

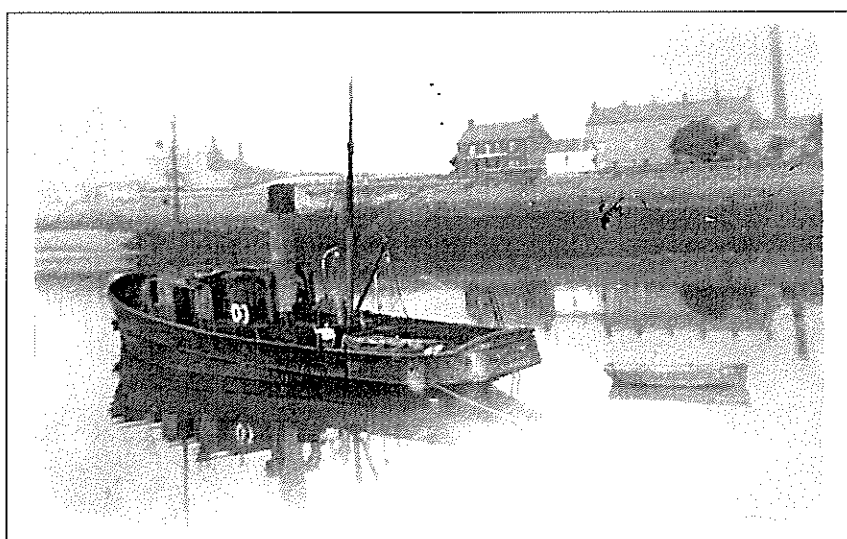
ARCHAEOLEG CAMBRIA ARCHAEOLOGY

BURRY PORT HARBOUR

AN INITIAL ARCHAEOLOGICAL ASSESSMENT

PART 1

Project Record No. 36920



Report prepared for Mott MacDonald
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PART 1

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(SEE PART 2 FOR ILLUSTRATIONS)

1.0 SUMMARY

1.0.1. Burry Port harbour was established between 1830 and 1836. It reached a peak of activity in the second half of the 19th century, which began a slow decline after World War I which hastened after World War II. Most of the harbour fittings etc. were removed during the early 1980s.

1.0.2. The harbour consists of four main physical elements:-

1. The harbour itself, which comprises three components - the Outer Harbour which connects with the sea, and East and West Docks, fed by a branch of the Derwydd River, with sluices into the Outer Harbour.
2. The transport and communications infrastructure. The harbour and docks were dependent upon a network of communications that began as a canal and tramline network, superseded in part by a rail network, and also featured a turnpike road and trackways.
3. The service infrastructure. Ancillary structures associated with the harbour such as the customs house and coastguard station.
4. Industries. Served by all the above elements were a number of associated industries including Copper, Lead and Tinsplate works.

Other forms of development occurred around the harbour once it was well established.

The first three elements have combined to give the harbour area its character and the pronounced north-south and east-west axes that define both its physical presence and the influences that governed its development.

1.0.3. The *raison d'être* behind the establishment of a harbour at Burry Port is to be found within the burgeoning coal industry within South-east Carmarthenshire of the 18th and early 19th centuries. Both Burry Port Harbour, and the slightly earlier Pembrey Harbour, began as coal export ports. The harbour was founded on *de novo* site, within common land comprising dune slacks, with little prior settlement.

2.0 BURRY PORT HARBOUR

2.1 DEVELOPMENT PROPOSALS AND BRIEF

2.1.1. This report has been prepared in response to an invitation from Mott MacDonald to tender for the undertaking of an archaeological assessment of the harbour at Burry Port, for their Environmental Statement which will form part of an Environmental Impact Assessment of the proposed harbour works for the Millennium Coastal Park team of Carmarthenshire County Council. *Archaeoleg CAMBRLA Archaeology* were awarded the contract on 4 December 1998.

2.1.2. The brief for the assessment required:-

1. A brief but comprehensive description of the origins, development and current condition of Burry Port Harbour, although concentrating on the structure of the harbour - buildings, rail heads, canals, drainage and water supply, sluices etc. should be noted. The assessment should clearly indicate the sources of information used and photocopies of the key cartographic sources for the harbour or an indication of their existence and location.
2. A survey paying particular attention to the surviving fabric, fittings, furniture and surrounding buildings. This information should be ranked, with reasons given, and should be related to the origins and development of the harbour.
3. The detailed information should be presented as a written report including drawings highlighting the detailed information found from the earlier work. The report should contain a brief description on the origins and development noted earlier, a full description of the survey methodology and the sources of information used. Photographs of historical features should be undertaken and used in the report.

2.1.3. In the absence of detailed development proposals, this report is primarily an assessment of the surviving resource. General recommendations, however, are included in Section 2.5.

2.2 METHODOLOGY

2.2.1. The area subject to the assessment comprises the harbour at Burry Port and its two docks, and all associated archaeological sites and features. The South Wales line of the railtrack network was selected as the northern boundary, between the Gors Bridges at the west end of the site and Dyfatty footbridge at the east end. The old Ashburnham Tinsplate works was selected as the western limit of the study area, and the three main industrial complexes - the former Copper Works, Lead and Silver Works and White Lead Works, were selected as the eastern limit. These industrial concerns were included within the study, as were all aspects of the communications and service infrastructures, and all other archaeological sites and features, both earlier and later than the harbour.

2.2.2. Each archaeological site and feature has been assessed in terms of its relationship with the harbour and its development. The harbourscape as a whole has been assessed as an archaeological resource, and individual elements assessed in terms of their relative importance.

2.2.3. A wide range of documentary, map and pictorial sources were examined in order that elements of the archaeological resource were correctly identified and placed within the harbourscape as a whole. A full list of sources consulted is included as Section 3.0 of this report, and most pictorial sources are reproduced as figures in Part 2. In addition, local oral sources were consulted.

2.2.4. The study area was fieldwalked on 17 December 1998, and all archaeological sites and features that were accessible were briefly recorded and their condition noted.

2.2.5. On the basis of 2.2.2 -2.2.4. (above), brief general recommendations have been included as Section 2.5 of this report.

2.3 CATEGORISATION OF SITES AND FEATURES

All sites and features identified within this report have been allocated a category. The allocation of a site to a category defines the archaeological importance of that site. The categories are listed below.

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

2.4 SUMMARY OF THE ARCHAEOLOGICAL RESOURCE (FIG. 2)

This section contains brief descriptions of archaeological/historic sites, features and buildings, listed by their type and individual Primary Record Number (or PRN) as allocated in the Sites and Monuments Record for Carmarthenshire, Ceredigion and Pembrokeshire.

Refer to Fig. 2 for PRNs and individual feature numbers.

Categories are as outlined in Section 2.3. The four canal boats (PRN 35902) are a Scheduled Ancient Monument and the Outer Harbour sea-walls (PRN 5345) are a Grade II Listed Building.

2.4.1. THE HARBOUR AND DOCKS

5340 - SN 4456 0050 - EAST DOCK (FLOATING DOCK)

Standing structure; constructed 1836-9; 19th century fittings; fair-good condition

Category B

- Fig. 2; 1 - stone lined shafts
- Fig. 2; 2 - two pairs of iron bollards
- Fig. 2; 3 - iron bollard
- Fig. 2; 4 - concrete steps
- Fig. 2; 5 - possible staging
- Fig. 2; 6 - concrete hoist base
- Fig. 2; 7 - rebuilt sluice
- Fig. 2; 8 - iron bollard
- Fig. 2; 9 - iron bollard; capstan?
- Fig. 2; 10 - tipper base
- Fig. 2; 11 - steps
- Fig. 2; 12 - sluice
- Fig. 2; 13 - railings
- Fig. 2; 14 - iron ratchet
- Fig. 2; 15 - anchor
- Fig. 2; 16 - two flights of steps

5341 - SN 4440 0054 - WEST DOCK (FLOATING DOCK)

Standing structure; constructed 1836-9 and 1872-88; 19th century fittings; fair-good condition

Category B

- Fig. 2; 17 - concrete bridge
- Fig. 2; 18 -?winch base
- Fig. 2; 19 - stone lined shafts
- Fig. 2; 20 - iron socket
- Fig. 2; 21 - two iron stanchions
- Fig. 2; 22 - iron bollard
- Fig. 2; 23 - timber coffer dam
- Fig. 2; 24 - iron outfall pipe
- Fig. 2; 25 - shipping stage
- Fig. 2; 26 - steps
- Fig. 2; 27 - railing
- (Fig. 2; 28 - damage)
- (Fig. 2; 29 - modern slipway)

5345 - SN 4452 0030 - HARBOUR (OUTER HARBOUR)

Standing structure; constructed 1830-36; 19th century fittings; fair-good condition

Category A; Grade II Listed Building

Fig. 2; 30 - landing stage

Fig. 2; 31 - landing stage

Fig. 2; 32 - landing stage

Fig. 2; 33 - steps

Fig. 2; 34 - steps

Fig. 2; 35 - steps

Fig. 2; 36 - steps

Fig. 2; 37 - masonry bollards

(Fig. 2; 38 - former staging and pontoon)

Fig. 2; 39 - masonry bollards

Fig. 2; 40 - iron outfall pipe

Fig. 2; 41 - former breakwater end wall?

Fig. 2; 65 - weir

Fig. 2; 42 - masonry bollards

Fig. 2; 43 - surface and rails

Fig. 2; 44 - seat

34068 - SN 4450 0041 - SLUICE

Standing structure; constructed 1836-9; 19th century fittings; fair-good condition

Category B

36943 - SN 4457 0043 - CRANE

Fixture; not *in situ*; good condition

Category C

36944 - 4457 0044 - WINCH

Fixture; erected 1904; good condition

Category C

36945 - 4453 0044 - WINCH

Fixture; erected 1904; good condition

Category C

36946 - GAS LAMP-POST AND BRACKET

Fixture; early 20th century; good condition

Category C

2.4.2. THE TRANSPORT AND COMMUNICATIONS INFRASTRUCTURE

5349 - SN 44 00 - BURRY PORT AND GWENDRAETH VALLEY RAILWAY

Rail network, constructed 1864 onwards; poor condition

Category D

Fig. 2; 43 - surface and rails

Fig. 2; 45 - railway parchmark

Fig. 2; 46 - concrete hard standing

Fig. 2; 47 - rails

Fig. 2; 48 - rails

Fig. 2; 49 - rails with points

Fig. 2; 50 - railway bank

Fig. 2; 51 - railway ballast

Fig. 2; 59 - rail overbridge

8671 - SN 4465 0076 - RAILWAY STATION (GWR)

Railway line, 1847-50; standing structure, constructed late 19th century; good condition

Category D

8675 - SN 4401 0073 - GORS BRIDGES (ROAD AND RAIL BRIDGES)

Standing structures; constructed c.1837 and c.1847; good condition

Category C

8822 - SN 4400 - THE KIDWELLY & LLANELLY CANAL

Earthwork, constructed 1837, and fittings from c.1860-70 and bridge from c.1890; good condition

Category B

Fig. 2; 52 - canal and culvert

Fig. 2; 53 - infilled canal - linear earthwork

(Fig. 2; 54 - infilled canal)

Fig. 2; 55 - culverted canal

Fig. 2; 56 - culvert

Fig. 2; 57 - culvert

Fig. 2; 58 - canal and two iron sluices

Fig. 2; 59 - rail overbridge

(Fig. 2; 60 - infilled channel)

29529 - SN 4462 0077 - RAILWAY FOOTBRIDGE

Standing structure; constructed 1880-1907; good condition

Category B

35902 - SN 4457 0014 - FOUR IRON CANAL BOATS

Artefacts; late 19th century; fair-good condition

Category A; Scheduled Ancient Monument SAM Cm268

36931 - SN 4454 0074 - ASHBURNHAM ROAD OVERBRIDGE

Standing structure; constructed 1880-1907; good condition

Category C

36937 - SN 4477 0075 - DYFATTY FOOTBRIDGE

Standing structure; constructed 1953-69; good condition

Category D

2.4.3. THE SERVICE INFRASTRUCTURE

5342 - SN 4465 0028 - LIFEBOAT STATION

Standing structure; constructed 1887; good condition

Category C

5343 - SN 4452 0043 - CUSTOMS HOUSE

Demolished structure; poor condition

Category D

8428 - SN 4445 0003 - LIGHTHOUSE

Standing structure; constructed 1838; good condition

Category B

8674 - SN 4462 0069 - NEPTUNE BUILDINGS (HOTEL)

Standing structures; constructed 1841 onwards; good condition

Category C

36924 - SN 4442 0042 - HARBOURMASTER'S OFFICE

Standing structure; constructed 1953-69; good condition

Category D

36925 - SN 4441 0034 - HARBOUR VIEW HOTEL (FORMER SALTWORKS)

Standing structure; constructed 1896; good condition

Category D

36947 - SN 4430 0043 - SEWAGE WORKS

Standing structure; constructed 1970s; good condition

Category D

36949 - SN 4442 0046 - WC

Standing structure; constructed 1970s; good condition

Category D

2.4.4. ASSOCIATED INDUSTRIAL STRUCTURES AND FEATURES

5338 - SN 4480 0064 - IRON FOUNDRY

Standing structure; constructed 1874; good condition

Category C

5339 - SN 4475 0035 - PEMBREY COPPER WORKS.

Standing structures; constructed 1849 - later 20th century; good condition

Category C

8942 - SN 4487 0048 - WORKSHOP

Standing structure; constructed 1953-69; fair condition

Category D

9043 - SN 4416 0040 - ASHBURNHAM TINPLATE WORKS

Standing structures; constructed 1890 onwards; good condition

Category C

23878 - SN 4481 0040 - LEAD AND SILVER WORKS

Partly demolished structures; poor condition

Category D

Fig. 2; 49 - rails with points

Fig. 2; 61 - office

Fig. 2; 62 - perimeter wall

23879 - SN 4480 0055 - WHITE LEAD WORKS

Standing structures; constructed 1870; good condition

Category C

36922 - SN 4440 0038 - HARBOUR HOUSE, COTTAGES AND WORKSHOPS

Standing structures; constructed 1830 onwards; poor condition/rebuilt

Category D

Fig. 2; 63 - brick flooring

Fig. 2; 64 - ruin

2.4.5. OTHER STRUCTURES AND FEATURES

20371 - SN 4434 0072 - CHAPEL (BAPTIST)

Standing structure; constructed 1865-75; good condition
Category C

20380 - SN 4489 0067 - CHAPEL (METHODIST)

Standing structure; constructed 1865-75; good condition
Category C

34065 - SN 4420 0007 - FISH WEIR

Standing structure; post-medieval; good condition
Category D

36926 - SN 4433 0033 - SANDHURST

Standing structure; constructed 1816-24; good condition
Category D

36927 - 4435 0034 - 'THE BUNGALOW'

Standing structure; constructed 1960s; good condition
Category D

36929 - SN 4441 0029 - YACHT CLUB

Standing structure; constructed 1970s; good condition
Category D

36948 - SN 4435 0042 - BUILDING

Standing structure; constructed 1970s; good condition
Category D

36953 - SN 4400 - PEAT DEPOSITS

Deposits; condition unknown
Category B

2.4.6. FORMER STRUCTURES AND FEATURES

The structures/features listed have been removed and there is now no above-ground evidence, but below-ground evidence may survive.

8672 - SN 4451 0065 - POWER HOUSE

Demolished structure; no above-ground evidence

Category E

20372 - SN 4447 0073 - HALL

Demolished structure; no above-ground evidence

Category E

36921 - SN 4445 0037 - COASTGUARD STATION

Demolished structure; no above-ground evidence

Category E

36923 - SN 4445 0042 - DOCK OFFICE AND LIMEKILNS

Demolished structures; no above-ground evidence

Category E

36928 - SN 4437 0034 - 'PLAS HYFRYD'

Demolished structure; no above-ground evidence

Category E

36930 - SN 4447 0044 - FORMER YACHT CLUB

Demolished structure; earthwork evidence

Category E

36932 - SN 4458 0073 - BUILDINGS

Demolished structures; no above-ground evidence

Category E

36933 - SN 4455 0067 - READING ROOM AND CLUB

Demolished structures; no above-ground evidence

Category E

36934 - SN 4452 0073 - WORKS

Demolished structures; no above-ground evidence

Category E

36935 - 4466 0073 - DEPOT/?FORGE

Demolished structures; no above-ground evidence

Category E

36936 - SN 4467 0070 - ENGINEERING WORKS

Demolished structure; no above-ground evidence

Category E

36938 - SN 4472 0073 - SCOUTS HALL

Demolished structure; no above-ground evidence

Category E

2.5 RECOMMENDATIONS

This section contains brief overall recommendations only and it is not intended as a full heritage management plan for the future development of the harbour.

The four canal boats (PRN 35902) are a Scheduled Ancient Monument and the Outer Harbour sea-walls (PRN 5345) are a Grade II Listed Building.

It is recommended that any future developments respect the pronounced north-south and east-west axes that define both the physical presence of the harbour and the influences that governed its development. The importance of the harbour within the local consciousness must also be regarded; many individuals lived and worked within the harbour and their oral testimony is a vital archaeological resource in its own right.

