post war development associated with the holiday camp. Slipway PRN 34989 is also of modern construction. It does not appear on the WWII p hotographs.

#### 4.0 CONCLUSIONS AND RECOMMENDATIONS

#### 4.1 Conclusions

The site lies within the Milford Haven Waterway Landscape of Outstanding Historic interest in Wales, as identified in the *Register of Landscapes of Outstanding Historic Interest in Wales*, 1998 (see appendix) The site has an interesting and significant history and is one of the features that present a continuous chronology of maritime defence history within the landscape.

The Submarine Mining Establishment is a unique example of its kind within Wales and an increasingly rare example within Britain. The presence of the Barracks and the Submarine Mining Establishment are also of significance to the history and development of the local community and adds to the local distinctiveness of the area.

Although the unique nature of the site imbues it with rarity value, the condition of the complex as a whole lessens the extent to which it can be considered of national importance. Despite much of the site having already been demolished, what re mains at present still allows the land-use history and former importance of the site to be appreciated, interpreted, and understood. Some of the buildings are in sufficiently good condition and of sufficient interest to perhaps be considered of regional si gnificance. Many, but not all of the surviving features are structurally unsafe or are a hazard in other ways. If they are to be retained, they will have to be made safe. Those features that are not structurally unsafe have less reason to be demolished and should be considered for retention.

Many of the features along the foreshore that were previously thought to be contemporary with the Mining Establishment have been shown to be of post WWII origin, lessening the likelihood that they should be retained.

#### 4.2 Recommendations

Permission to build the access roads and a preliminary group of houses close to the entrance to the site has already been granted, and is considered unlikely to impact upon

any archaeologically sensitive features or deposits, since the former buildings have already been demolished. The main area of concern is the site of the former Submarine Mining Establishment that is situated along the southern shore of Pennar Point, where significant buildings and other features still survive.

In the light of the findings of this desk-based assessment the following recommendations have been prepared following consultation with the Development Control Officer of Cambria Archaeology who provides archaeological advice to the local Planning Authority.

These recommendations are not considered to be insurmountable or unreasonable considering the unique nature and historical importance of the site and its dramatic setting within a recognised historic environment. The Development Control Officer should be informed prior to the commencement of any work on the site for which planning permission has not yet been granted.

#### It is recommended that: -

- the possibility of incorporating some or all of the surviving buildings associated
  with the Submarine Mining Establishment should be considered in the design of
  the redevelopment of the coastal strip. In particular, the buildings that have a
  limestone exterior (PRNs 26274, 26273, and 26272) have some appeal, while the
  brick constructed workshops (PRNs 26269 and 26 270) are perhaps of less value.
- failing the preservation of the original buildings, the former significance of the Barracks and the Mining Establishment site should be recognised and reflected in aspects of the new design and layout of the proposed development.
- the former significance of the site should be recognised and presented to the public in the form of display and/or information panels at locations within the development.
- The development should be designed in such a way as to minimise its visual impact upon the landscape, respecting the natural topography, geology and ground cover on the site.

## 4.3 Acknowledgements

This report was researched and written by Duncan Schlee of Cambria Archaeology. Acknowledgements to: colleagues at Cambria Archaeology and staff of the National Library of Wales, Royal Commission on the Ancient and Historic Monuments in Wales, Haverfordwest Public Library, and Roger Thomas of English Heritage for their help, advice and assistance.

#### APPENDIX 1

## Archive deposition

The archive, indexed according to the National Monuments Record (NMR) material categories, will be deposited with the Sites and Monuments Record for Carmarthenshire, Ceredigion and Pembrokeshire, curated by Cambria Archaeology, Shire Hall, 8 Carmarthen Street, Llandeilo, Carmarthenshire. It contains the following: -

- A.1. Copy of the final report
- A.4. Disk copy of report
- B.4. Field notes
- D.1. Catalogue of site photographs
- D.2. Colour slides
- D.3. Mono prints and negatives
- G.1. Source documentation
- I.4. Final report manuscript
- I.4. Final report typescript
- I.4. Final report disk
- I.4. Proofs
- I.4. Paste-ups
- L.1. Project research design/specification
- L.4. General admin.
- M.1. Non-archaeological correspondence

There is no material for classes C, E, F, H, J, K and N.

## **APPENDIX 2**

#### List of sources consulted

## Databases

Sites and Monuments Record for Carmarthenshire, Ceredigion and Pembrokeshire, curated by Cambria Archaeology, Shire Hall, 8 Carmarthen Street, Llandeilo, Carmarthenshire.