2.5.1. It is recommended that the following sites and features are retained:-

5338 - SN 4480 0064 - IRON FOUNDRY - Category C

5339 - SN 4475 0035 - PEMBREY COPPER WORKS - Category C

5340 - SN 4456 0050 - EAST DOCK - Category B

Including sea-walls, sluices and fittings, tipper and hoist bases, staging, bollards, railings and steps

5341 - SN 4440 0054 - WEST DOCK - Category B

Including sea-walls, sluices and fittings, staging, bollards, railings and steps

5342 - SN 4465 0028 - LIFEBOAT STATION - Category C

5343 - SN 4452 0043 - REMAINS OF CUSTOMS HOUSE - Category D

5345 - SN 4452 0030 - OUTER HARBOUR - Category A; Grade II Listed Building

Including sea-walls, staging, bollards and steps

8428 - SN 4445 0003 - LIGHTHOUSE - Category B

8671 - SN 4465 0076 - RAILWAY STATION - Category D

8674 - SN 4462 0069 - NEPTUNE BUILDINGS - Category C

8675 - SN 4401 0073 - GORS BRIDGES - Category C

8822 - SN 4400 - THE KIDWELLY & LLANELLY CANAL - Category B

Including open stretches of canal, sluices, bridges and culverts

9043 - SN 4416 0040 - ASHBURNHAM TINPLATE WORKS - Category C

20371 - SN 4434 0072 - CHAPEL (BAPTIST) - Category C

20380 - SN 4489 0067 - CHAPEL (METHODIST) - Category C

23878 - SN 4481 0040 - LEAD AND SILVER WORKS - Category D

Perimeter wall only

23879 - SN 4480 0055 - WHITE LEAD WORKS - Category C

29529 - SN 4462 0077 - RAILWAY FOOTBRIDGE - Category B

34068 - SN 4450 0041 - SLUICE - Category B

35902 - SN 4457 0014 - CANAL BOATS - Category A; Scheduled Ancient Monument SAM Cm268

36931 - SN 4454 0074 - ASHBURNHAM ROAD OVERBRIDGE - Category C

36943 - SN 4457 0043 - CRANE - Category C

36944 - 4457 0044 - WINCH - Category C

36945 - 4453 0044 - WINCH - Category C

36946 - GAS LAMP-POST AND BRACKET - Category C

2.5.2. The following sites and features require further investigation/recording prior to any destructive development:-

34065 - SN 4420 0007 - FISH WEIR - Category D

36925 - SN 4441 0034 - HARBOUR VIEW HOTEL (FORMER SALTWORKS) - Category D

36922 - SN 4440 0038 - HARBOUR HOUSE, COTTAGES AND WORKSHOPS - Category D
Including brick flooring and ruin.

2.5.3. Any opportunities to investigate the following should be pursued:-

36923 - SN 4445 0042 - SITE OF DOCK OFFICE AND LIMEKILNS - Category E

36941 - SN 4465 0038 - BUILDING - Category E

36953 - SN 4400 - PEAT DEPOSITS - Category B

2.5.4. The form of the following should be reflected in any future developments:-

5349 - SN 44 00 - BURRY PORT AND GWENDRAETH VALLEY RAILWAY - Category D

8671 - SN 4400 - RAILWAY (GWR) - Category D

8822 - SN 4400 - THE KIDWELLY & LLANELLY CANAL - Category B

36939 - SN 4468 0061 - ENGINE SHED

Demolished structure; no above-ground evidence

Category E

36940 - SN 4464 0043 - WAGON REPAIR SHOP

Demolished structure; no above-ground evidence

Category E

36941 - SN 4465 0038 - BUILDING

Demolished structure; no above-ground evidence

Category E

36942 - SN 4481 0071 - STEAM SAW MILLS

Demolished structure; no above-ground evidence

Category E

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3.0 LIST OF SOURCES CONSULTED

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National Monuments Record, curated by The Royal Commission for Ancient and Historical Monuments (Wales), Crown Buildings, Plas Crug, Aberywyth, Ceredigion.

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APPENDIX I

THE HISTORY AND DEVELOPMENT OF BURRY PORT

The landscape

There is little surviving evidence for land-use at Burry Port Harbour prior to the 18th century, however peat deposits up to 3.35m thick (PRN 36953), with inherent archaeological potential for all periods, have been recorded in a borehole within 'the Burry Port area' (Page, 1997, 6), presumably within the intertidal zone. No further details are known. In addition a fish weir has been recorded at SN 4420 0007 (PRN 34065); although probably of relatively recent date it illustrates a further use of the Burry Port harbour area, as does cockling at low tide at the harbour, as shown on a postcard of c.1906 (Brian Cripps Collection; copy held by Countryside Commission for Wales).

Emanuel Bowen's map of 1729 (NLW, 'Emanuel Bowen's Map of South Wales', 1729) depicts a coastline very different from that at present; the changes in the coastline of this part of Carmarthenshire are amply discussed in James, 1991. The dune slacks of Cefn Sidan have both developed and been reclaimed since before the 18th century, but Bowen's map shows the dunes - as 'Kidwelly Marsh' - extending eastwards to an existing mooring at Barnaby Pill (east of Dyfatty), which is labelled. The only other feature in the immediate vicinity of Burry Port to be labelled in Pembrey parish church, but a house or cottage is depicted to the south of Barnaby Pill. Coal pits are labelled south of Trimsaran and at Llanelli, but land use was still primarily agricultural. A later description summarises the situation as it must have existed throughout the 18th century, when the Burry Port area was mainly sandy, uncultivated and unenclosed, though areas were 'in a tolerable state of cultivation'. A 'very extensive sandy common is overflowed occasionally by the tide, but affords good pasturage to numerous flocks of sheep, which the tenants of several farms in this and adjoining parishes have the right of depasturing on for 8 months of the year' (Lewis, 1833). The common, 'Tywyn Mawr', represents the present Cefn Sidan but included the smaller 'Tywyn Bach' which was to become the site of Burry Port, on which there was no settlement prior to the establishment of the harbour. The western boundary of the common followed the course of the Derwydd River and its confluence with Nant Dyfatty (National Library of Wales, Ashburnham II, 31/7), to the west of which lay the Manor of Pembrey, part of an extensive estate which had been held by the Ashburnham family since 1677 (National Library of Wales, Ashburnham II, 50/1-78); however, pasturage rights were maintained on the latter area of dune slacks (National Library of Wales, Ashburnham II, 31/7).

The economic background - the 18th and early 19th centuries

Industrial activity is not recorded in the immediate vicinity of the harbour until the 18th century, However, there is a record of monks working coal in south-east Carmarthenshire early in the 13th century (Thomas, 1937, 35). According to an account written by John Leland's in the mid 16th century '*there lieth a long on eche side of Wendraeth Vawr Pittes, wher menne digge se (sea) Cole*' (Thomas, 1937 2); however, there is no reference to mineral extraction in a survey of the area that was conducted in 1609-13 (Rees, 1953, 175-253). During the 17th century prospecting for a variety of minerals appears to have stepped up and in 1636 '*Henry Murrey was given permission to search, dig and mine for ores and metals in county Carmarthen*' (Thomas, 1937, 2) and according to Blome's 'Britannia' of 1673 '*in the bowels of the earth many places are digg Pitt-coal*' (ibid.).

The produce from such ventures required transportation and from 1770 there were 'shipping places' at both Barnaby Pill and at Pwll Quay, where small vessels of 50 or 60 tons lay in the creeks for a tide or two (Thomas, 1937, 5). An extensive trade in lime had developed between Pembrey and the Gower, the lime being imported with coal taken as a return cargo, and there were formerly several lime kilns in the area, including two at Burry Port.

An admiralty chart of 1775 (NLW, 'Carmarthen Bay on the South Coast of Wales, surveyed and navigated by M. Mackenzie Snr.', 1775) depicts the coastline in a little more detail; the small pill at the mouth of the Derwydd River's western branch, which became the basis of Pembrey (Old) Harbour, is clearly shown, lying among dune slacks, and cottages are depicted in the area that was to become Burry Port. The map was intended for navigation use and no industries are shown, but Barnaby Pill is also omitted.

Coal production had intensified during the 18th century and extended from its centre around Trimsaran. Early pits were noted near Pembrey House and Waun Baglan, and the first pits at Gwscwm Colliery immediately north of Burry Port were probably sunk in the opening decades of the 18th century (Thomas, 1937, 10). New Lodge colliery was begun by Colonel Pemberton c.1831, but there had been a coal working near Barnaby Pill, including a quay wall, near the colliery since at least 1767 (Thomas, 1937, 13). Before 1800 there were possibly several openings on the Gwscwm vein in the Gwscwm valley (ibid.). In 1810 Messrs. Farquharson and Simons commenced collieries at Pembrey, and an ironworks which gave its name to 'Furnace', north of Burry Port, but was soon discontinued. They were succeeded by Gaunt and Co. in c.1814 (ibid.). The latter reopened Gwscwm pits, drove Gwscwm level and in 1824 re-opened and enlarged Furnace Ironworks. They also sank a pit, later known as 'Stanley's New Pit,' in 1834 (ibid.).

Another industrialist, George Bowser, secured a lease on Cwm Capel Colliery (or 'Kenross') immediately north of Burry Port by 1816 and went on to develop a number of smaller mines nearby (Nicholson, 1991, 122). His leases included permission to construct tramways and dig canals to export his coal from the foreshore. New Lodge Colliery, to the east of Burry Port, was opened in around 1830 by Colonel Christopher Pemberton (Thomas, 1927, 49). Both Pemberton and George Bowser played important roles in the development of Burry Port, and as a result of this industrial activity, the population of Pembrey parish increased from 1,455 in 1801 to 1,733 by 1831 (Thomas, 1927, 40).

The 'Kidwelly & Llanelly Canal and Tramroad Co.' were formed in 1813 for 'improving and maintaining Kidwelly Harbour, Kymer's Canal and the tramroads connecting the collieries etc with it' (Thomas, 1937, 5). Thomas Kymer's canal of 1766-68, the first in South Wales, had been cut in order to connect his collieries in the Trimsaran district with his harbour at Kidwelly, and followed the course of the Gwendraeth Fawr. In 1814 the company commenced to link Kidwelly and Llanelli, via Kymer's canal, to a junction 2km south-east of Kidwelly from which a new canal - the 'Kidwelly & Llanelly Canal' - was continued eastwards; however, it was never to reach Llanelli (James, 1991, 156-7).

Sheet 188 of the Ordnance Survey Original Surveyors' Drawing of 1813, held at the National Library of Wales, depicts enclosed fields in the area that was later occupied by Pembrey Old Harbour, but the site of Burry Port lay within the dune system of Tywyn Bach common, which is labelled. The common extended landward into the course of the Derwydd River and Nant Dyfatty, the streams which formed the basis of Burry Port Harbour, where two farms are depicted, 'Gors' to the west and 'Penycoed' to the east, the latter occupying the site of the later settlement of Burry Port. Dyfatty is shown as a large farm or small hamlet. A trackway crossed the dunes between the Derwydd River's western branch and Dyfatty. Gwscwm (as 'Gouse Cwm') and Craig Capel are both labelled, but not as collieries, although the stippled area around the latter may denote its industrial use. The map was revised in 1827 but the Old Harbour, established in 1819, is not shown. Sheet 188 terminates at Pembrey and no canal systems are included.

Pembrey Old Harbour, 1819 - 1830

In 1819 the industrialists George Bowser and Thomas Gaunt (see above) joined forces, with two other colleagues, to construct a harbour on the Pembrey foreshore (Nicholson, 1991, 123). The harbour would be in direct competition with that at Kidwelly, but the latter had suffered severely from silting and was unable to cope with the increasing traffic in coal. Land for the new harbour was acquired from the Ashburnham estate on a 60 year lease, and the harbour was constructed by deepening the western branch

of the Derwydd River where it entered the sea. The harbour, which is situated a mere 2000m west of the present Burry Port Harbour, was complete by 1819 (*ibid.*).

Bowser, Gaunt *et al.* were incorporated in June 1825 as 'The Pembrey Harbour Co.', and 'authorised to make a and maintain a Harbour at Pembrey, and a canal, and a railway or tramroad to connect Pembrey Harbour with the undertaking of the Kidwelly & Llanelly Canal and Tramroad Company' (Thomas, 1937, 11). In 1823-4 they commenced construction of the Pembrey Canal which connected Pembrey Harbour with the completed section of the Kidwelly & Llanelly Canal, where the latter terminated at Ty Gwyn farm, 3km south of Kidwelly (Nicholson, 1991, 126). The canal conveyed coal from Gaunt's Cilrhedyn Colliery on the Kidwelly & Llanelly Canal at Llandydry (opened 1824) and ended at the appropriately named Glo Caled ('Hard Coal') cottages, near Pembrey Harbour, from where it was conveyed to the loading stage via tramways. The harbour was also connected, by gravitational tramway, with Furnace Ironworks and Gwscwm Colliery (see above), and with New Pit (later 'Stanley's New Pit') by an long inclined tramway the embankment for which still forms an significant feature of Pembrey's industrial landscape (Nicholson, 1991, 124).

A plan of the Pembrey Canal and Old Harbour was produced in 1825 (copy in National Monuments Record). Pembrey Old Harbour, Pembrey Canal, the above-named collieries, Furnace and the three tramways are clearly depicted on both this plan and the Ordnance Survey map of 1830 (Ordnance Survey 1" to the mile Old Series, Sheet 37, 1830), the latter labelled as 'railroads'. Tywyn Bach common (labelled 'Morfa Bach Tywyn' in 1825) was still undeveloped, and is shown as dune-slacks all the way eastwards to Barnaby Pill. Gors and Pen-y-coed Farms still survived, and 2 additional farms are depicted between them, Achddu-uchaf and Achddu-isaf; Derwydd Cottages, between Pembrey Harbour and the present Burry Port, are also shown. A trackway followed by the present main east-west B4311 (Ashburnham Road) is depicted, with an isolated building labelled 'Coasting Pilot' on the site of the present public house of that name, but this is the only building shown within what is now Burry Port town. Pen-y-coed Farm disappeared during the subsequent growth of Burry Port town; Derwydd, Gors and Achddu survive at least as names. A further map of the 1820s (National Monuments Record, 'Sketch of the Mineral Property thro' which the Kidwelly Company's lines of Canals & Tramroads pass', n.d.) marks the Dyfatty Valley with the label 'Bowser's Level Mouth' ie. Cwm Capel Colliery.

Pembrey New Harbour - the beginnings of Burry Port, 1830 - 1840

It became apparent, almost immediately upon its completion, that Pembrey Harbour was excessively prone to silting and would prove unsuccessful. In addition, several colliery owners, agents and others realised that the harbour, like Kidwelly before it, would be unable to cope with the increasing traffic in coal. This breakaway group formed a separate company to build 'New Pembrey Harbour', ie. Burry Port Harbour. The company was established in 1825, by Act of Parliament, by an unknown syndicate (Nicholson, 1991, 126) but one in which the local landowner and industrialist Col. Christopher Pemberton appears to have played a leading role (Carmarthenshire Record Office Bowser 31, Bowser 33, Bowser 61). The Harbour Company appealed for money, in the press, on 3 August 1830, and acquired what was an area of Tywyn Bach common land 2000m east of the Old Harbour, where the Derwydd River and Nant Dyfatty entered the sea through dune slacks.

The Landscape

George Bowser had acquired a plot on Tywyn Bach immediately west of the Derwydd River, on land demised from the Ashburnham estate in 1810 and 1816. There, before 1824, he had built a Salt Works, on the site if the later 'Harbour View', and a residence, now 'Sandhurst' (National Library of Wales, Ashburnham II, 31/7). At a later date, but before 1830, he had also commenced a small manufactory later known as the 'Old Harbour Works'. His plot was partly claimed for the construction of the new harbour and led to much litigation between the harbour company, Bowser and Ashburnham (Carmarthenshire Record Office Bowser 61; National Library of Wales, Ashburnham II, 30/3).

(See also Appendix III, 'The Bowsers and Burry Port'.)

The Harbour

Burry Port Harbour was initially designed by the marine engineer Sir Joseph Banks (Nicholson, 1991, 129). It was established at the confluence of the Nant Dyfatty, which ran from north to south, and the Derwydd River. The main, Outer Harbour was formed by deepening the Nant Dyfatty; the west-east flowing Derwydd river, whilst supplying, and influencing the alignment of the docks, was diverted to the south of the harbour and remained open until later in the 19th century.

Captain John Wedge, of nearby Goodig, took an interest in the selection of the site and with Banks himself was appointed resident engineer (Thomas, 1927, 49). However, great difficulties were encountered with both the design and the construction of the harbour. A copy of a plan of 1824 (National Library of Wales, Ashburnham II, 31/7), on the basis of which the Act of Parliament was passed, depicts the plan of the harbour as originally intended, showing to have been a narrow, rectangular cut running north-south, much narrower than the present Outer Harbour, and without a large scouring reservoir but with a dock or reservoir of occupying similar dimensions to the north; no breakwaters are shown. The plans were evidently adapted; the Outer Harbour was constructed with a weir and breakwaters (presumably those still present), but with great difficulties - the breakwaters were continually washed away and the walls of the harbour kept collapsing. Samuel and Robert Bowser, the sons of George Bowser on whose land the harbour encroached, supplied a steady stream of criticism and alternative plans (Carmarthenshire Record Office Bowser 31 and Bowser 53; Countryside Commission for Wales Collection), some of which appear to have been adopted.

The eastern breakwater was complete by February 1831, when the Outer Harbour was well advanced (Nicholson, 1991, 129). In April 1832 the harbour was declared as 'ready' (ibid.) but this was manifestly untrue and in 1833 yet another engineer was engaged, in the person of James Green (Carmarthenshire Record Office CH3), the civil engineer for the Kidwelly & Llanelly Canal and Tramroad Co.. According to Samuel Bowser (Carmarthenshire Record Office Bowser 53), one of the problems with the earlier designs was their ineffectiveness in clearing the Outer Harbour of silt. It appears that Green was responsible for introducing a reservoir, the present West Dock, into the designs, but was himself dismissed in early 1836 (Wakelin, n.d., 2). The harbour may possibly not have been finally opened until January 1836 when the *Ninus* of Scarborough berthed to take on anthracite (Nicholson, 1991, 130); by 1837 'the New Harbour... is so far advanced as to admit the entrance of vessels of up to 400 tons' (Minute to Carmarthenshire Record Office Cawdor Maps 2/44/415).

The opening of 1836 refers to the Outer Harbour only. It is clear from Green's proposed plans (Carmarthenshire Record Office CH3; Carmarthenshire Record Office Cawdor Maps 2/44/415) that the present West Dock, or 'Pond Clai', was designed as a floating harbour, with wharfage around three sides served by twin branches from the Kidwelly & Llanelly Canal, and incorporating the site of the present East Dock. The harbour as completed, however, appears to be depicted on the tithe map of 1839 (NLW, Parish of Pembrey, 1839) which suggests that it was divided by the present quay, into East and West Docks, from at least that date and that the West Dock served merely as a scouring reservoir.

Transport

Until 1849, the harbour was almost exclusively used for the export of coal, which was brought to the harbour from numerous sources including Cwm Capel and Gwscwm collieries (see above). It was unloaded from tramway tubs and stored in piles near the harbour walls.

Of those associated with the failed Old Pembrey Harbour, Thomas Gaunt was to abscond, and in 1840 all of Gaunt & Cos. industrial activities were put up for sale including the Old Harbour, Pembrey Canal, Furnace Iron Works, Gwscwm colliery, and other smaller pits (Nicholson, 1991, 127).). However, before 1835 his former partner George Bowser had, despite legal differences with the harbour company (see

Appendix III) constructed a tramway to the New Harbour, on the site of the later railroad from his Cwm Capel colliery. Horses drew the trams up and they were conveyed down by gravity (Thomas, 1937, 16).

A tramway had been established in c.1826 to connect Llanelli with Pwll Quay (Thomas, 1937, 5) and a second tramway was constructed across the marshes east of the harbour, to Col. Pemberton's New Lodge Colliery. The Llanelli - Burry Port connection was completed in 1833-4 when the New Lodge - Pwll Quay tramway was built (Carmarthenshire Record Office Cawdor 2/44). This connection 'was entirely destroyed by the sea' in the floods of January 1846 (Nicholson, 1991, 131); both the New Lodge and the Cwm Capel tramways went on, however, to form the basis of the harbourside lines that were later to develop (PRN 5349). They are both shown in maps of 1834 and c.1837 (Carmarthenshire Record Office Cawdor Maps 2/44/415; Carmarthenshire Record Office CH3), with a junction just to the north-east of the West Dock, from which point the united tramway ran down the eastern side of the Outer Harbour.

A link with the Kidwelly & Llanelli Canal had been anticipated from the first, and specifications were submitted to the canal Management Committee by the civil engineer James Green in July 1833 within which it was decided to substitute the Llanelli link with the New Lodge-Pwll-Llanelli tramway, terminating the canal at the New Harbour (Carmarthenshire Record Office Cawdor 2/44). However, it was not to reach the harbour until 1837 (Nicholson, 1991, 131). Furthermore, it is apparent from an undated plan by Green (Carmarthenshire Record Office Cawdor Maps 2/44/415) of c.1833 that even upon the completion of the link, work had yet to be undertaken to complete the remainder of the canal. From 1837-69 the canal carried virtually all the Gwendraeth Valley anthracite production which was brought down the canal in barges to a point, just east of the harbour, where it divided into a branch either side of the West Dock, as described above. The coal was unloaded from barges and stored in heaps on the dock-side; ships were then loaded from the heaps with baskets (Thomas, 1937, 4). Four horse-drawn iron barges, probably of rather later construction, still lie on the eastern breakwater of the harbour.

A third line of communication is shown on a plan of the harbour as intended, from 1834 (Carmarthenshire Record Office CH3). The present B4311 (Ashburnham Road), the main road from the west which skirts the northern side of the harbour, is marked as a 'proposed new Turnpike Road' following the line of the trackway depicted in 1825 and 1830 (see above). A number of meandering former roads and tracks are depicted underlying the intended harbour, leading from Tywyn Bach common within which it was built; the edge of the common roughly corresponds with the line of the proposed turnpike/B4311.

Services

The lighthouse was erected on the western breakwater in 1838 and still survives (Nicholson, 1991, 131-2). Until 1855 it may have marked the end of a shorter breakwater (National Library of Wales, Parish of Pembrey, 1839).

Other developments

Few buildings are depicted within the area now occupied by Burry Port town on earlier 19th century maps but the 'Coasting Pilot' was labelled in a map of 1830 (see above), while a 'Steam Mill' is marked and labelled on the site of the present Memorial Hall (Carmarthenshire Record Office, CH3; it is shown again in a map of 1854. A building is shown on the site of the 'Gors Farm' marked on earlier maps.

Consolidation, 1840 - 1864

Pembrey New Harbour had been renamed Burry Port Harbour in 1835, and gave its name to the evolving town (Nicholson, 1991, 130-131). The population of Pembrey parish, 2,650 in 1831, had risen to 2,850 by 1841 (Slater, 1850, 59). However, the urban infrastructure had yet to develop and no chapels or churches are listed in Trade Directories of 1850 (Hunt, 1850; Slater, 1850). The Coasting Pilot public

house continued trading (Slater, 1850, 62), and the Steam Mill was still operational in 1854 (Carmarthenshire Record Office CRO/AE7), otherwise the central part of the present town was little developed.

Gaunt & Co. became bankrupt in 1842, and the Furnace Ironworks closed down (Thomas, 1937, 12). Their pits were taken over by John Stanley the following year (ibid.) However, throughout most of the 1840s only one colliery was at work in the parish (Hunt, 1850, 81) and according to 'Slater's Directory' of 1850 'collieries have for a time been suspended, but are now in active operation' (Slater, 1850, 59); 'Colonel Pemberton, bituminous coal, Burry Port', is listed (Slater, 1850, 60). The Furnace Ironworks had also been reopened by 1850, as the 'Gwendraeth Iron Works' under the Gwendraeth Iron and Coal Co. (Hunt, 1850, 81, 84).

The industrial expansion of Burry Port began in earnest with the construction of the Copper Works, on the east side of the harbour, by Mason and Elkington in 1849. The surrounding area had been acquired by the New Harbour Co. in 1830 and was apparently earmarked for industrial development from the first (Thomas, 1937, 49) and a large industrial complex was to later develop. The west side of the harbour remained in Ashburnham estate ownership and was not available for development. A rail link came to Burry Port in 1852.

Mason and Elkington became the main developers of Burry Port. They took over Pemberton's New Lodge Colliery in 1850 (but gave it up by them in 1863), acquired Cwm Capel Colliery from the Bowser family in 1858 (Thomas, 1937, 16), and were chiefly responsible for the urban development of the town. They sponsored the development of worker housing on New Street, Glanmor Terrace, Morlan Terrace and Burrows Terrace north-west of the Copper Works, on land acquired by parliamentary enclosure and shown as the initial mark-out into lots on the award plan of 1854 (Carmarthenshire Record Office CRO/AE7). The Bowsers remained resident at Burry Port and were living at Harbour View (now 'Sandhurst') in 1860 (Carmarthenshire Record Office, Bowser 67).

The Harbour

The East Dock (PRN 5340) finally opened in 1840, as a wet-dock constructed under William McKiernon, later superintendent of both the harbour and the Kidwelly & Llanelly canal, from stone brought from his Gwar Mac ('Mac's Quarry') near Cwm Capel colliery (Nicholson, 1991, 134). At first it could berth vessels of up to 500 tons only (Hunt, 1850, 81). Three timber coal-wagon tippers were installed, two on the east side, still present in 1900, and one on the north. A steam crane is said to have been situated at the East Dock entrance to the Outer Harbour from at least 1867 (J. Nicholson, pers. Comm.).

Transport

The Kidwelly & Llanelly Canal remained as the chief transport link to the port's hinterland 1850 (Hunt, 1850, 81). However, the South Wales Railway line from Swansea to Carmarthen, through Burry Port, was under construction and the Llanelli to Burry Port railway embankment was built, under William McKiernon, between 1847 and 1850 (Nicholson, 1991); 1847 newspapers reported that the 'South Wales Railway is progressing at Llanelly... walling in the sands between Llanelly and Pembrey' (Thomas, 1937, 6). The establishment of the line truncated the turnpike (on the line of Ashburnham Road/B4311) which henceforth terminated at the Neptune Hotel, and closed both Pwll Quay and New Lodge colliery (ibid.). The line opened in August 1852 with Brunel travelling on first train (Nicholson, 1991, 134). It was broad gauge while the harbour tramways and colliery tracks were standard gauge. It was taken over by the GWR in August 1863 but remained broad gauge until 1872.

Burry Port railway station occupied its present location but was called 'Pembrey'. A plan of 1855 shows the station, while just west of the existing platform footbridge was a level crossing with gates (Carmarthenshire Record Office, Cawdor Maps 222, Plan No. 6), and tramways crossed the main line at Dyfatty and Snook's Crossings (Thomas, 1937, 6).

In 1855, a railway was established by Mason and Elkington from their Cwm Capel colliery to Burry Port, on the site of Bowser's earlier tramway (Thomas, 1937, 16).

Industries

The Pembrey Copper Works, on the east side of the harbour, was commenced in 1849. It was managed by Alexander Parkes and from the 1850s onwards large quantities of copper ore were imported from both home and abroad (Thomas, 1937, 15). *The chimney-stack, 280ft high, was completed in 1852 and was the 'highest stack in kingdom' (ibid.).* Large quantities of ore were discharged into the Outer Harbour, and also in spoil tips to the south of the works (J. Nicholson, *pers. comm.*). *Parkes left Burry Port in 1856 (Thomas, 1937, 16) but the Copper Works continued production and was extended.*

George Bowser's saltworks was disused by at least 1855 (Carmarthenshire Record Office, Cawdor Maps 222), but his workshops, as the 'Old Harbor Works', continued operating into the 20th century (ibid.).

Services

The Customs House had been established between the two Dock sluices by 1850 (Hunt, 1850, 90) when a Harbourmaster's Office was also present (ibid.), probably at the present 'Harbour House'. A reading room was established by the company on the west side of the Outer Harbour in 1854-5 (Nicholson, 1991, 138) in a building that was taken over as a Dock office in 1891.

The Neptune Buildings (PRN 8674) were established as a hotel for seamen in 1841 and William McKiernon spent most of his life there until his death in 1881 (Nicholson, 1991, 134); Alexander Parkes was another resident (Thomas, 1937, 16). From at least 1857, it also provided accommodation for tourists visiting Pembrey for the sands and bathing (Nicholson, 1991, 134).

Expansion, 1864 - 1899

During the period 1864-1899 harbourside industries rapidly developed into an extensive complex. In addition, the west side of the harbour, which hitherto had been empty, was developed in 1890 when Lord Ashburnham himself opened a tinplate works.

It was also a period of great urban expansion. By 1875 *'Burry Port.... has of late years become a place of great trade and importance... and the village is rapidly assuming the proportions of a town'* (Worrall, 1875, 218). By 1880 housing had developed on the north side of Ashburnham Road, the present 'Seaview Terrace' being marked and labelled on the Ordnance Survey, 1:10560, First Edition of 1880. Silver Terrace had been developed, but Glanmor, Morlan and Burrows Terraces were still empty. Again the main impetus was from Mason & Elkington who built the Copper Works schools and opened Burry Port St Mary's Church in 1877 (Thomas, 1937, 16). The Burry Port Smelting Co. Ltd., established in 1865, built the houses in Silver Terrace (Thomas, 1937, 27). Two chapels had also been founded at Burry Port by 1875, Wesleyan and a Baptist (Worrall, 1875, 218).

Mason & Elkington also established a patent fuel manufactory at Burry Port (Worrall & Co., 1875, 225). They retired in 1884 and the Copper Works - the backbone of Burry Port - and Cwm Capel colliery, were continued by Elliot's Metal Co. (Thomas, 1937, 18).

However, coal-mining in the immediate vicinity was in decline. Stanley's New Pit closed in 1864 (Thomas, 1927, 40), but New Lodge Colliery was still operational in 1875 (Worrall, 1875, 225). Cwm Capel Colliery was abandoned by Elliot's Metal Co. In 1898 (Thomas, 1937, 16).

The Harbour

The harbour company was renamed the 'Burry Port and Gwendraeth Railway and Dock Company' in 1866 (see below) and managed the harbour until taken over by the GWR in 1923.

There was little development of the harbour and docks until 'improvements' were authorised in 1872 (Thomas, 1937, 7). By 1880 the East Dock had been equipped with more tippers and railways (Ordnance Survey, 1:10560, First Edition, 1880), and was now capable of admitting vessels of 1000 tons burden (Kelly, 1895, 117) but the West Dock scouring reservoir had become an amorphous, sub-triangular pond shown with mudflats (Ordnance Survey, 1:10560, First Edition, 1880). In 1876 the foreshore land adjoining the harbour had been purchased from the crown by the dock company (Thomas, 1937, 8) and by 1880 the Derwydd River had been entirely culverted.

The scouring reservoir was converted into the West Dock, mainly between 1872 and 1878; however, although the fittings were all in place by the later date, the dock was not finally opened until October 1888 (Nicholson, 1991, 135) and the first cargo was shipped in January 1889. It was also a floating dock with water-tight lock gate and a steel swing bridge. Masonry walls were built to the east and partly to the north, and timber stages projected from the long east wall and short south wall. It was available for ships of 1000-3000 tons burden, and featured a high level stage with steam cranes capable of loading vessels at any time of tide (Kelly, 1895, 117). A swing bridge connected the harbourside railway on both sides of the sluice (Nicholson, 1991, 135).

Transport

The Kidwelly & Llanelly canal had remained operational side-by-side with the South Wales line and minerals etc. had been brought direct to vessels side by railway tram (Worrall, 1875, 218).

However, In 1866 the Kidwelly & Llanelly Canal and Tramroad Company amalgamated with the Burry Port Harbour Co. as 'The Burry Port and Gwendraeth Valley Railway and Dock Company' (Thomas, 1937, 7) who, between 1865 and 1869, replaced the Kidwelly & Llanelly canal with a railway which ran alongside the canal all the way to Pontyberem and later to Cwmmawr (Thomas, 1937, 7). A further branch of the railway replaced the earlier tramway up the valley of Nant Dyfatty to Cwm Capel Colliery and The old tramway to Pwll colliery was relaid before 1875 (Thomas, 1937, 8).

The line was for minerals and goods only and brought vastly increased quantities of coal to Burry Port, but was standard 4'8½" gauge which entailed much unloading and unloading with the broad-gauge South Wales line (Nicholson, 1991, 135). Embanked sidings were established alongside the latter in 1870 to ease this process, and most of the harbourside lines were then fitted with a third rail to accommodate the broad gauge rolling stock (Thomas, 1937, 7). However, when the South Wales line converted to standard gauge in 1872, the harbour was faced with serious competition from rail (Nicholson, 1991).

Under the new company, with its resident harbour and railway superintendent, and dock master (Kelly, 1895, 118), the harbourside rail links, many of which were 3' gauge, proliferated. In addition, most of the trackways around the harbour, docks and industrial sites now represented by tarmac roadways had been established by 1880 (Ordnance Survey, 1:10560, First Edition, 1880).

Industries

The Copper Works expanded by 200% in area between 1864 (National Monuments Record, *Proposed Line of the Kidwelly & Llanelly Canal and Tramroad Company*, c.1864) and 1880 (Ordnance Survey, 1:10560, First Edition, 1880).

In 1864 the Lead and Silver Works was commenced by the Burry Port Smelting Co. Ltd., opening in 1865 and known as the 'Blue Lead works'. It was not a success, and closed down in 1877 (Thomas, 1937, 27). The White Lead Works was begun in 1870 alongside the Blue Lead works by Messrs. Risley and Burgmann; later taken over by the Cambrian Metal Co. (ibid.). The Iron Foundry was established alongside the latter in 1874 but did not last long (Thomas, 1937, 27). All were supplied with rail links.

In 1879 a steam saw-mill was established by Messrs. Williams and Powell to the north of the foundry, but was unsuccessful (Thomas, 1937, 27). There was also a smith's forge, near the Neptune Hotel, during the later 19th century (ibid.).

Tinplate, conveyed from Kidwelly Tinplate Works, was exported from Burry Port from 1885 onwards (Nicholson, 1991, 135). Trade increased when the Ashburnham Tinplate Works was established on the western side of the harbour in 1889-90 (ibid.). At the same time, a pumping works was established pumping water from Gwendraeth along the old canal to Burry Port (Thomas, 1937 5).