## Maps

Tithe Map of St Mary's Parish (Pembroke) 1841

Ordnance Survey 25" First Edition. 1863. Sheets XXXIX.7 and XXXIX.8

Ordnance Survey 25" Second Edition. 1908. Sheets XXXIX.7 and XXXIX.8

## Aerial photographs

Sortie No.	Frame No.	Flight No.	Date
106G/UK/1629	3134	N/A	July 1946
106G/UK/1399	4209	N/A	April 1946
106G/UK/1625	4362-4363	N/A	July 1946
Meridian 25435	190/200	N/A	1955
58/2985	292-293	F21	1959
P.C.N.P. 50/83	199-201	N/A	1983
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## Unpublished works

Hughes, B.H.J. 1995. Jottings on the History of Pennar.

Murphy, K. and Allen, B. 1998 Coastal Survey 1997-8, Lower Milford Haven, Pembrokeshire.

Murphy, K. and Ludlow, N. 2002. The Historic Landscape characterisation of the Milford Haven Waterway.

Thomas, R.J.C. 1994. A Survey of 19<sup>th</sup> and 20<sup>th</sup> Century Military Buildings of Pembrokeshire.

## **Published** works

Cadw/Icomos, 1998, Register of Landscapes of Outstanding Historic Interest in W ales.

Cadw/Icomos, 2001, Register of Landscapes of Special Historic Interest in W ales.

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Peters, S. 1905. The History of Pembroke Dock.

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#### APPENDIX 3

## Copy of the Project Specification

Design Brief for An Initial Archaeological Desk -top Assessment Pennar Point, Pembroke Dock, Pembrokeshire

Prepared for: Pembroke Design Ltd.

Site Location: NGR SM 945 030

This design brief is only valid for six months from the above date. After this period Cambria Archaeology- Heritage Management should be contacted. Any specification resulting from this brief will only be considered for the same period. Please note that this document is written for archaeological project managers to facilitate the production of an archaeological specification of works, it is <u>not</u> a tender document. Any response to this brief should follow IFA Standards and Guidelines.

The project manager is strongly advised to visit the site before completing their specification as there may be implications for accurately costing the project. The project manager must consult the Regional Sites and Monuments Record held by Cambria Archaeology Heritage Management as part of the assessment.

## 1.0 Introduction

- 1.1 This design brief has been prepared for and at the request of Pembroke Design Ltd. by the Heritage Management Section of Cambria Archaeology, funded by Cadw-Welsh Historic Monuments to provide advice on archaeology and planning to the Planning Authorities and others in West Wales.
- 1.2 Following the submission of a planning application in 1998 for residential development, nursing home, quayside club house, water sports centre, bar, shop, etc. at the Point, Pembroke River, (formerly Pennar Park) comments regarding the potential impact of the proposal on the known historic remains on the Point were provided to the LPA by Cambria Archaeology-Heritage Management. A condition was subsequently attached by the LPA to outline planning consent identifying the need for a programme of archaeological work to be carried out prior to any development taking place.
- 1.3 The intial stage of the scheme of works will include a desk-top assessment to identify the specific implications of proposed development, bringing together an understanding of both the archaeological potential of the site along with the surviving historic remains, their condition and significance. This information will then be used to develop an appropriate mitigation strategy for minimising any negative impact on the historic environment. It should also provide sufficient

- understanding to enable the presentation of the historic use of the site as part of the development.
- 1.4 The results of this desk-top assessment will be required before the full scope of the necessary archaeological scheme of works can be identified to comply with the condition placed on planning consent.

## 2.0 Site Description

- 2.1 The site covers approximately 8 hectares at Pennar Point. This includes the area of Pennar Barracks, the military barracks of the Royal Engineers originally built between 1903 and 1907.
- 2.2 The area of the proposed development has been included in a number of relatively recent surveys which have considered various aspects of the historic environment. These include 'Survey of 19th and 20th Century Military Buildings of Pembrokeshire' by Roger J.C. Thomas 1994, commissioned by Pembrokeshire Coast National Park and Preseli and South Pembrokeshire District Councils, and 'Coastal Survey 1997-8, Lower Milford Haven, Pembrokeshire' 1998, grant aided by Cadw, undertaken by Cambria Archaeology.
- 2.3. The site lies within the Milford Haven Waterway Landscape of Outstanding Historic Interest in Wales, as defined in the Register of Landscapes of Outstanding Historic Interest in Wales, 1998, produced by Cadw, CCW and ICOMOS UK. This part of the waterway includes many of the aspects which have been identified within the broader landscape description including a chronological range of maritime conquest, settlement, commerce, fishing and defence from prehistoric times to the 20th century, exhibiting both continuity and adaptation.
- 2.4 Historic sites and features identified in the Sites and Monuments Record range from the remains of late 19th century torpedo launching pads (PRN 34991, 34993) to the site of a WWII barrage balloon (PRN 26211).