Services

The present lifeboat station was established on the eastern pier in 1887.

The club and reading room were moved in 1891 to a new site north of the East Dock, given by the Burry Port and Gwendraeth Valley Railway Co.; It was 'open to the captains of ships, employees of the company and local works, and residents of Burry Port as may be admitted as members' (Kelly, 1895, 118). The old Reading Room became the Coastguard Station (Ordnance Survey, 1:2500, Second Edition, 1907); the new Reading Room itself was demolished in 1909.

'Harbour View', the Bowser residence (now 'Sandhurst'), had become an Inn by at least 1880 (Ordnance Survey, 1:10560, First Edition, 1880), run by George Bowser in 1895 (Kelly & Co., 1895, 118). It reverted to private use when the later Harbour View Hotel, itself now a private house since 1971, was licensed in 1896 (Nicholson, 1991, 130) having been rebuilt from the old saltworks

Other developments

Bowser's Old Harbour Workshops west of the Outer Harbour had been partly converted into cottages by at least 1880 (Ordnance Survey, 1:10560, First Edition, 1880), including the Harbourmaster's House. The two chapels established near the harbour have been mentioned above.

Decline, 1899 - 1998

Overall, the period 1899 - 1998 has been one of decline for Burry Port Harbour, beginning with the closure of the West Dock in 1899. However, this decline did not properly set in until after World War I; when the remaining local collieries were amalgamated as Pembrey Collieries Ltd. (Thomas, 1937, 18). It hastened after World War II. Most of the harbour fittings etc. were removed during the early 1980s.

The dock area and the surrounding land that was owned by the Burry Port and Gwendraeth Valley Railway and Dock Company passed to the GWR in 1923, and was nationalised under British Rail in 1948. Burry Port became an urban district and civil parish in 1903 (Kelly, 1926, 151); in the mid 1960s the British rail owned land became the property of Burry Port Urban District Council which was incorporated within Llanelli Borough Council in 1974 (Nicholson, 1991, 138). In the early 1980s the harbour area was landscaped under Llanelli Borough Council, the Outer Harbour was dredged, the section of Kidwelly & Llanelli Canal north of the docks was infilled, the remains of the rail network, which had already been largely removed, were removed/covered over, and most of the harbourside fixtures and fittings were removed. The latter were offered by the council, and the Llanelli Harbour Trust, to Trinity House, who refused then and they were scrapped (J. Nicholson, pers. comm.).

Since the mid 1990s the council, amalgamated as Carmarthenshire County Council, have treated Burry Port Harbour as one of the priority areas for their Millennium Coastal Park.

The harbour

The West Dock proved unsuccessful and, in 1900-1901, the dock gates were removed and the swing bridge was replaced by a fixed iron bridge and coffer dam. It returned to its function as a scouring reservoir (Nicholson, 1991, 135) and its slow contraction began. The coffer dam was demolished in 1972 (National Monuments Record), and the bridge over the sluice was replaced by a concrete bridge in 1989-90 (Nicholson, 1991, 135).

Under the dynamic management of Arthur Morgan, General Manager of the Burry Port and Gwendraeth Valley Railway and Dock Company 1899-1925, Burry Port Harbour remained competitive during the first decade of the 20th century due largely to improvements at the East Dock. The timber coal-tippers were replaced, in 1904, by three hydraulic steel hoists (Ordnance Survey, 1:2500, Second Edition, 1907) powered by a contemporary generating plant. They were made by Tunnett and Walker & Co. of Leeds, who also installed a turntable, weigh-bridge, hydraulic capstan and a hydraulic crane of both sides of the dock (Nicholson, 1991, 136). New dock gates were fitted in 1905-6, allowing ships of up to 1800 tons to enter (*ibid.*).

Usage of the harbour declined after World War I and only one hoist remained in 1915 (Ordnance Survey, 1:2500, Edition of 1915). No stages or hoists are shown in later maps.

The battered sea-wall of both docks, and the Outer Harbour, had become unstable by the mid 20th century and was concreted over in the early 1960s (J. M. Williams, Burry Port Harbourmaster, *pers. comm.*); the work was very poor quality and is now in poor condition.

Transport

Harbour lines had proliferated between 1880 and 1907, when they reached their maximum extent and a power-house and Engine Sheds had been built (Ordnance Survey, 1:2500, Second Edition, 1907). These were still largely in place in 1953 (Ordnance Survey, 1:10560, Provisional Edition, 1953), but much of the network had already been lost by 1969 (Ordnance Survey, 1:2500, Sheet SN 4400, 1969). Some harbour railway lines were visible during the 1970s, but were lost when the harbour area was landscaped during the early 1980s.

The main South Wales line station received the footbridge before 1907, but most of the Station buildings and fixtures had gone by 1969 (Ordnance Survey, 1:2500, Sheet SN 4400, 1969). The B4311 (Ashburnham Road) had finally been connected with Station Road by a bridge by 1907 (Ordnance Survey, 1:2500, Second Edition, 1907).

A rail passenger service from Burry Port to Pontyberem was established in 1909, and in 1913 was extended to Cwmmawr (Thomas, 1937, 8). The small station was built on the site of the 1907 Reading Room and Club; this had gone by the later 20th century.

Industries

The Copper Works had doubled in size between 1880 and 1907 but it closed in 1911, to be sold the following year (Nicholson, 1991, 134). It was dismantled, but the buildings were acquired in 1923 by Frickers Metal co. Ltd., zinc oxide manufacturers (Kelly, 1926, 153). Many of the original buildings had gone by 1953.

The Lead and Silver works closed down c.1900 and was dismantled by 1907 (Ordnance Survey, 1:2500, Second Edition, 1907). The original buildings were removed between 1921 and 1953 (Ordnance Survey, 1:10560, Provisional Edition, 1953), and before 1969 the present large machine/fitting shop had been constructed over the eastern half of the complex. (Ordnance Survey, 1:2500, Sheet SN 4400, 1969).

Pembrey White Lead Works closed between 1907 and 1921 and was a Builder's Yard from 1937 (Thomas, 1937, 27) until recently; it now houses the Millennium Coastal Park Harbour Interpretative Centre. In 1914-18 the Iron Foundry alongside White Lead Works reopened by a local company but closed in 1925 (Thomas, 1937, 27). It has been an engineering works since before 1969 (Ordnance Survey, 1:2500, Sheet SN 4400, 1969). The Steam Saw Mill had gone by 1907 (Ordnance Survey, 1:2500, Second Edition, 1907).

Milling continued at the Ashburnham Tinsplate Works until the late 1940s, and was taken over as a shellfish packing plant in c.1950. The Old Harbour Workshops were operational until after 1907 (Ordnance Survey, 1:2500, Second Edition, 1907) but had gone by 1969 (Ordnance Survey, 1:2500, Sheet SN 4400, 1969).

The west side of the harbour was partially reorganised by the construction of Burry Port Power Station in 1952; it was demolished in 1991 (Nicholson, 1991, 138). The Ordnance Survey, 1:2500, Sheet SN 4400 of 1969 depicted several small industries in the vicinity of the Neptune Hotel labelled 'Engineering Works', 'Depot' and 'Works'. All, including the buildings, have gone.

Services

The Coastguard Station and Customs House were both demolished between 1953 and 1969. The lifeboat station was closed in 1914 but since 1973 has been operated by volunteers (Nicholson, 1991, 138).

APPENDIX II

GAZETTEER OF SITES

This section contains detailed descriptions of archaeological/historic sites, features and buildings, listed by their individual Primary Record Number (or PRN) as allocated in the Sites and Monuments Record for Carmarthenshire, Ceredigion and Pembrokeshire.

Refer to Fig. 2 for PRNs and individual feature numbers.

5338 - SN 4480 0064 - IRON FOUNDRY

Standing structure; constructed 1874; good condition; Category C

A small Iron Foundry was started by William Roberts in 1874 (Thomas, 1937, 27). William Roberts, Iron Founder, is listed in Worrall's Directory for 1875 (Worrall, 1875, 227) but the foundry did not last long (Thomas, 1937, 27) and no Iron Founder is listed by Kelly in 1895 (Kelly, 1895).

The main foundry block is marked, and labelled 'Iron Foundry' on the Ordnance Survey 1:10560 First Edition of 1880 as it is shown as in later plans, with a perimeter as at present. The foundry is marked 'disused' on the Ordnance Survey 1:2500 Second Edition of 1907. It was reopened in 1914-18 by a local company but closed in 1925 (Thomas, 1937, 27) and is marked on the Ordnance Survey 1:2500 Edition of 1915 but not labelled; it is labelled 'Foundry' in the 1:10560 Edition of 1921. The Foundry building is marked, and labelled 'Engineering Works', on the Ordnance Survey, 1:2500 of 1969.

The main block is from 1874 and in brick, with a gabled roof of corrugated sheets, and an attached, contemporary parallel gabled building on the south side. Openings are largely segmental-headed with brick surrounds, those on the south side largely blocked in breeze-blocks. A corrugated sheet extension has been added to the east side, marked on the Ordnance Survey 1:2500 of 1969. A similar detached building to the south is also marked on the Ordnance Survey 1:2500 of 1969, but two detached, brick ancillary buildings to the north-east are later than the 1969 survey. The buildings are now the premises of the company 'BHE'.

It is doubtful whether any 19th century foundry fittings etc. have survived.

5339 - SN 4475 0035 - PEMBREY COPPER WORKS.

Standing structures; constructed 1849 - later 20th century; good condition; Category C

The Outer Harbour was, from the first, intended to serve an anticipated Copper Works (Thomas, 1937, 49). Construction begun in March 1849, under Alexander Parkes for his new process, on behalf of the proprietors, Mason, Elkington & Co. of Birmingham, on 20 acres of land that was a free gift from the Dock Company (Thomas, 1937, 15-16). It is said to have been operational by November (ibid.), but according to trade directories for 1850 the copperworks was variously 'in the process of erection' (Hunt, 1850, 81) or 'about to be opened' (Slater, 1850, 59); the National Monuments Record contains the entry 'In 1850 - 53 Alexander Parkes was sent to superintend the erection of Mason & Elkington's Copper Works'.

5342 - SN 4465 0028 - LIFEBOAT STATION

Standing structure; constructed 1887; good condition; Category C

A lifeboat station had been founded at Pembrey Old Harbour in the 1860s (National Library of Wales, Ashburnham Group II, 40/3). It was moved to Burry Port, in its present building, in 1887. It was closed in 1914 but since 1973 has been operated by volunteers (Nicholson, 1991, 138).

The north-south building lies at the head of a slipway on the east quay of the Outer Harbour. It measures 14.3 x 6.5m and is constructed from red bricks. The openings have been mainly rebuilt but surviving original windows and doorways have segmental heads. A string-course/label lies over the main boat doorway in the south gable wall, either side of which is a square medallion comprising a crown and the date '1887'. The original lifeboat fittings have probably been largely renewed, but an early iron lifeboat capstan has been resented in the ground to the north of the building (in the wrong position).

The slipway is apparently not original (J. Nicholson, *pers. comm.*); a tramroad unit conveyed the boat until the late 1970s (*ibid.*).

5343 - SN 4452 0043 - CUSTOMS HOUSE

Demolished structure; poor condition; Category D

The truncated remains of the customs house building stand upon the 'island' between the East and West Dock sluices. It was an octagonal building, comprising a single chamber with an internal diameter of approximately 3.00m and an external wall c.0.40m thick with an external chamfered limestone offset at a height of 0.15m, the level to which the wall now stands. The entry was in the eastern 'facet' and is a plain gap. The brick floor, and the remains of internal render, also survive.

A building is first depicted on the site of the customs house on a map of 1855 (Carms. R. O., Cawdor Maps 222, Plan No. 6) on which it is labelled 'Watch Tower'. However, a customs house is listed in Hunt's trade directory for 1850 (Hunt, 1850, 90) and it is probable that the building depicted in this plan was the present customs house building which is shown unchanged from c.1864 (National Monuments Record, *Proposed Line of the Kidwelly & Llanelly Canal and Tramroad Company*) through to 1953 (Ordnance Survey, 1:10560, Provisional Edition, Carmarthenshire Sheet LVII NE, 1953). There was a water tank on the flat roof to supply boats (J. Nicholson, *pers. comm.*).

The building had been demolished prior to the survey of 1969 (Ordnance Survey, 1:2500, Sheet SN 4400, 1969).

5345 - SN 4452 0030 - HARBOUR (OUTER HARBOUR)

Standing structure; constructed 1830-36; 19th century fittings; fair-good condition; Category A; Grade II Listed Building

The Outer Harbour was and is a tidal harbour, 15 acres in extent and forming an irregular rectangle with its long axis running north-south; it had a level bottom of clean blue clay (Worrall, 1875, 218), formerly kept clean by scouring from the West Dock but now largely silted. A long breakwater runs north-south from the south-west corner, extending over the tidal flats for 180m and continuing for a further 220m as a low, sand weir, to a barrel-post at low-water mark. A shorter breakwater from the south-east corner,

running in a north-east - south-west direction for 120m and constricting the harbour entrance to a width of 50m; beyond it lies a second barrel-post at low-water mark.

The harbour was initially designed by the marine engineer Sir Joseph Banks (Nicholson, 1991, 129). Captain John Wedge, of nearby Goodig, took an interest in the selection of the site and diverted some of the land streams in order to scour out a new channel, and with Banks himself was appointed resident engineer (Thomas, 1927, 49). However, great difficulties were encountered with both the design and the construction of the harbour. A copy of a plan of 1824 (National Library of Wales, Ashburnham II, 31/7), on the basis of which the Act of Parliament was passed, depicts the plan of the harbour as originally intended, showing to have been a narrow, rectangular cut running north-south, much narrower than the present Outer Harbour, without a large scouring reservoir but with a dock or reservoir of occupying similar dimensions to the north; no breakwaters are shown. The plans were evidently adapted; the Outer Harbour was constructed with a weir and breakwaters (presumably those still present), but with great difficulties - the breakwaters were continually washed away and the walls of the harbour kept collapsing. Samuel and Robert Bowser, the sons of George Bowser on whose land the harbour encroached, supplied a steady stream of criticism and alternative plans (Carms. R. O., Bowser 31 and Bowser 53; Countryside Commission for Wales Collection), some of which appear to have been adopted.

The eastern breakwater was complete by February 1831, when the Outer Harbour was well advanced (Nicholson, 1991, 129). In April 1832 the harbour was declared as 'ready' (ibid.) but this was manifestly untrue and in 1833 yet another engineer was engaged, in the person of James Green (Carms. R. O., CH3), the civil engineer for the Kidwelly & Llanelly Canal and Tramroad Co.. According to Samuel Bowser (Carms. R. O., Bowser 53), one of the problems with the earlier designs was their ineffectiveness in clearing the Outer Harbour of silt. It appears that Green was responsible for introducing a reservoir, the present West Dock, into the designs, but was himself dismissed in early 1836 (Wakelin, n.d., 2). Silting remained a problem is mentioned in 1853 and 1856 (Nicholson, 1991).

The harbour may possibly not have been finally opened until January 1836 when the *Ninus* of Scarborough berthed to take on anthracite (Nicholson, 1991, 130). By 1837 'the New Harbour... is so far advanced as to admit the entrance of vessels of up to 400 tons' (Minute to Carms. R. O., Cawdor Maps 2/44/415). The opening of 1836 refers to the Outer Harbour only.

At first, coal was brought to the harbour by canal and tramway tubs and stored on heaps at the harbourside from which it was loaded onto vessels. However, there were apparently two shipping or tipping stages in the Outer Harbour from an early date ((National Monuments Record; Thomas, 1937, 49). None are depicted on the tithe map of 1839 (National Library of Wales, Parish of Pembrey, 1839) but a map of 1855 (Carms. R. O., Cawdor Maps 222, Plan No. 6) shows two tipping stages on the north side of the Harbour, east of the East Dock lock. There were also three landing stages on the west side. By this date the Outer Harbour had achieved more-or-less its present form; the walls, and the breakwaters, had been strengthened by a similar sloping rubble batter to that added to the East and West Docks (ibid.) but here it is even more massive. The barrel-posts are labelled either side of the channel at low-water mark. The Outer Harbour is shown as in 1855 on a map of c.1864 (National Monuments Record, 'Proposed Line of the Kidwelly & Llanelly Canal and Tramroad Company'). A lighthouse (PRN 8428) had been erected on the western breakwater in 1838 (Nicholson, 1991, 131-2), and a lifeboat station slipway was added to the west side of the eastern breakwater in 1887 (PRN 5342).

A tipper is shown on the east side of the harbour, where an 'Engine House' is marked and labelled, on the Ordnance Survey 1:10560 First edition of 1880; a north-south harbour railway line ran down the eastern side of the harbour to supply the tippers, and linked with the industries here. No tippers are shown on the west side (but the three projections are as in 1855 and c.1864), and three projections are shown to the north and north-east. Tidal mudflats are shown. A flagstaff is marked, and labelled, south of 'Sea View' on the west side of the harbour. Two buoys are labelled marking the outer harbour channel, while a third lay to the south, and the barrel posts are labelled. Many mooring posts (ie. iron bollards) are marked.

The Ordnance Survey 1:2500 Second Edition of 1907 shows the Outer Harbour is shown as in 1880 with a shipping stage labelled on the east side, where the Engine House had gone. The flagstaff is marked, and labelled 'F.S.', as in 1880, and continued to be marked up to the 1953 survey. A second flagstaff, labelled 'F.S.', lay to the south-east of the East Dock, but had gone by 1915. A third buoy is labelled in the Outer Harbour. The barrel-posts and bollards are as in 1880. These latter features are depicted unchanged right through to the Ordnance Survey 1:2500 of 1969, but the bollards, as elsewhere, have now largely gone.

The Outer Harbour today retains most of its structure and some fittings. The walls are in roughly coursed and squared local rubble, all apparently of one build (1830-36 - see above), with a secondary battered rubble base noted above; the latter is generally cruder than in the East Dock and at the north-east corner is concave. Throughout the harbour, the summit of the quayside lies beneath late 20th century concrete surface which overhangs in areas.

There is now no evidence of any tipper projections on the north and west sides, but on the east side the three landing stages shown in 1855 (see above) survive and project over the batter. That to the north (Fig. 2; 30) is wide, as shown on contemporary maps, and was the location of the former Coastguard Station (PRN 36921); the central one (Fig. 2; 31) forms a rubble masonry pier approximately 15m long, now concreted above and with a brick and breeze-block walkway, leading to a timber stair, while the southern (Fig. 2; 32) forms a sharp 'cutwater' in plan and has been re-used in a post-1969 concrete slipway.

There is a restored flight of masonry steps, with a landing, at the north-west corner of the harbour (Fig. 2; 33) while to the south is a secondary flight, probably 20th century (Fig. 2; 34). An early flight further south (Fig. 2; 35) is associated with a 'cutwater' like that described above. There is a further early flight at the junction with the western breakwater (Fig. 2; 36). There are two masonry bollards, which may be 19th century, on the west side of the harbour (Fig. 2; 37).

The position of timber staging for the discharge of ore from the Copper Works can still be discerned at the east side of the harbour (Fig. 2; 38); immediately below this, the remains of a pontoon were apparently visible until recently. Two collapsed masonry bollards, good examples of 19th century mooring posts, lie at the north-east corner (Fig. 2; 39). An iron outfall pipe lies just to the west, possibly leading from the East Dock (Fig. 2; 40); the sea-wall here has been rebuilt above the batter; a small pipe immediately to the west appears to be contemporary with the 20th century concrete quayside surface and may have supplied one of the harbourside works.

Along the east side of the Outer Harbour, iron mooring rings and chains lie at 3.00m - 10.00m intervals of which many may be 19th century; there are a number of further iron mooring rings and chains, from a number of periods, and timber and iron ladders mainly from the later 20th century, throughout the harbour.

The eastern breakwater expands around the base of the lighthouse (PRN 8428), with an irregular plan, the eastern side projecting in large rubble like a 'cutwater' with a summit that slopes down to the south as a slipway; the latter may not be part of the 1830-36 work. A semi-hexagonal line of masonry is visible in the surface immediately west and south of the lighthouse (Fig. 2; 41), possibly representing the summit of the original southern tip of the breakwater, which appears to be shorter on the tithe map of 1839 (National Library of Wales, Parish of Pembrey, 1839) but had achieved its present dimensions by 1855 (Carmarthenshire Record Office, Cawdor Maps 222, Plan No. 6). A low wall, possibly 20th century, lies on the west side of the breakwater summit, which is now beneath later 20th century tarmac; south of the lighthouse, the wall is represented by very large shaley slabs set upright in the surface, which may be contemporary with the lighthouse (1838). The sand weir out to the barrel-post south of the breakwater (Fig. 2; 65) may be part of the original 1830-31 construction. There are later 20th century lamp-posts all along the breakwater.

The eastern breakwater exhibits two good, oval 19th century masonry bollards, in ?Pennant Sandstone (Fig. 2; 42), and an area of 19th century cobbled surface is still visible with 4' 8½" rails (Fig. 2; 43). At the end is a seat (Fig. 2; 44) that is said to date from c.1920; it is sheltered by three upright stone slabs like those on the western breakwater. Both breakwater batters are in much cruder rubble than that in the harbour itself, but the tip of the eastern breakwater is in well constructed masonry. The east side is partially supported by four, 19th century iron canal boats (*see PRN 35902, below*). The slipway to the north is post-1969.

The eastern harbourside railway lines are shown on Ordnance Survey maps from 1880 onwards, including the 1969 edition, but no evidence is now visible (*see PRN 5349 below*).

The sloping batter was concreted like the East and West Docks in the early 1960s but the finish here is generally in better condition, apart from to the north-west. The breakwaters exhibit less concrete.

The Outer Harbour was last dredged in 1984 (J. M Williams, Burry Port Harbourmaster, *pers. comm.*)

The Outer Harbour walls are a Grade II Listed Building.

(See Appendix III for aspects of the harbour constructional history)

5349 - SN 44 00 - BURRY PORT AND GWENDRAETH VALLEY RAILWAY

Rail network, constructed 1864 onwards; poor condition; Category D

The Kidwelly & Llanelly Canal and Tramroad Company gave notice of their intention to replace the canal with a railway, in a press article dated 10 November 1864 (copy in National Monuments Record), with the promise to deposit maps, plans and sections of the proposed railway and associated works with the Clerk of the Peace. In July 1865 the company was authorised 'to acquire Kymer's Canal, and to fill up or drain the canal, and to convert it into a railway'.

In 1866 the Kidwelly & Llanelly Canal and Tramroad Company amalgamated with the Burry Port Harbour Co. as 'The Burry Port and Gwendraeth Valley Railway and Dock Company' (Thomas, 1937, 7). The railway ran alongside the canal all the way to Pontyberem, like the Trimsaran branch to the junction near Moat Farm. It was opened in June 1869, and later that year was extended to Cwmmawr (Thomas, 1937, 7).

The conversion of the canal between Burry Port and Pontyberem was authorised in July 1865 and conformed to the standard 4' 8½" gauge (National Monuments Record). The Burry Port section was constructed alongside the canal and included a network of both 4' 8½" and 3' gauge lines around the harbour, leading from a junction with the main line to the west of the West Dock, at Gors Bridge (PRN 8675).

The growth, and decline, of the Burry Port and Gwendraeth Valley Railway and Dock Company's network at the harbour is depicted in 19th and 20th century maps. The earliest, a plan of the proposed line from c.1864 (National Monuments Record, '*Proposed Line of the Kidwelly & Llanelly Canal and Tramroad Company*'), shows merely one line running east-west between the East and West Docks and the northern branch of the canal, but from the first the line supplied tippers at the East Dock and Outer Harbour (*ibid.*) while 'minerals etc. are brought direct to vessels side by railway tram' (Worrall, 1875, 218). A large, embanked siding was constructed to the north-east of the harbour in 1870 for transference of coal from harbour wagons to the (then) broad-gauge wagons of the South Wales line, and most of the sidings at the docks were fitted with a third rail to accommodate the South Wales rolling stock (Thomas,

1937, 7) which was not converted to standard gauge until 1872 (Nicholson, 1991, 135). Another branch of the railway replaced the earlier tramway up the valley of Nant Dyfatty to Cwm Capel Colliery (*ibid.*), and the old tramway to Pwll was incorporated before 1875 (Thomas, 1937, 8) but was not extended to Llanelli until March 1899 (Kelly, 1926, 151).

These two lines, and the sidings, are shown on the Ordnance Survey 1:10560 First Edition of 1880 as they are shown on later maps. The line north of the docks has been joined by a second, parallel line running north of the canal; a double-bay engine shed (PRN 36939) is north-east of the East Dock (at the junction with the old Pwll tramway). The north-south running line from Cwm Capel crossed the line here, to continue down the eastern side of the Outer Harbour supplying the tippers and industries located in this area. No line is shown crossing the central 'island' to the west side of the harbour, but a line ran along the quay between the two docks feeding the tippers.

The final conversion of the West Dock in 1888 entailed the laying of further lines to the new coal-tippers, and across the swing bridge which connected the railway on both sides of the East and West Docks, across the 'island' (Nicholson, 1991, 135). The Ordnance Survey 1:2500 Second Edition of 1907 shows that the harbour lines had proliferated, particularly in the area between the northern canal branch and the docks; while the power-house (PRN 8672) had been built in this area. A line had been established from the junction leading south of the West Dock, alongside the southern canal branch, leading to the Harbour Workshops (PRN 36922) and the new Ashburnham Tinplate Works (PRN 9043); the line continued to cross the central 'island' between the two docks. More lines are depicted east of the East Dock where a building that may have been another engine shed is shown, and on the division between the two docks. The north-south Cwm Capel line continued down the eastern side of the Outer Harbour onto the eastern breakwater, and the lines had developed further within the industrial compounds here.

The Burry Port and Gwendraeth Valley Railway was, until 1909, for minerals and goods only, but in that year a passenger service from Burry Port to Pontyberem was established, and in 1913 was extended to Cwmmawr (Thomas, 1937, 8). The Ordnance Survey 1:2500 Edition of 1915 accordingly shows the harbour line network much as in 1907, but with a small station on a spur of the line east of the Neptune Hotel, on the site of what had been a Reading Room and Club (*see Reading Room and Club, PRN 36932, below*). Very few lines are depicted within the industrial sites to the east. The Burry Port and Gwendraeth Railway and Dock Company was grouped with the GWR in 1924 (Thomas, 1937, 8)

The rail network is depicted unchanged on 20th century maps until the Ordnance Survey, 1:2500 of 1969, which shows the harbour lines as almost completely removed. Two lines survived from the complex between the dock and the old canal; the station marked here in 1915 and 1921 had also gone. The north-south lines to the east, running down to the eastern breakwater also survived and incorporated a new building labelled 'Wagon Repair Shop' (PRN 36940) near the East Dock. The sidings next to the South Wales line also survived.

There is now little visible physical evidence for the rail network at Burry Port Harbour, and there is no above-ground evidence for any of the associated buildings mentioned above. However, much physical evidence may remain immediately below ground. Rails were visible, 'at the quay wall for approximately 500 yds', in 1978. The lines immediately north of the harbour are represented by slight parchmarks (Fig. 2; 45) within a grassy area that was landscaped during the early 1980s. The sidings established alongside the South Wales line to the east of the harbour have been similarly lost, and no above ground evidence is visible. The line extending down the east side of the East Dock and Outer Harbour, shown with sidings and a wagon repair shop in 1969 (Ordnance Survey, 1:2500, Sheet SN 4400, 1969) have left little evidence but there is a pair of 4' 8½" rails in a cobbled surface on the eastern breakwater (Fig. 2; 43) and an isolated area of concrete hard standing (Fig. 2; 46). Short stretches of 3' gauge harbour railway survive within the present tarmac surfaces north-west of the Iron Foundry site (Fig. 2; 47 & 48), and within the former Lead and Silver Works site (Fig. 2; 49), the latter with points. A slight bank, representing part of

the north-south line from Cwm Capel Colliery, survives as a footpath towards the north-east of the harbour area (Fig. 2; 50) and a section of rail ballast is visible west of the West Dock (Fig. 2; 51).

8428 - SN 4445 0003 - LIGHTHOUSE

Standing structure; constructed 1838; good condition; Category B

The lighthouse erected on the western pier in 1838 still survives (Nicholson, 1991, 131). Claims that the present lighthouse is a rebuild of 1866 (eg. Thomas, 1937, 6) are due to confusion with the Whitford Point lighthouse on the south side of the Burry Estuary (J. M. Williams, Burry Port Harbourmaster, *pers. comm.*).

The lighthouse is first shown on the tithe map of 1839 (NLW, Parish of Pembrey, 1839). It is a low, two-storey cylindrical structure of approximately 5m diameter, constructed from local rubble with plain, square-headed openings and supporting a cast-iron 'cupola' superstructure which houses the light. This *'showed a blue light towards the entrance to the Burry River and a red light towards Llanelli; the first opening of the red light would lead vessels directly into the harbour and past the lighthouse, which showed a white light on their starboard side'* (Nicholson, 1991, 131). There is a bench-mark on the north-west face of the building.

The lighthouse has been restored but retains some 19th century fittings.

8671 - SN 4465 0076 - RAILWAY STATION (GWR)

Railway line, 1847-50; standing structure, constructed late 19th century; good condition; Category D

The then South Wales Railway Co. completed its broad-gauge Swansea to Carmarthen line, via Burry Port, in 1850; it opened in August of that year with Brunel travelling on first train (Nicholson, 1991, 134). The line was taken over by the Great Western Railway in 1863 but remained broad gauge until 1872 (*ibid.*); the Burry Port and Gwendraeth Valley Railway network at the harbour was standard gauge (see PRN 5349 above).

The Llanelli to Burry Port section of the line, with its embankment, had been built under William McKiernon, superintendent of the Kidwelly & Llanelli Canal, between 1847 and 1850 (Nicholson, 1991, 134); a newspaper of 1847 reported that the *'South Wales Railway is progressing at Llanelli... walling in the sands between Llanelli and Pembrey'*, with stone from a quarry near Pwll (Thomas, 1937, 6).

The railway line, and the station, are shown in a map of 1855 (Carms. R. O., Cawdor Maps 222, Plan No. 6). The station appears to have had two platforms from the first, linked by a level crossing, with gates, that stood just west of the present footbridge (Thomas, 1937, 6) which had been constructed by 1907 (see PRN 29529). The station building is shown as a small structure with the same ground plan that was shown on maps throughout the 20th century until its demolition before 1969. It was initially called 'Pembrey Station' (Thomas, 1937, 6) but by 1895 had been renamed 'Burry Port and Pembrey' (Kelly, 1895, 117). The Cwm Capel colliery tramway, and the later railway, level-crossed the line to the east, on the site of the present Dyfatty crossing footbridge (PRN 36937). The situation was unchanged in c.1864 (National Monuments Record, *'Proposed Line of the Kidwelly & Llanelli Canal and Tramroad Company'*).

The line is shown, and the railway station marked and labelled, on the Ordnance Survey 1:10560 First Edition of 1880; to the east, a building is marked, but not labelled, on the site labelled 'goods shed' in 1907. No footbridges, nor the present road bridge connecting the B4311 (Ashburnham Road) with Station Road (PRN 36931), are shown.

The railway station and goods shed are marked and labelled as in 1880 on the Ordnance Survey 1:2500 Second Edition of 1907, on which are also shown both the road bridge and station footbridge. A Cattle Pen had been added to the Goods Shed by 1915 (Ordnance Survey 1:2500 Edition of 1915) and a Mail Apparatus is marked and labelled north of the West Dock. No changes are depicted until the Ordnance Survey, 1:2500 of 1969. The station was demolished at some period after the 1953 survey, as were the Goods Shed, Cattle Pen and mail apparatus, while a second footbridge had been constructed to the east where the Dyfatty mineral line had formerly crossed.

The line itself, with its embankment and walls, and both the station footbridge (PRN 29529) and the Dyfatty footbridge (PRN 36937), have survived, the former standard gauge since 1877. Otherwise the only surviving station building is the ancillary brick building first shown on the 1907 map immediately to the east of the station itself; this is a small, single-storeyed red brick construction with segmental-headed windows and door in yellow brick, an ornamental cornice and a flat roof. It was erected between 1880 and 1907.

8672 - SN 4451 0065 - POWER HOUSE

Demolished structure; no above-ground evidence; Category E

In 1900-1901 the Burry Port and Gwendraeth Railway and Dock Company built its own Power House north of the East and West Docks, between the two branches of the railway (Nicholson, 1991, 135-6). It had three Cornish Boilers and a pair of Armstrong hydraulic steam pumps, and above it was a large tank used both for the hydraulics and for locomotive use (*ibid.*).

The Ordnance Survey 1:2500 Second Edition of 1907 shows the power house, labelled 'Electric and Hydraulic Engine House'. However, according to Nicholson (*ibid.*) the harbour did not receive electricity until 1919 when the loco sheds, workshops offices etc. were supplied, and the steam plant in the power House was replaced by an electric hydraulic pump in 1922 when a high tension cubicle was added to the Power House (*ibid.*).

The power house was demolished at some period after the 1953 survey and is not depicted on the Ordnance Survey 1:2500 of 1969. The area has been landscaped and there is now no above-ground evidence for the building, but below-ground evidence may survive.

8674 - SN 4462 0069 - NEPTUNE BUILDINGS (HOTEL)

Standing structures; constructed 1841 onwards; good condition; Category C

The Neptune Buildings were established as a hotel for seamen in 1841; William McKiernon, superintendent of the Kidwelly & Llanelly Canal, spent most of his life there until his death in 1881. From at least 1857, it also provided accommodation for tourists visiting Pembrey for the sands and bathing (Nicholson, 1991, 134).

It is shown in 1855 (Carms. R. O., Cawdor Maps 222, Plan No. 6) with more-or-less its present ground plan, a rectangular block of buildings comprising two ranges separated by several small yards. The long

east range consists of two halves, depicted as at present in 1855. The northern is of three storeys, and six bays divided by a spine wall with fireplaces and a brick stack; there are further brick stacks at either end. There are east-facing bay windows at either end. Openings are all square-headed, now with sash-windows, and the roof is a slated gable; the exterior is rendered. The southern half comprises three discrete units, each of two storeys, now self-contained accommodation. Openings and finishes are as in the northern half and the roof is a slated gable; any former chimney stacks have gone.