## 3.0 The nature of the proposed development and archaeological requirements

- 3.1 The proposed development is understood to include residential development, nursing home, quayside club house, water sports centre, bar, shop, access, services and landscaping.
- 3.2 The aim of the archaeological assessment is to clearly identify the locations of all surviving structures and other historic features within the application area as well as any areas of potential archaeological interest, identifying form, date, condition and significance of any remains and of the interrelationships between remains. The assessment should also consider the potential impact of the proposed development on those remains.

3.3 This work will be to a sufficient level to identify the significance of all the individual identified structures and features, their relationship to each other and the significance of those relationships to understanding and appreciating the historic and archaeological importance of the site. Where there is currently insufficient information to adequately understand any potential impact the results will also need to be sufficient to identify the necessary scope of any further evaluation required to identify mitigation measures which may be considered necessary within the framework of legislation, guidance and planning policies as well as the specific concerns of Pembrokeshire County Council.

## 4.0 Methodology

#### 4.1 The research should:

- 1. Collate and assess relevant information where readily accessible from documentary sources including cartographic information held in the SMR, Pembrokeshire County Records Office, Council for British Archaeology Defence of Britain Project, RCAHM(W) and other relevant collections.
- 3. Collate, assess and where appropriate rectify information from relevant aerial photographs.
- 4. Collate and assess available geotechnical data.
- Assess the topography and landuse of the area through maps and site visits compiling a general photographic record of the whole site.
- 6. Provide a detailed assessment of areas of archaeological survival and potential based on the above research.
- 4.2 Historic air photographs (notably the 1946 RAF vertical black and white survey) are available for inspection at both the SMR and the National Monuments Record Aberystwyth and Welsh Office Air photographs library, Cardiff.
- 4.3 Along with the data base and full archive produced as part of the survey of 19th and 20th century military buildings in Pembrokeshire it is considered that Roger J C Thomas, currently working within English Heritage, should be consulted as part of the assessment process.

## 5.0 Analysis

- 5.1 The overall objectives of the results of the Desk Top Assessment's hould include the following:-
  - An assessment of the existing information regarding archaeological remains in the area of the development and the area immediately surrounding it to aid the identification of areas of high archaeological potential.

- 2. An assessment of the known and potential state of preservation of any structures, features and deposits known or potentially surviving on the site.
- 3. An assessment of the possible extent of direct and indirect impact on the known and potential remains of archaeological interest on the site.
- 4. An assessment of the potential for the use of particular investigative techniques in order to aid the formulation of any mitigation strategy including further evaluation and/or preservation of archaeological sites/features.
- 5. An assessment of archaeological and historical significance of all areas of known and potential archaeological interest, in local, regional and national contexts.

## 6.0 Requirements

- 6.1 The project must be undertaken by an archaeological team of recognised competence, fully experienced in the assessment of military and industrial archaeology and formally acknowledged by Cambria Archaeology Heritage Management (CA-HM) the regional archaeological curators. Details, including the name, qualifications and experience of the project director and all other key project personnel (including specialist staff) will be communicated to CA -HM as part of a project specification. The contractor will be expected to produce a reasonably detailed project specification although a full programme of works will not be required.
- Arrangements of the long term storage and deposition of the archive must be agreed with CA-HM before the commencement of fieldwork.
- 6.3 The site archive should conform to the NMR (W) agreed structure (guidelines available) and be deposited within an approved store (normally this will be the appropriate local museum and/or NMR) on completion of site analysis and publication.

## 7.0 Reporting

- 7.1 A full report of the assessment results should be prepared and presented to CA-HM within 3 weeks of the completion of site works (unless otherwise agreed). A report shall be produced that is fully representative of the results of the assessment and include the following:-
  - 1. A concise non-technical summary of the project results.
  - 2. Location plan of identified features and structures in relation to the proposed development.

- 3. Mapped archaeological and historical features as well as archaeological potential to at least a scale of 1:500
- 4. Written descriptions of all features identified and their considered interpretation
- 5. Condition statements and assessments of significance for all identified features and areas of archaeological potential.
- 6. Statement of the local and regional context of archaeological remains identified.

### 8.0 General

- 8.1 In addition two copies of the final report should be provided for the Sites and Monuments Record.
- 8.2 CA-HM is responsible for monitoring all archaeological work within the Pembrokeshire area. The contractor must inform CA-HM in writing detailing proposed start dates for the project. Once notified a Project Record Number will be allocated prior to on site work commencing, to be used in all site records.
- 8.3 Any changes to the specification that the contractor may wish to make after approval should be communicated to the CA HM and approved.
- 8.4 CA-HM should be kept regularly informed about developments both during the site works and subsequent analysis.

#### **APPENDIX 4**

An Extract from the Historic Landscape Charac terisation of the Milford Haven Waterway

HISTORIC LANDSCAPE CHARACTER AREA: 306 PEMBROKE DOCK

GRID REFERENCE: SM 963034 AREA IN HECTARES: 455

#### Historic Background

During the medieval period this area, a small peninsula situated in St. Mary's Parish, Pembroke, lay within the Manor of Kingswood with Golden, which was a demesne manor of the lordship of Pembroke. Arable land-use is recorded in detailed accounts from the 14<sup>th</sup> century and 15<sup>th</sup> century, with issues from wheat, beans, peas, barley and oats. However, meadowland, sheep and wool are also recorded, along with profits from cloth-processing - two fulling-mills were established during the 15th century. Income was also derived from the ferry that crossed the waterway to Burton. This was not replaced by a bridge until the later 20th century. During the post-medieval period the area became part of the Bush estate. The partial construction of a fort at Paterchurch in 1758 did not alter this area's agricultural aspect, as shown on estate maps of 1772 and 1813, although it would seem that as with most inlets on the Haven small-scale ship building was being carried out at Bentlass on the Pembroke River and at Pembroke Ferry. The Admiralty's decision to relocate their dockyards from Milford Haven to a new site at Paterchurch in 1812 marked the beginning of the new town of Pembroke Dock. Growth was rapid. An estate map of 1848 titled 'Town of Pater' shows the grid pattern of the embryonic town. Many of the plots are shown occupied, but many others are awaiting development. Indeed, a later hand has annotated the map with the names and types of buildings that were subsequently built. The naval dockyards were opened in 1814, extended in 1830-32 and again in 1844. In 1832 a stone pier at Hobbs Point was opened and later an Hotel and stables for Irish steam packet passengers; this service having been transferred from Milford Haven. As part of the overall defence for Milford Haven several large installations were constructed within this area in the mid 19th century, including a large 'star' fort and two gun towers on the foreshore by the dockyards. In 1864, the first train ran from Pembroke Dock to Tenby. The line was later extended into the dockyards. Civilian shipbuilding yards on Water Street, Front Street and Lower Meyrick Street all operated in the 19th century, as well as a substantial yard at Jacob's Pill on the Pembroke River. This last installation was opened in 1874 and closed in 1884, when it was converted to an isolation hospital. Late in the 19th century a torpedo stores was established at Pennar Point and submarine mining experiments were carried out on the river here. The dockyards were one of the world's most important naval shipbuilding centres, with over 260 ships launched in its 112 year life. The development of larger ships, culminating in the dreadnought class, signalled the end of the dockyards. The Admiralty was unwilling to invest in new facilities, and in 1907 men were laid off. The dockyard was abruptly closed in 1926. In 1930, the establishment of a RAF flying-boat base in the eastern part of the former dockyard provided some employment until its closure in 1959. During the early and mid 20<sup>th</sup> century other military installations were located in this area including barracks, oil and ammunition stores. More recently, a ferry service to Ireland has been operating at a new base in the former dockyard. The town of Pembroke Dock expanded in conjunction with the military and industrial development, at first close to the dockyards and at Pennar, and then, in the 20<sup>th</sup> century, outside this historic town core.