The west range is similarly in two halves. The southern half was depicted as at present in 1855 and is a six-bayed, single storey, neo-Gothic building in local rubble, with square-headed and triangular-headed openings in brick, a slated gable roof and a projecting west porch; there is a contemporary a two-storeyed, hip-roofed block at the north end. The northern half is later, first depicted with its present plan on the Ordnance Survey 1:2500 Second Edition of 1907 and occupying what were two separate buildings in 1855; it is square, with 2 storeys, projecting square quoins and square-headed openings with projecting keystones, and a slated hip roof.

The Ordnance Survey 1:10560 First Edition of 1880 labels part of the 'Neptune Hotel' as 'Offices'. The northern half is labelled 'Hotel' and the southern half is labelled 'Club' on the Ordnance Survey 1:2500 Edition of 1915, while 'The Neptune Building' is shown as incorporating two 'Clubs' in 1969 (Ordnance Survey, 1:2500, Sheet SN 4400, 1969). A planning application was made in 1989 to convert the building from a Sports & Social Club to a Hotel/Public House (Sites and Monuments Record for Carmarthenshire, Ceredigion and Pembrokeshire); the northern building of the west range is now the 'Neptune's Palace' Public House.

8675 - SN 4401 0073 - GORS BRIDGES (ROAD AND RAIL BRIDGES)

Standing structures; constructed c.1837 and c.1847; good condition; Category C

Two bridges lie over the Kidwelly & Llanelly Canal/Burry Port and Gwendraeth Valley railway to the west of the West Dock.

The present B4311 (Ashburnham Road) along the north side of the harbour is marked as a 'proposed new Turnpike Road' on a plan of 1834 (Carms. R. O., CH3), following the line of a trackway depicted in 1825 and 1830. The road bridge over the canal was constructed in the later 1830s and is shown on the tithe map of 1839 (NLW, Parish of Pembrey, 1839). It is a modernised structure with concrete walls strengthening the north and south sides of each abutment (National Monuments Record). The wall was raised to accommodate rail traffic below when the canal was converted in 1865-9, and again to support a new concrete and girder deck carrying the present B4311 (*ibid.*). Some quoin stones on the west side of the north elevation are original; one large hammer-dressed stone has a deep groove from a tow-rope. The rebuild is in uncoursed random rubble (*ibid.*).

Immediately to the north is a rail overbridge, which was constructed as a skew-bridge in c.1847 to carry the South Wales line over the canal (*ibid.*). The original canal abutments were raised and strengthened to accommodate two-tier railway traffic but as built had a timber deck which would have fitted into slots still visible in inner face of the abutments (*ibid.*). The entire structure was probably raised in c.1868 when the four masonry piers were added. The original masonry at the base of the abutments is in uncoursed random rubble with hammer-dressed quoins; some have grooves from tow-ropes. The later work is hammer-dressed, coursed random rubble (*ibid.*).

8822 - SN 4400 - THE KIDWELLY & LLANELLY CANAL

Earthwork, constructed 1837, and fittings from c.1860-70 and bridge from c.1890; good condition; Category B

The 'Kidwelly & Llanelly Canal and Tramroad Co.' were formed in 1813 for 'improving and maintaining Kidwelly Harbour, Kymer's Canal and the tramroads connecting the collieries etc with it' (Thomas, 1937, 5). Thomas Kymer's canal of 1766-68, the first in South Wales, had been cut in order to connect his collieries in the Trimsaran district with his harbour at Kidwelly, and followed the course of the Gwendraeth Fawr. In 1814 the company commenced to link Kidwelly and Llanelli, via Kymer's canal, to a junction 2km south-east of Kidwelly from which a new canal - the 'Kidwelly & Llanelly Canal' - was continued eastwards; however, it was never to reach Llanelli (James, 1991, 156-7).

A link with the Kidwelly & Llanelly Canal had been anticipated from the first, and specifications were submitted to the canal Management Committee by the civil engineer James Green in July 1833 within which it was decided to terminate the canal at the New Harbour (Carms. R. O., Cawdor 2/44). However, it was not to reach the harbour until 1837 (Nicholson, 1991, 131). Furthermore, it is apparent from an undated plan by Green of c.1833 (Carms. R. O., Cawdor Maps 2/44/415) that even upon the completion of the link, work had yet to be undertaken to complete the remainder of the canal. In its final form it was over 11 miles long with 5 locks, 3 inclined planes and 3 substantial aqueducts (Sites and Monuments Record for Carmarthenshire, Ceredigion and Pembrokeshire).

The Burry Port section closely followed the course of the Pembrey Canal. At first there was a reservoir - 'Gors Pool' - to the west of the harbour, which is shown on a plan of 1843 (National Library of Wales, Ashburnham II, 31/7) but for which no evidence now survives. A second reservoir lay on Nant Dyfatty, near Cwm Capel Colliery, with a feeder to the canal (Carms. R. O., Cawdor 2/44).

From 1837-69 the canal carried virtually all the Gwendraeth Valley anthracite production which was brought down the canal in barges to a point, just east of the West Dock, where it divided into two branches constructed by the Pembrey Harbour company (Carms. R. O., Cawdor 2/44). The northern branch ran, through a sluice, to the north of the harbour before turning, at right-angles, to run down its eastern side; from at least 1855 a low bridge crossed this branch north of the present East Dock (Carms. R. O., Cawdor Maps 222, Plan No. 6). The southern branch ran, also through a sluice, alongside the south side of the West Dock, the south-eastern corner of which it entered via a further sluice. The coal was unloaded from the barges and stored in heaps on dock-side; ships were then loaded from the heaps with baskets (Thomas, 1937, 4).

The bulk of the canal was replaced by the Burry Port and Gwendraeth Valley Railway between 1865 and 1869 but much of it survives alongside the later railway line; elsewhere it has the rails set in the infilled bed (National Monuments Record). Furthermore, the section within the harbour was bypassed by the railway lines and remained open.

The west half of the northern branch is still open. It emerges from a very poorly constructed culvert beneath the railway line to the east (Fig. 2; 52) which has been much rebuilt, is not closely dateable and lacks fittings. It continues westwards to Gors Bridge (PRN 8675) as a regular earth cutting, approximately 6.00m wide with a steep-sided, V-shaped profile, and still wet.

From c.1880 the northern branch had existed as three discrete sections. The western section was infilled in the early 1980s, and can be seen as a shallow linear depression north of the harbour (Fig. 2; 53) lying within a grassy area that was landscaped at the same time. The central section (Fig. 2; 54) is also dry; it was labelled 'Sluice Pond' on the Ordnance Survey, 1:2500, Sheet SN 4400, of 1969 and was described in the 1970s as *'a small basin... (partly) filled with earth and rubble and smothered in vegetation... with indications that it continued further east and west of the exposed section. It seems that the vertically walled masonry basin chamber was partly filled in to accommodate later railway sidings. Water escaped*

through a sluice in the south quay wall and flowed along a tunnel to emerge in the East Dock (National Monuments Record). The eastern, north-south section was, and is, fed by the Nant Dyfatty and has been culverted, with a large open manhole (Fig. 2; 55).

The Nant Dyfatty itself was diverted into this section as a straight, narrow open channel which enters the harbour area from the north, through a culvert (now choked with vegetation and not visible) beneath the South Wales line embankment (Fig. 2; 56). It is first labelled on the Ordnance Survey 1:10560 Edition of 1921 but was an original feature of the harbour. Since at least 1855 it has been culverted beneath the roadway leading eastwards from the Neptune buildings out of the harbour, through a masonry culvert with a semicircular arch now with a breeze-block parapet to the north (Fig. 2; 57). The continuation south towards the canal branch now ends at a breeze-block culvert.

The branch running south of the West Dock was shown in c.1864 as connecting, beneath a bridge, with the south-east corner of the dock (National Monuments Record, *'Proposed Line of the Kidwelly & Llanelly Canal and Tramroad Company'*). This link was culverted, probably during the 1860s (Ordnance Survey 1:10560, First Edition, 1880), but the remaining section still remains open and is similar to the northern branch. At the east end are two sluices, set in the east and north banks, both connecting with the West Dock (Fig. 2; 58). Both are in rubble masonry with iron sluice-gates and gear from c.1860-70, but with 20th century steps and gratings. A little to the west, the canal is crossed by a former railway bridge (Fig. 2; 59) dating from c.1890 when the Ashburnham Tinplate Works received a line. It is a skew-bridge, in rubble; the small (3.00m square) channel has a depressed semicircular brick head.

A similarly constructed channel linking the west end of the West Dock with the northern branch (Fig. 2; 60) was filled in at some period between the 1953 survey and 1969 (Ordnance Survey, 1:2500, Sheet SN 4400, 1969).

8942 - SN 4487 0048 - WORKSHOP

Standing structure; constructed 1953-69; fair condition; Category D

A large, square, two-storey heavy workshop/fitting shop constructed in brick over the eastern half of the former Lead and Silver Works site (PRN 23878), between 1953 (Ordnance Survey, 1:10560 Provisional Edition) and 1969 (Ordnance Survey, 1:2500, Sheet SN 4400, 1969). The interior space was lit and ventilated by multiple openings in all four walls, with concrete surrounds. The building is now disused, and has been stripped of its fittings.

9043 - SN 4416 0040 - ASHBURNHAM TINPLATE WORKS

Standing structures; constructed 1890 onwards; good condition; Category C

The Ashburnham Tinplate Works was commenced by Lord Ashburnham, W. Bevan, D. Griffiths *et al.* in April, 1890, on land west of the Outer Harbour that belonged to the Ashburnham estate and hitherto had not been developed; it worked until December 1896 (Brooke, 1932, 49). The works received its water from the Morlais River, about 5 miles away (Kelly, 1895, 118). It was purchased by Messrs. Thos. Bowen & Co. (Proprietors of Morriston Tinplate Works) in 1898 (*ibid.*). Bowen's son-in-law, A. A. Lewis, assumed management in July 1915 when the works was registered as the 'Ashburnham Tinplate Co.' with £30,000 capital under Lewis, with Messrs. D. L. Williams, F. J. Rees, W. J. Rees and O. L. Harries (*ibid.*). In 1937 there were four mills at the works employing approximately 300 people (Thomas, 1937, 27). The works was acquired by Messrs. the Llanelly Associated Tinplate Companies Ltd. in April 1939 when it ceased to

trade as a separate company (National Monuments Record). Tinplate manufacture ended in the late 1940s and the site was sold to a shellfish packing firm in c.1950.

The works is marked and labelled on the Ordnance Survey 1:2500 Second Edition of 1907, when the buildings had reached their maximum development and the perimeter was as today. A harbourside railway line had been established from the junction at Gors Bridge and led south of the West Dock, alongside the southern canal branch, to both the tinplate works and the Old Harbour Workshops (PRN 36922). The works is depicted unchanged on all maps until the on the Ordnance Survey, 1:2500 Sheet SN 4400 of 1969 when the southern half of the building complex is shown as an empty rectangle suggesting that it was already roofless, and the rail link had been removed. The site is labelled 'Pickle Factory'.

The works has been occupied by L. A. Parsons and Sons, Shellfish Packers, since at least 1979 (National Monuments Record). The site has been partly destroyed. The works offices and stores at the north end of the main block are almost intact. The main, north-south mill building is long, with a shallow gabled roof, and in brickwork from 1890. The northern main facade is of good quality with three tiers of windows, the lower openings having segmental heads, the upper tier - in the gable - comprising five neo-Gothic lancets. There is a shallow, two-storey porch with a segmental-headed entry. To the west a shorter, parallel-gabled block abuts the mill building and may be secondary, but before 1907; it is in red-brick, with segmental-headed openings and a circular opening in the gable apex. To the east is a similar, but detached north-south gabled building with largely blocked openings which is probably contemporary, but only the northern bay survives of a formerly longer building. The remainder of the building complex has been extensively altered, and to the south is in decay and roofless. The site of a former, large chimney stack immediately east of the south end is occupied by a post-1969 large corrugated iron building.

The masonry perimeter wall is from 1890 and contains some Old Red Sandstone. Only the north side was observed which contains several blocked, wide former entries with limestone ashlar quoins. It has been partially breached to the north-east, with red-brick stops, by a post-1969 sewage pumping station (PRN 36947). Some low slag-heaps are visible within the south-east quarter of the perimeter, which here is represented by a fence, but this area has been largely overrun by sand-dunes.

It is doubtful whether any 19th-early 20th century tinplate works fittings etc. have survived.

The remainder of the present buildings appear to be later 20th century, and there is no evidence of rail lines which, in the area observed, have been taken up or tarmacked over.

20371 - SN 4434 0072 - CHAPEL (BAPTIST)

Standing structure; constructed 1865-75; good condition; Category C

Tabernacle Baptist Chapel was established, on the north side of Ashburnham Road (B4311), between 1864 and 1875 when it is listed in Worrall's Directory (Worrall, 1875, 219). It is marked, and labelled on the Ordnance Survey 1:10560 of 1880, and again in 1907 when the adjacent burial ground was also labelled.

The chapel is a four-bayed, north-south structure with a low-pitched gable. Openings are in the hybrid neo-Romanesque/neo-Classical style typical of later 19th century chapel architecture, and are in two tiers; the lower tier of windows being square-headed and the upper tier semicircular-headed with plain, two-light 'tracery'. There is a neo-Classical porch against the south wall, the facade of which is divided into three bays, and the gable is pierced by a circular opening. The exterior is rendered and the roof slated. A plainer gabled annexe to the west had been added by 1880 (Ordnance Survey 1:10560).

20372 - SN 4447 0073 - HALL

Demolished structure; no above-ground evidence; Category E

Former Community Hall on the north side of Ashburnham Road (B4311), first depicted as an east-west rectangle on the Ordnance Survey, 1:2500, Sheet SN 4400 of 1969 but probably a little earlier. It has since been demolished, and the site is now occupied by a car park.

20380 - SN 4489 0067 - CHAPEL (METHODIST)

Standing structure; constructed 1865-75; good condition; Category C

The Wesley Chapel was constructed at the North end of Silver Terrace in 1866, recorded in a date-stone on the porch. It was the 'English Wesleyan Chapel' from the first (Worrall, 1875, 219).

The chapel is all of one build, occupying a small rectangular plot without burials. It is aligned north-south and has three bays defined by external buttressing. The walls are in red brick on limestone sills, and openings are neo-Gothic double-lancets with triangular heads. There is a small porch at the north end. The roof is a slated gable.

23878 - SN 4481 0040 - LEAD AND SILVER WORKS

Partly demolished structures; poor condition; Category D

A silver works had apparently been first established in 1853 by Alexander Parkes, employed by Mason and Elkington at their Copper Works (*see Copper Works, PRN 5339, above*). There Parkes employed a new process and the works was in joint ownership with the Copper Works under Mason & Elkington (Thomas, 1937, 16). A plot is shown and labelled 'Lead Works' in a map of c.1864 in an area that was to be occupied by the north end of the Copper Works, and may in fact denote the site of this silver works. However, production ceased after just a year (Thomas, 1937, 16). Slag from the works, with that from the Copper Works, was tipped onto the sea-front to form a strong embankment (*ibid.*).

In 1864 the present Lead and Silver Smelting Works was commenced by the Burry Port Smelting Co. Ltd., opening in 1865. The plant was traditionally known as the 'Blue Lead works'. It is listed in Worrall's Directory of 1875 (Worrall, 1875, 218, 228) but was not a lasting success and closed down in 1877 (Thomas, 1937, 27). Nevertheless it is shown and labelled on the Ordnance Survey 1:10560 First Edition of 1880, as three east-west blocks of buildings with the present perimeter boundary. The works was integrated with the harbourside rail network, a spur from which exited through the perimeter boundary to run to a spoil-tip east of the Copper Works. It is depicted, unchanged, in 1907 and 1921, but labelled 'dismantled' (Ordnance Survey 1:2500 Second Edition; Ordnance Survey 1:10560, 1921 edition); it was repeatedly shown with an unchanged plan, including the harbour lines, until the Ordnance Survey, 1:10560 Provisional Edition of 1953 by which time the works buildings had been demolished; some of the present buildings are shown on this map, but in outline only. Most of the present buildings had been erected by 1969 (Ordnance Survey, 1:2500, Sheet SN 4400, 1969).

The site is now occupied by a number of buildings mostly constructed between 1953 and 1998; a small, gabled brick office to the north of the site (Fig. 2; 61) appears to be early 20th century. A block of prefabricated concrete offices are from 1953-1969, and are depicted on the Ordnance Survey, 1:2500, Sheet SN 4400 of 1969. To the west are a post-1969 brick building ('Unit A'), a contemporary

prefabricated concrete building ('R. A. Jones Joinery') and brick WC; the site is also shared by 'Rod's Bait & Tackle', and 'KBS Building Supplies'.

However, part of the 1864 eastern perimeter wall survives (Fig. 2; 62) and is of unsquared local rubble, roughly coursed. There are two, wide former entries, the southern with masonry post stops, possibly for a railway line, the northern with brick stops and possibly inserted; a concrete hard stand, of unknown function, lies immediately west of the wall in the present tarmac surface. Furthermore, immediately to the south of the present buildings is an east-west stretch of 3' gauge harbour railway, including points, as first depicted on the Ordnance Survey 1:10560 of 1880 (Fig. 2; 49).

Occupying the east half of the former Lead and Silver Works plot is a large, later 20th century workshop/fitting shop (PRN 8942 - see above).