#### Description and essential historic landscape components

Pembroke Dock is an urban historic landscape character area. It is centred on the 19th century and early 20th century naval dockyards, and smaller private shipbuilding yards. The naval dockyards are surrounded by a high defensive wall and flanked by two 19th century gun towers. Large parts of the yard are now given over to modern industry, including the Irish ferry port, but several large stone buildings in the Georgian tradition close to the dock's entrance provide a strong architectural signature. Several of the original docks also survive as do a collection of 20th century military structures, including two large hangars built for flying boats. Pembroke fort, originally constructed on an open hillside overlooking the dockyards is now surrounded by development. The 19th century town is built in a grid pattern, and this, together with the survival of many wide streets of contemporaneous houses and other buildings, provides a strong architectural signature. The combination of a planned street pattern and high survival rate of contemporaneous houses and other buildings provides Pembroke Dock with a coherent historic character that is rarely matched in other Welsh town. These 19th century dockyard worker houses are generally of two storey terraces, cement rendered, and broadly in the Georgian tradition. The social and economic landscape of the town is manifest in details such as the larger 'foreman' houses that stand at the ends of terraces. Three storey houses on some street corners in the commercial centre emphasise the importance of certain road intersections. At Pennar over looking the dockyards to the south the grid pattern of wide streets is maintained, but here terraces of single-storey cottages provide a very distinctive, if not unique, aspect to the town. In all there are 125 listed buildings within the town. There is not a great deal of later 19<sup>th</sup> century and early to mid 20<sup>th</sup> century housing, but later 20<sup>th</sup> century housing and other buildings testify to intensifying growth in this period. Several of the 20<sup>th</sup> century military installations have been redeveloped into offices and light industrial estates; many have been demolished and the land restored. The Cleddau Bridge, which replaced a ferry, has rejuvenated the northern side of the town. It is here that much of the light industry is located. A golf course lies within this area.

This historic landscape character area is defined to the west, north and east by the sea. On the other side it neighbours farmland. However, it is likely that Pembroke Dock will soon merge with Pembroke as only a few fields separate them.

## Conservation priorities

Pembroke Dock is a Conservation Area, and therefore development must comply with this status.

Sources: Carradice 1991; Findley 1875; Jack 1981; Owen 1918; Peters 1905; Price 1986; St Mary's Pembroke Tithe Map 1841; PRO D/BUSH/6/26; PRO D/BUSH/6/27; PRO D/BUSH/6/40;

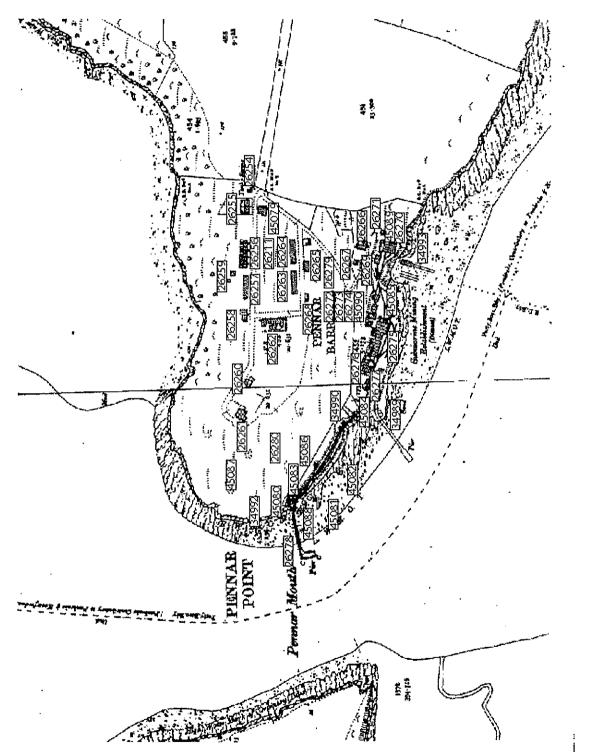


Figure 1: Map of the Archaeological Resource showing Location of Features and PRNs.