23879 - SN 4480 0055 - WHITE LEAD WORKS

Standing structures; constructed 1870; good condition; Category C

'Pembrey White Lead Works' was established to the north of the Lead and Silver Works (PRN 23878) in 1870, by Messrs. Risley and Burgmann (Thomas, 1937, 27), the proprietors in 1875 (Worrall, 1875, 218, 230) and 1895 (Kelly, 1895, 117). Along with the Copper Works (PRN 5339) it received its water from a reservoir at Cwm Capel capable of holding 20,000,000 gallons (Kelly, 1895, 118). The works was later taken over by the Cambrian Metal Co. (Thomas, 1937, 27). It was listed in Kelly's Directory of 1901 (Kelly, 1901, 124) but had been dismantled by 1921 (Ordnance Survey, 1:10560, Edition of 1921). It had become a Builders' Yard by 1937 (Thomas, 1937, 27), as it was still in 1969 (Ordnance Survey, 1:2500, Sheet SN 4400, 1969).

The White Lead Works is marked and labelled on the Ordnance Survey 1:10560 First Edition of 1880 at its maximum, and present extent, with the present perimeter boundary. Harbour railway lines are also shown. The buildings are shown unchanged throughout later maps, but by 1969 the railway lines had gone. Two buildings first shown in 1969, one labelled 'The Bungalow', have also gone.

Most of the 1870 buildings have survived, and now house the Harbour Interpretative Centre for the Millennium Coastal Park. The main block is a long, east-west building in red brick, with a low pitched, slate gabled roof. It has been recently renovated and rendered, and few of the original openings survive; the present openings are all square-headed. A similar, low, parallel gabled building adjoins to the north, and is now blind, but some original openings can be seen at the east end, blocked with breeze-block. East of this is a further adjoining red-brick building, which is taller and represents a shop with large, plain entries in the north wall. A parallel range of two, similar buildings adjoin the eastern half of the south wall of the main block.

The perimeter wall to the south, representing the boundary with the Lead and Silver Works (PRN 23878) is from 1870 and in red brick; that to the west has been rebuilt, also in red brick, during the late 20th century.

It is doubtful whether any 19th century lead works fittings etc. have survived, and there is now no visible evidence for any railway lines.

29529 - SN 4462 0077 - RAILWAY FOOTBRIDGE

Standing structure; constructed 1880-1907; good condition; Category B

See Railway Station, PRN 8671.

The then South Wales Railway Co. completed its broad-gauge Swansea to Carmarthen line, via Burry Port, in 1850; it opened in August of that year with Brunel travelling on first train (Nicholson, 1991, 134).

There is a strong local tradition that Brunel constructed the present station footbridge but until the later 19th century the two platforms were linked via a level crossing, with gates, which lay just west of the present footbridge (Thomas, 1937, 6) and is shown on the Ordnance Survey 1:10560 of 1880. The footbridge is first shown on the Ordnance Survey, 1:2500 Second Edition of 1907.

The bridge is an iron lattice structure supported on fluted, cast-iron columns with moulded 'Corinthian' capitals. It was restored by Railtrack in 1994-5 (Western Mail, 10 November 1994).

34065 - SN 4420 0007 - FISH WEIR

Standing structure; post-medieval; good condition; Category D

Post-medieval fish weir in the intertidal zone west of the western breakwater of the Outer Harbour (Page, 1997, 36). It comprises timber and iron uprights, and is probably of relatively recent date but illustrates a further use of the Burry Port harbour area.

34068 - SN 4450 0041 - SLUICE

Standing structure; constructed 1836-9; 19th century fittings; fair-good condition; Category B

Sluice between West Dock and Outer Harbour - see PRN 5341, West Dock

35902 - SN 4457 0014 - FOUR IRON CANAL BOATS

Artefacts; late 19th century; fair-good condition; Category A; Scheduled Ancient Monument SAM Cm268

A group of four iron canal boats of the late 19th century shoring up the eastern breakwater of the Outer Harbour, in varying states of completeness. They are made of wrought iron plates bolted together. Three are barges with pointed ends and one is a tub boat with lightly rounded ends. All have a variety of fixings for towing, holding down tarpaulins etc.

Iron boats were developed during the 19th century and became widespread. Those on South Wales canals had double prows like the Burry Port boats. Tub boats were used on a small number of canals designed specifically for them during the industrial revolution, with inclined planes instead of locks, eg. the Shropshire Canal, the Bude Canal and the Kidwelly & Llanelly Canal. Boats were pulled in trains on the level waterway. These are the only known iron canal boats or tub boats in Wales.

The scheduled area is a strip approximately 80m by 12m just below high water mark at the base of the harbour breakwater. It consists of shingle and stones on which the boats have been fixed with piling and filled with stone.

Scheduled 19 May 1998.

(Description taken from Cadw, 1998)

36921 - SN 4445 0037 - COASTGUARD STATION

Demolished structure; no above-ground evidence; Category E

The former Coastguard Station stood on the west side of the Outer Harbour, on the northern landing stage, which still survives (*see Outer Harbour, PRN 5345, above*).

No mention of a station is made in Trade Directories of 1850 and 1875. The station building was erected as a Reading Room in 1854-5 but became the Coastguard Station when the Reading Room was moved to a new site in 1891 (*see Reading Room, PRN 36933, below*). The label 'Coastguard Station' on the Ordnance Survey, 1:10560 First Edition of 1880 appears to refer to one of the present Harbour Cottages.

The building was a small, rectangular structure with square-headed windows and doors, and a slated gable roof, as shown in early 20th century photographs (Plates 2 and 5) where it carries the sign 'Dock Master's Office'. It was still present by the time of the survey for the Ordnance Survey 1:10560 Provisional Edition of 1953, on which it is labelled, but had gone by 1969 (Ordnance Survey, 1:2500, Sheet SN 4400, 1969).

There is now no visible evidence for the station; however, below-ground evidence may survive beneath the present tarmac surface.

36922 - SN 4440 0038 - HARBOUR HOUSE, COTTAGES AND WORKSHOPS

Standing structures; constructed 1830 onwards; poor condition/rebuilt; Category D

George Bowser acquired a plot on Tywyn Bach, west of the Derwydd River, on land demised from the Ashburnham estate in 1810 and 1816. There, at some period between 1824 (National Library of Wales, Ashburnham Group II, 31/7) and 1830 he established a small manufactory to the west of what was to become the Outer Harbour, north of his existing saltworks (PRN 36925). Called 'Old Harbour Works', the enterprise occupied what are the backyards of what are now the private houses 'Harbour House', 'Schenictady' and 'The Haven', (Carmarthenshire Record Office, CH3). The Old Harbour Works continued manufacturing after Bowser's death in 1835.

The terrace of cottages called 'Harbour Cottages' had been added to the south end of the works at some period prior to 1855 when it was depicted on Carmarthenshire Record Office, Cawdor Maps 222, Plan No. 6.

The Old Harbour Works is shown and labelled 'Workshops' on the Ordnance Survey 1:10560 First Edition of 1880. By 1907 the back yards appear to have been roofed over to form a unit, which is labelled 'Workshops' and supplied with a harbour railway line and a small ancillary building to the west (Ordnance Survey, 1:2500, Second Edition, 1907). The works is depicted unchanged until the Ordnance Survey, 1:10560 Provisional Edition of 1953 which shows 'Harbour House', 'Schenictady' and 'The

Haven' in their present form; the ancillary building was retained until after 1969 (Ordnance Survey, 1:2500, Sheet SN 4400, 1969).

A Harbourmaster's Office is listed in Trade Directories of 1850 onwards (Hunt, 1850, 90; Worrall, 1875, 220) and appears to have been located, until recently, within 'Harbour House', the address given in 1895 and 1901 (Kelly, 1895, 118; Kelly, 1901, 124). 'Harbour House' is in fact labelled 'Harbour Office' in 1907 (Ordnance Survey, 1:2500, Second Edition, 1907).

Harbour Cottages and The Haven have been recently rebuilt as a terrace of two-storey cottages. However, an early 20th century photograph shows Harbour Cottages as a three-storey terrace, with a very plain facade. 'Harbour House' and 'Schenictady' were always two storey cottages in a plain, mid 19th century style with 3-bayed facades, square-headed openings and central passages.

Remains of the former workshops can be seen to the rear of Harbour House. The ancillary building shown in 1969 is now represented by a small, east-west area of brick flooring visible in the grassy verge of the tarmac road that runs along the south side of the West Dock (Fig. 2; 63). The plot is for sale and has already been cut by foundation trenches. To the south, and forming the northern boundary of 'Schenictady', is the remains of a low, gabled east-west masonry building, with a central spine wall, which also formed part of the 19th century workshops (Fig. 2; 64).

36923 - SN 4445 0042 - DOCK OFFICE AND LIMEKILNS

Demolished structures; no above-ground evidence; Category E

A square structure is depicted to the north-west of Harbour House on maps of 1839 (NLW, Parish of Pembrey, 1839), of 1855 (Carmarthenshire Record Office, Cawdor Maps 222), when it is shown with two associated limekilns, and of c.1864 (National Monuments Record, *'Proposed Line of the Kidwelly & Llanelly Canal and Tramroad Company'*, c.1864). The structure is labelled 'Dock Office' on the Ordnance Survey 1:10560 First Edition of 1880, but the limekilns are not shown. It had gone by 1907 (Ordnance Survey, 1:2500, Second Edition, 1907), when its function had probably been taken over by the Coastguard Station (*see PRN 36921 above*).

There is now no visible evidence for the structure or the limekilns; however, below-ground evidence may survive beneath the present tarmac surface.

36924 - SN 4442 0042 - HARBOURMASTER'S OFFICE

Standing structure; constructed 1953-69; good condition; Category D

The current Harbourmaster's Office is first shown on the Ordnance Survey, 1:2500, Sheet SN 4400, 1969 but in its present form appears to be a recent (re)build. It is a small, gabled east-west building in red brick with square openings and synthetic tiles.

36925 - SN 4441 0034 - HARBOUR VIEW HOTEL (FORMER SALTWORKS)

Standing structure; constructed 1896; good condition; Category D

Between 1816 and 1824 George Bowser built a Salt Works, on the site of the later 'Harbour View Hotel', on the land he had acquired from the Ashburnham estate (National Library of Wales, Ashburnham II, 31/7). The works is shown on a map of 1834 (Carmarthenshire Record Office, CH3) as an east-west, double-pile mill-building, with a wing to the south, lying over the eastern branch of the Derwydd River, which was still open and meandered into the sea around the south-western edge of the harbour.

The works is shown, but labelled 'Old Saltworks' on a map of 1855 (Carmarthenshire Record Office, Cawdor Maps 222), suggesting that it was disused. It is not labelled on a map of c.1864 (National Monuments Record, *'Proposed Line of the Kidwelly & Llanelly Canal and Tramroad Company'*, c.1864), which shows the Derwydd River still open. The site is depicted as an open rectangle, presumably representing a roofless (and ruined?) building, on the Ordnance Survey 1:10560 First Edition of 1880.

The works was rebuilt and licensed as the 'Harbour View Hotel' in 1896 (Nicholson, 1991, 130), which was still operating in 1969 but has been a private house since 1971 (*ibid.*).

The present building is little altered from 1896 and is a semi-detached block, now united, of typical late 19th century character, with rear wings. There is no evidence for any pre-1896 fabric. The rubble walls have brick quoins and segmental-headed openings and the roof is a slated gable. A small, late 20th century conservatory has been added to the facade.

36926 - SN 4433 0033 - SANDHURST

Standing structure; constructed 1816-24; good condition; Category D

In addition to, and west of the Salt Works, George Bowser had, by 1824, also built a residence (National Library of Wales, Ashburnham II, 31/7), now called 'Sandhurst' but during the later 19th century called 'Harbour View'. It was vested in Samuel Bowser and George Bowser Jnr. In 1839 (Carmarthenshire Record Office, Bowser 49), and the family were resident in 1860 (Carmarthenshire Record Office, Bowser 67).

It is shown on the Ordnance Survey 1:10560 First Edition of 1880, when it was a hotel, labelled the 'Harbour View Hotel'. This name was transferred to the new hotel in 1896 (see PRN 36925 above) and the house had been renamed 'Sandhurst' by 1907 when it was the residence of another George Bowser (Carmarthenshire Record Office, Bowser 67).

It is a typical early-mid 19th century building in the local farm-house tradition. It is of rubble, with three bays with a central passage, square-headed windows with low sills and yellow-brick chimneys on the end walls; the southern chimney has been removed by a 20th century extension and external stair. There is also a small later porch on the eastern facade, while to the rear (west) are a series of rubble pens/sheds that appear to be contemporary with the main building. The exterior is rendered, but the building has been neglected in recent years.

36927 - 4435 0034 - 'THE BUNGALOW'

Standing structure; constructed 1960s; good condition; Category D

Dwelling east of 'Sandhurst', in 'Swiss chalet' style, rebuilt during the 1960s on the site of a building (probable dwelling) which is marked, but not labelled, on Ordnance Survey maps from 1915 onwards.

36928 - SN 4437 0034 - 'PLAS HYFRYD'

Demolished structure; no above-ground evidence; Category E

Site of dwelling east of 'Sandhurst' which is marked, but not labelled, on Ordnance Survey maps from 1915 until 1953, when the plot is shown as empty. It had been replaced with a dwelling labelled 'Plas Hyfryd' by 1969 (Ordnance Survey, 1:2500, Sheet SN 4400, 1969), but this too has gone.

36929 - SN 4441 0029 - YACHT CLUB

Standing structure; constructed 1970s; good condition; Category D

The present Yacht Club is a square building on the west side of the Outer Harbour, in brickwork and concrete with a low-pitched roof, constructed during the 1970s. It replaced a dwelling marked, but not labelled, on Ordnance Survey maps from 1915 through to 1969 when it was labelled 'Sea View'. The early 20th century masonry perimeter wall has been retained.

(See PRN 36930 for the former Yacht Club)

36930 - SN 4447 0044 - FORMER YACHT CLUB

Demolished structure; earthwork evidence; Category E

Site, immediately north-west of the West Dock sluice, of a rectangular building first shown on the Ordnance Survey, 1:2500, Sheet SN 4400, of 1969 on which it is labelled 'Yacht Club'. The building has now gone, but the site is marked by a square depression and loose sleepers which may not be derived from the building.

36931 - SN 4454 0074 - ASHBURNHAM ROAD OVERBRIDGE

Standing structure; constructed 1880-1907; good condition; Category C

The present B4311 (Ashburnham Road) along the north side of the harbour is marked as a 'proposed new Turnpike Road' on a plan of 1834 (Carms. R. O., CH3), following the line of a trackway depicted in 1825 and 1830. It led eastwards out of the harbour area on the line of the present Station Road, but was truncated by the construction of the South Wales railway line in 1847-50 (*see PRN 8671 above*), and henceforth terminated at the Neptune Buildings (PRN 8674).

There was no link between Ashburnham and Station Roads until the construction of the present road bridge after 1880 and first shown on the Ordnance Survey, 1:2500, Second Edition of 1907. The rubble masonry abutments are original, but the concrete and steel-girder deck carrying the road are from the mid 20th century. A steel-frame footbridge was added to the east side in the later 20th century.

36932 - SN 4458 0073 - BUILDINGS

Demolished structures; no above-ground evidence; Category E

A group of buildings, of unknown nature and function, are marked, but not labelled, between Ashburnham Road (B4311) and the South Wales railway line, immediately south-west of the station footbridge (PRN 29529) on Ordnance Survey maps from 1880 through to 1953. They had gone by 1969 when the site was labelled a Car Park (Ordnance Survey, 1:2500, Sheet SN 4400, 1969).

The site is still a car park but includes a post-1969 WC block in brick and concrete. Evidence for the former buildings may lie beneath the tarmac surface.

36933 - SN 4455 0067 - READING ROOM AND CLUB

Demolished structures; no above-ground evidence; Category E

The Reading Room established by the Burry Port Harbour Co. on the west side of the Outer Harbour in 1854-5 became the Coastguard Station in 1891 (Kelly, 1895, 118), when the Reading Room was moved to a new site (see Coastguard Station, PRN 36921, above).

The new Club and Reading Room were established on a site, given by the Burry Port and Gwendraeth Valley Railway Co., on the south side of Ashburnham Road (B4311) west of the Neptune Buildings (PRN 8674). It was '*open to the captains of ships, employees of the company and local works, and residents of Burry Port as may be admitted as members*' (ibid.) and is shown on the Ordnance Survey 1:2500 Second Edition of 1907.

The building was demolished in 1909 when the site was re-acquired by the railway company for a new spur and passenger station (see *Burry Port and Gwendraeth Valley Railway*, PRN 5349, above). The site lies in an area that was landscaped and grassed-over in the early 1980s, and there is now no visible evidence for any structures; below-ground evidence may however survive.

36934 - SN 4452 0073 - WORKS

Demolished structures; no above-ground evidence; Category E

Group of three small, detached buildings first depicted on the Ordnance Survey, 1:2500, Sheet SN 4400 of 1969 on the north side of Ashburnham Road (B4311) just west of Ashburnham Bridge. They have now gone and the site is a yard plot, currently for sale. There is now no visible evidence for any structures; below-ground evidence may however survive beneath the tarmac surface.