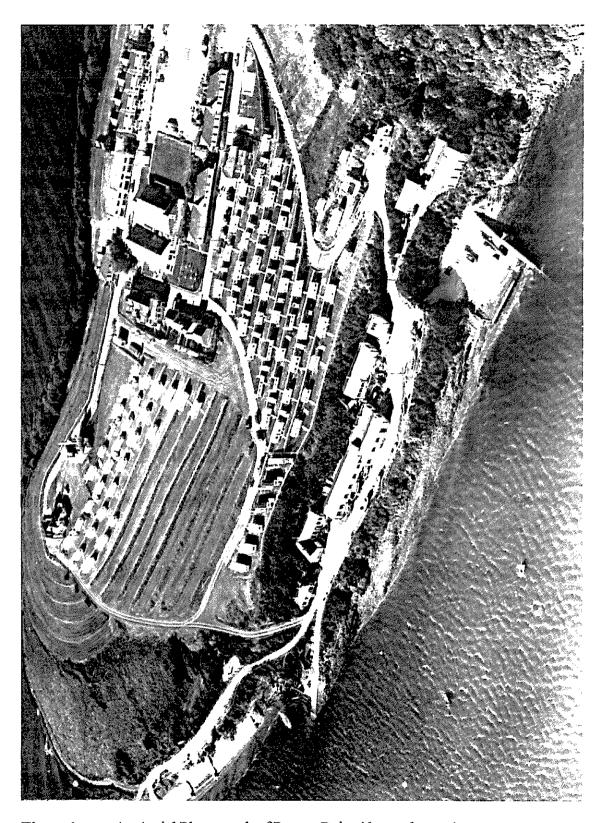
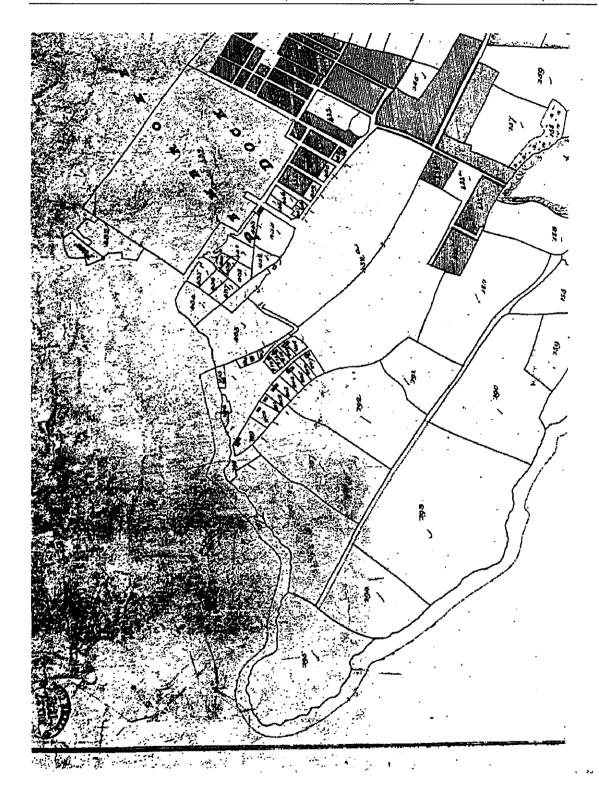
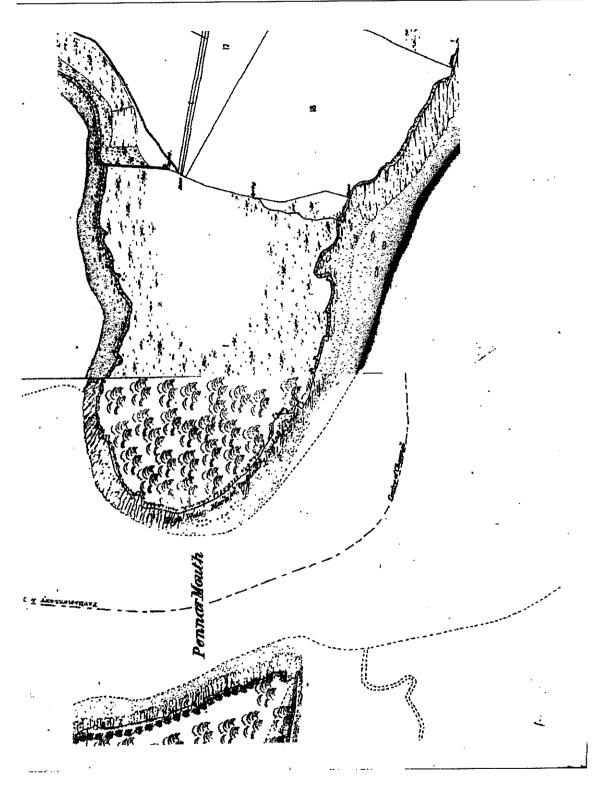


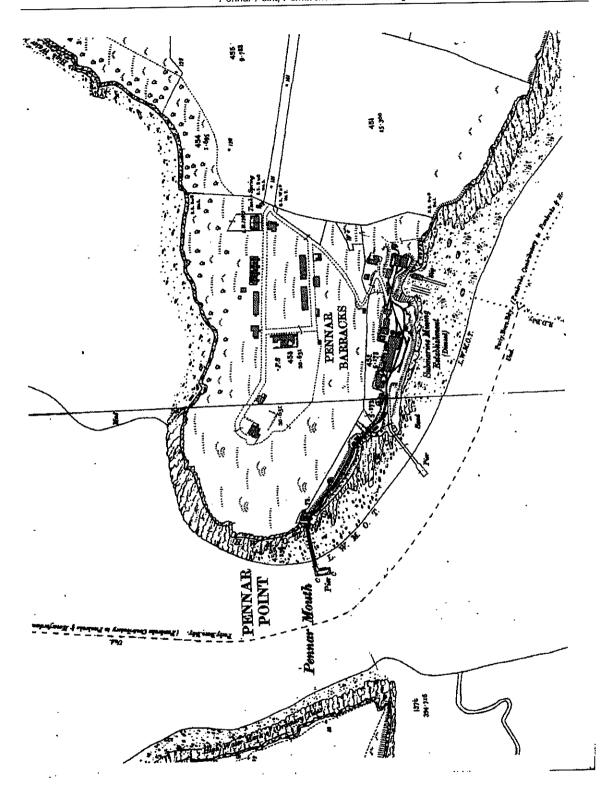
Figure 2: An Aerial Photograph of Pennar Point (date unknown).



Map 1: Pennar Point on The St Mary's Parish (Pembroke) Tithe Map. 1841.



Map 2: Pennar Point on the Ordnance Survey 25" (reduced) Map of 1863.



Map 3: Pennar Point on the Ordnance Survey 25" (reduced) Map of 1908.

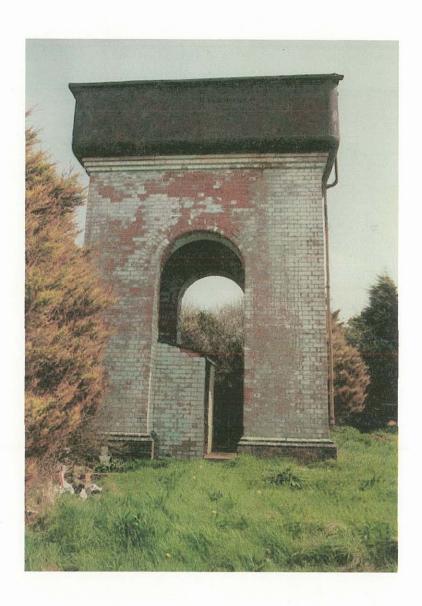


Photo. 1: The Water Tank (PRN 26254). From unknown Receivers photographs held in SMR



Photo 2: Married Quarters (PRN 26255). From unknown Receivers photographs held in SMR



Photo 3: Married Quarters (PRN 26256). From unknown Receivers photographs held in SMR

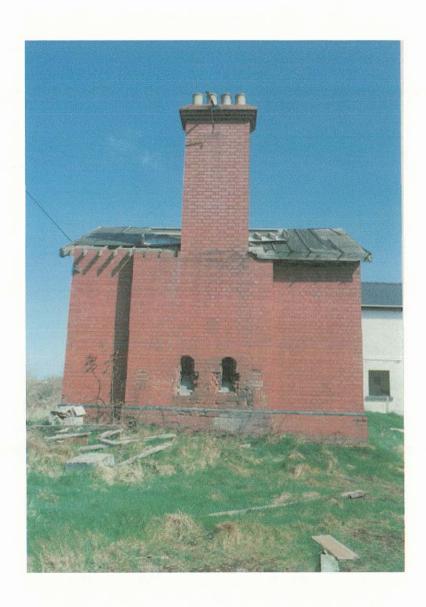


Photo. 4: Laundry Building (PRN 26259). From unknown Receivers photographs held in SMR



Photo. 5: Former Barracks? (PRN 26257). From unknown Receivers photographs held in SMR



Photo. 6: Former Quarters (PRN 26258). From unknown Receivers photographs held in SMR



Photo. 7: Married Quarters (PRN 26260). From unknown Receivers photographs held in SMR



Photo. 8: Officers Mess (PRN 26261). From unknown Receivers photographs held in SMR



Photo. 9: Headquarters Building (PRN 26262). From unknown Receivers photo held in SMR



Photo. 10: Barracks (PRN 26263). From unknown Receivers photographs held in SMR



Photo. 11: Barracks (PRN 26264). From unknown Receivers photographs held in SMR



Photo. 12: Ablutions Building (PRN 26265). From unknown Receivers photo held in SMR