36935 - 4466 0073 - DEPOT/?FORGE

Demolished structures; no above-ground evidence; Category E

A complex of several small buildings north-east of the Neptune Hotel (PRN 8674) first depicted on the Ordnance Survey, 1:10560 First Edition of 1880. It may have been the site of the smith's forge which stood 'near the Neptune Hotel' in the late 19th century (Thomas, 1937, 28). It is marked on all subsequent maps and labelled 'Depot' on the Ordnance Survey, 1:2500, Sheet SN 4400 of 1969.

The buildings have now gone, and there is now no visible evidence for any structures; below-ground evidence may however survive beneath the tarmac surface.

A small, rendered building with a low-pitched roof (now a Gymnasium) occupies the part of the associated yard, which bounded by a 19th century rubble wall; the building apparently lies in a different location than any of the earlier buildings and is probably post-1969.

36936 - SN 4467 0070 - ENGINEERING WORKS

Demolished structure; no above-ground evidence; Category E

Square building immediately north-east of the Neptune Hotel (PRN 8674), first depicted on the Ordnance Survey, 1:2500, Sheet SN 4400 of 1969 and labelled 'Engineering Works'. The building has now gone, and there is now no visible evidence for any structure; below-ground evidence may however survive beneath the tarmac surface.

36937 - SN 4477 0075 - DYFATTY FOOTBRIDGE

Standing structure; constructed 1953-69; good condition; Category D

Footbridge, first shown on the Ordnance Survey, 1:2500, Sheet SN 4400, 1969, on the site where the Cwm Capel colliery tramway, and the later railway, level-crossed the South Wales line (Thomas, 1937, 6). The bridge walkway, parapets and stanchions are all in mid 20th century ironwork. However, in appearance the brick, semicircular-arched piers are rather earlier.

36938 - SN 4472 0073 - SCOUTS HALL

Demolished structure; no above-ground evidence; Category E

Rectangular, east-west building between Nant Dyfatty and the Dyfatty footbridge, first marked and labelled on the Ordnance Survey, 1:2500, Sheet SN 4400 of 1969. The building has now gone, and there is now no visible evidence for any structure; below-ground evidence may however survive beneath the present turf.

36939 - SN 4468 0061 - ENGINE SHED

Demolished structure; no above-ground evidence; Category E

See Burry Port and Gwendraeth Valley Railway, PRN 5349.

A double-bay engine shed is marked and labelled on the Burry Port and Gwendraeth Valley Railway 3' gauge harbourside line, north-east of the East Dock at the junction with the Pwll (former tramway) line, on the Ordnance Survey, 1:10560 First Edition of 1880.

The Ordnance Survey 1:2500 Second Edition of 1907 shows the engine shed as triple-bayed; the surrounding harbour lines had proliferated. The shed is shown, with an unchanged plan, through to 1969 (Ordnance Survey, 1:2500, Sheet SN 4400, 1969).

The building has now gone. The site lies in an area that was landscaped and grassed-over in the early 1980s, and there is now no visible evidence for any structures; below-ground evidence may however survive.

36940 - SN 4464 0043 - WAGON REPAIR SHOP

Demolished structure; no above-ground evidence; Category E

See Burry Port and Gwendraeth Valley Railway, PRN 5349.

A large, rectangular north-south building was first depicted at the terminus of three of the Burry Port and Gwendraeth Valley Railway 3' gauge harbourside lines, immediately north-east of the Outer Harbour, on the Ordnance Survey, 1:2500, Sheet SN 4400, 1969, and labelled 'Wagon Repair Shop'.

The building has now gone. The site lies in an area that was landscaped and grassed-over in the early 1980s, and there is now no visible evidence for any structures; below-ground evidence may however survive.

36941 - SN 4465 0038 - BUILDING

Demolished structure; no above-ground evidence; Category E

A small, single-storey cylindrical masonry building, with a flat roof, a square-headed window and door, and a whitewashed exterior (formerly a lime kiln?), can be seen in undated 19th century photographs (Plates 1 and 6) at the north-east corner of the Outer Harbour quayside. It is not depicted on any of the map sources and its function is unknown. There is now no visible evidence for the structure; however, below-ground evidence may survive beneath the present tarmac surface.

36942 - SN 4481 0071 - STEAM SAW MILLS

Demolished structure; no above-ground evidence; Category E

A steam saw mill was established in 1879 by Messrs. Williams and Powell (Thomas, 1937, 27), north of the English Wesleyan Chapel (PRN 20380) and against the embankment of the South Wales railway line.

It is marked, and labelled 'Steam Saw Mill' on the Ordnance Survey, 1:10560 First Edition of 1880, but was unsuccessful (Thomas, 1937, 27) and had gone by 1907 (Ordnance Survey 1:2500 Second Edition, 1907).

In 1937 a large pond lay 'alongside the site of this works' (Thomas, 1937, 27).

The site lies in an area that was landscaped and grassed-over in the early 1980s, and there is now no visible evidence for any structures; below-ground evidence may however survive.

36943 - SN 4457 0043 - CRANE

Fixture; not *in situ*; good condition; Category C

On the east side of the East Dock sluice (PRN 5340) is an incomplete hydraulic iron crane (Plate 7). A crane had stood near here since at least 1867 but the present crane, made by Lloyd's of Wednesbury, was taken from a goods shed in the 1980s (J. Nicholson, *pers. comm.*). It stands on a concrete block base.

36944 - 4457 0044 - WINCH

Fixture; erected 1904; good condition; Category C

On the east side of the East Dock sluice (PRN 5340) is an iron hydraulic capstan winch made by Tunnett and Walker & Co. of Leeds in 1904 but now incomplete crane (Plate 8); it was used for closing the lock gates and is *in situ*. Its sister winch lies on the opposite, west side of the lock (*see PRN 36945 below*).

36945 - 4453 0044 - WINCH

Fixture; erected 1904; good condition; Category C

On the west side of the East Dock sluice (PRN 5340) is another iron hydraulic capstan winch made by Tunnett and Walker & Co. of Leeds in 1904 but now incomplete crane (Plate 8); it was used for closing the lock gates and is *in situ*. Its sister winch lies on the opposite, east side of the lock (*see PRN 36944 above*).

36946 - GAS LAMP-POST AND BRACKET

Fixture; early 20th century; good condition; Category C

Also on the east side of the East Dock sluice (PRN 5340) is an earlier 20th century concrete lamp-post with an iron gas-lamp bracket - *in situ?* (Plate 9).

36947 - SN 4430 0043 - SEWAGE WORKS

Standing structure; constructed 1970s; good condition; Category D

A small sewage pumping station, constructed after 1969 (Ordnance Survey, 1:2500, Sheet SN 4400, 1969) within the north-east corner of the Ashburnham Tinsplate Works enclosure (PRN 9043) the perimeter wall of which was partially breached, with red-brick stops.

36948 - SN 4435 0042 - BUILDING

Standing structure; constructed 1970s; good condition; Category D

An east-west concrete and glass building south of the West Dock, constructed after 1969 (Ordnance Survey, 1:2500, Sheet SN 4400, 1969) and now 'Burry Port Yacht Services'.

36949 - SN 4442 0046 - WC

Standing structure; constructed 1970s; good condition; Category D

A small brick WC building south of the West Dock, constructed after 1969 (Ordnance Survey, 1:2500, Sheet SN 4400, 1969).

36953 - SN 4400 - PEAT DEPOSITS

Deposits; condition unknown; Category B

Peat deposits up to 3.35m thick, with inherent archaeological potential for all periods, have been recorded in a borehole within 'the Burry Port area' (Page, 1997, 6), presumably within the intertidal zone. No further details are known.

APPENDIX III

THE BOWSERS AND BURRY PORT

George Bowser was the father of four brothers (Carms. R. O., Bowser 30), two of whom, Samuel and Robert, were also engaged in engineering; George Junior and Edwin (Carms. R. O., Bowser 49, Bowser 68), were not closely involved with Burry Port.

The 'Pembrey New Harbour Act' (ie. The Act of Parliament) was about to expire in August 1830 and the passage of a new act was not a foregone conclusion (Carms. R. O., Bowser 31). In a letter to Col. Pemberton, of 3 August, Samuel Bowser criticised the harbour construction, thus - *'The first step in making the harbour ought to have been the formation of a breakwater. Why the weir face with limestone was begun and then abandoned for the prosecution of the sluice which should have been the ulterior proceeding....judging from the way that money was squandered some sinister ends were intended...'*. Samuel Bowser went on to recommend that *'the railroad began by Mr Pinkerton from the Quarry to the site of the new harbour and breakwater'* should be completed, and extended to the quarry on Col. Pemberton's land'. He proposed that *'it will require 250 yards of Breakwater from high Water Mark to the Weir of Limestone, 150 yards of which may be completed.... before winter sets in.'* He claimed that the sluice already erected was not sufficient to scour out the harbour, and recommended that a *'temporary sluice or trunk of wood be erected to scour out the harbour (one similar to what my brother and myself erected for Mr. Gaunt.'* Samuel offered financial assistance the company.

A further letter signed by Samuel Bowser in August 1830 (copy held with the Countryside Commission for Wales Collection) read:

'The Breakwater

It is proposed to form the breakwater on the same principles as the Lower Harbour with the exception, that it is made wholly of Gravel paved with Stone and this New Breakwater is intended to be wholly of Stone the part 70 or 80 yards from High water towards the sea of the Breakwater of the old harbour is made of a Bank of Sand faced with Gravel & then paved with stone. Whether the new Harbour Co. Would wish the first 70 yards to be made in like manner and thereby save 100£ or so it is for them to determine & were left to decide. I should say form it the same as the Old harbour which is found to answer the purpose very well. If it is to be set about immediately 150 yards from High Water towards the Sea may be completed before the Winter sets in if exertion is used. I have proposed on my plan that the Breakwater shall be 220 yards in length 60 yards at the Base at the South end, 16 yards base at the North end. The Top side 8 yards wide with a Double Rail Road laid over the same for the conveyance of the Stones, the paving of the Breakwater to the West & South be made of the layout stones that can be provid(ed) and to be covered with Gravel to be obtained near the Company's Saw pit on Towyn beach.*

The Weir

The present one made of Limestone which is found to stand the action of the Tide better than any other material, it is proposed to open it which is now 12 yards in width by 6 feet in Height or Depth and convey down 8000 stones from the Quarry for the purpose of raising the Weir 12 feet in height by 10 yards in width and cover the same with the Limestone 2 yards in thickness thereby save the expense of conveying more Limestone from the opposite shore of Glamorganshire at an expense of from 2/9 to 3/- per ton.

I recommend raising 2 banks over the Common at Towyn Bach about 6 feet high and & lay about 20 acres of land under water at the most reasonable plan of making a temporary reservoir the one sufficiently capacious to contain the tide is formed by scouring.

The tram road

*This Road as will be seen was commenced by Mr Pinkerton** in 1825. It is now necessary to complete it from Col. Pemberton's Quarry to the Breakwater for the conveyance of the stone why it was not made by Mr Elwell time no doubt will develop & why he paid 1/10d per ton for carriage of Stone by Carts & mend the Road to convey the same about 100 £ more which has cost on the quarterly already round about 1/- per Ton. Perhaps he may give a reason if he had known any thing about what he was then undertaking his judgement was ill applied if he thought of joining the Breakwater by stone taken down by carts when the hauling can be done by wagons at 6d per ton.*

Augt. 21st 1830 Samuel Bowser

Under that Read. I have provided for the Sum of 500 £ naturally supposing that accidents would happen by Storms, or otherwise and Beer to men for any Extra work, as the Company's Surveyor would be there he would be able to see what extra work was necessary but if Such Sum or any part of it was not Expended then the Company are not to be call'd upon to pay it.

Casing the Western Side of the Breakwater

Immediately the Sluice begins to work, this work must be commenced upon depositing Faggotts cover'd with Stones about a Yard in thickness similar to the work done on the old Harbour and extending from the Base of the Breakwater to the Bottom of the Scouring'

*Sluice Pit. I have proposed that it should be 80 yards each way on the Surface the present depth to the Foundation is 24 feet & excavated 30 yards Square in the Bottom to give Space for the Sluice walls and Bank. It is for the Consideration of the Company whether they will endeavour to save that sum mentioned for Excavation 130 £ which is considerable and wash away their Surface Sand by Back Water and Random Ponds the Banks of to be made of Sand in the way Mr Gaunt*** opened his at about 200 £ expense, were I left to act as I thought fit I would attempt to get the Sluice down in a Similar way to the one followed by Mr Gaunt, the Erection of the Sluice Walls. Timber etc. will require further explanation if commenced upon by me.'*

(Following sentence crossed out and illegible)

* ie. Pembrey Old Harbour

** engineer for the Kidwelly & Llanelly Canal Co., built the well-known aqueduct over the Gwendraeth Fawr near Trimsaran.

*** ie. Thomas Gaunt, the industrialist behind Pembrey Old Harbour with George Bowser.

On 26 March 1832 Samuel wrote to John Wedge undertaking to pay his father's dues, wharfage and tonnage 'for all the coal to the New Pembrey Harbour Co.' (Carms. R. O., Bowser 133). Wedge replied that he would show the letter to Col. Pemberton and thanked him for his offer of assistance.

George Senior had a turbulent relationship with the 'Pembrey New Harbour Co.', a syndicate that was apparently anonymous but within which the local landowner and industrialist Col. Christopher Pemberton appears to have played a leading role (Carms. R. O., Bowser 31, Bowser 33, Bowser 61). A strip of land, lying alongside the west bank of the Derwydd river, was demised to George Bowser by the Ashburnham estate in 1810. Here he had established a salt works, lying over the Derwydd on the site of the present 'Harbour View' and a residence, the present 'Sandhurst', by 1824 (National Library of Wales, Ashburnham 31/7). The New Harbour encroached on this land, and litigation between Ashburnham, Bowser and the New Harbour Co. followed.

The New Harbour Co. passed the harbour as complete in the quarter sessions of 1832, and succeeded in September in binding George Bowser to ship all his Cwm Capel coal through the port (ibid.). Stockpiles apparently built up on the harbourside but 'Agents of the New Harbour Co., under the influence of Col.

Pemberton, would not suffer the vessels to enter the harbour'. The company allegedly broke up the roads to Cwm Capel and 'oppressed' George Bowser, 'the effect being so fatal that he was deprived of the sum of £1500 for his saltworks'.

Again, in January 1835, George Bowser complained that the company had, by its *'new important works, stopped our shipment of coals... they have no power under the Act to injure property without compensation'* (Carms. R. O., Bowser 46).

By June 1835, the company had changed its name to the 'Burry Port Company' (Carms. R. O., Bowser 47). Bowser was still seeking compensation, but liability was denied by Samuel Woods, Secretary to the Directors (ibid.).

Samuel was always something of a loose cannon. By September 1835 he became involved in a wrangle with his father over Cwm Capel Colliery (Carms. R. O., Bowser 49) and was later to criticise him openly, to Col. Pemberton, for having *'possessed himself of everything he could lay his hands on'* (Carms. R. O., Bowser 61). George Bowser Senior died shortly afterwards and on 20 October 1835 the Bowser's solicitor, Abraham Meredith of Bristol, served notice on Samuel ordering him to *'quit the premises of Kinross Colliery (ie. Cwm Capel)' and 'not to interfere or meddle with the colliery, or any of the affairs, estate or property of the late George Bowser, deceased, at Kinross or elsewhere'* (Carms. R. O., Bowser 50).

Samuel was also still openly criticising the new harbour. In a letter to his brother Robert on 22 December 1835 (Carms. R. O., Bowser 53) he berated the *'management of this ill-fated concern'*. The contents of a previous communication in which *'I told you that the wall they were building up the second time would come down and many more with it'* had become known to the new harbour engineer, James Green, who had *'threatened my life'*. His main concern in this communication appears to have been the method of scouring the harbour which he felt would *'injure the harbour outside'*. Green himself was dismissed by the Kidwelly & Llanelly Canal Co. in early 1836 for his failures on the canal (Wakelin, n.d., 2).

Robert Bowser also submitted alternative specifications for the harbour. Below is a transcript of specifications, undated, signed by Robert Bowser (copy held with the Countryside Commission for Wales Collection):

'a,a,a, The Ebb Tide from Llanelly is heavily Charged with Sand and runs at the rate of 2½ miles per hour, and in crossing the mouth of the Harbour, meets with the Ebb Tide out of the same. E E, which is almost a Still Body of Water, The consequence is that in the Spot where the Two Waters Intersect each other a Deposit of Sand from the Ebb a a Takes Place which is the Principal cause of the accumulation of Sand B B If openings are made through the Western Weir as Marked C C It will Draw the Ebbs a a and E E through the same By which Means the Strong current thereof will effectually Scour away the accumulation of Sand B B. It is Proposed that a Portion of the Stones taken out of C C shall be Placed as a new weir D D which will act as a guide to the Ebbs a a and E E and will also have the same effect to all extent, and Purposes of Preventing the Sand from coming into the Harbour from the Westward as they had Previous to their removal from E, E,

It is Proposed to leave Eighteen Inches or Two feet of the lowest Part of the Stones in C, C as they are in their Present situation To act as a guide for the Scour from the Harbour as it is not advisable to Permit the Same to turn through the new Channel C C.

Robert Bowser'

N. B. The extent necessary to carry out the new Weir D D must be determined by circumstances.