Photo. 13: Latrine Block (PRN 26268). From unknown Receivers photographs held in SMR



Photo. 14: Detached House (PRN 26267). From unknown Receivers photo held in SMR



Photo. 15: Bungalow (PRN 26266). From unknown Receivers photographs held in SMR



Photo. 16: Workshop (PRN 26269). From unknown Receivers photographs held in SMR



**Photo. 17:** Loaded Mine Store and office? (PRN 26273 and PRN 26274). From unknown Receivers photographs held in SMR



Photo. 18: Former Drill Shed (PRN 26275). From unknown Receivers photographs held in SMR



Photo. 19: Offices ? (PRN 26276). From unknown Receivers photographs held in SMR

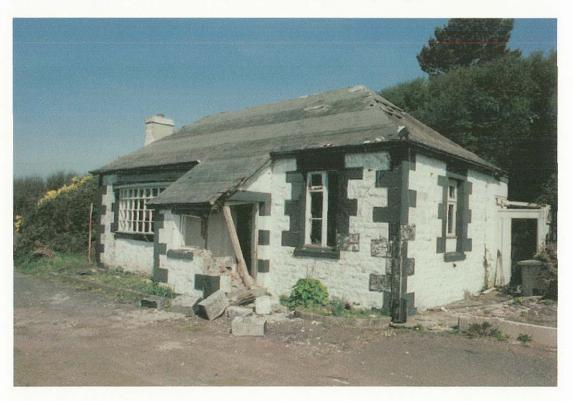


Photo. 20: Office (PRN 26277). From unknown Receivers photographs held in SMR



Photo. 21: Loading Room (PRN 26272).

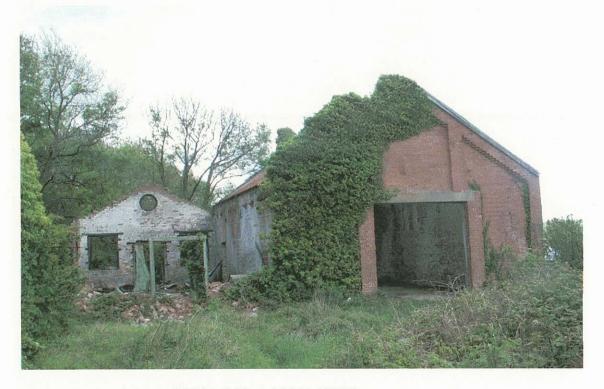


Photo. 22: Workshops (PRN 26270 and PRN 45089).



Photo. 23: Jetty (PRN 34993). From unknown Receivers photographs held in SMR



Photo. 24: Swimming Pool (PRN 45084)



Photo. 25: Jetty (PRN 45082)



Photo. 26: Jetty (PRN 45081)

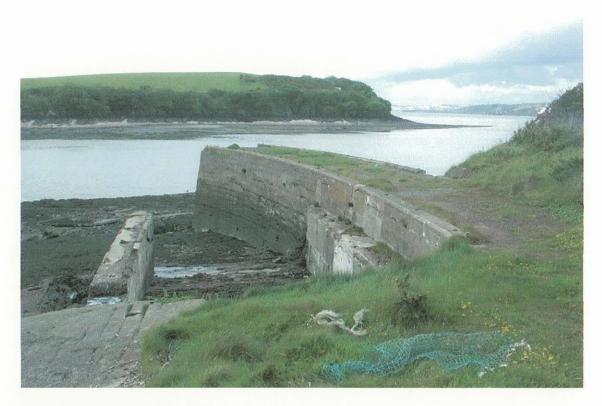


Photo. 27: Tank and Pier (PRN 45083 and PRN 26278)



Photo. 28: Tank and Slipway (PRN 45083 and PRN 45088)



Photo. 29: Unidentified Building (PRN 34990)

4

# PENNAR POINT, PEMBROKE DOCK, PEMBROKESHIRE AN ARCHAEOLOGICAL DESK-BASED ASSESSMENT AND WALK-OVER SURVEY

## **REPORT NUMBER 2002/47**

JUNE 2002

This report has been prepared by Duncan Schlee

Position: Archaeologist

Signature Date 17 June 02

This report has been checked and approved by Archaeological Trust Ltd.

on behalf of Cambria Archaeology, Dyfed

Position

Signature Date 17 Tune 2002

As part of our desire to provide a quality service we would welcome any comments you may have on the content or presentation of this report