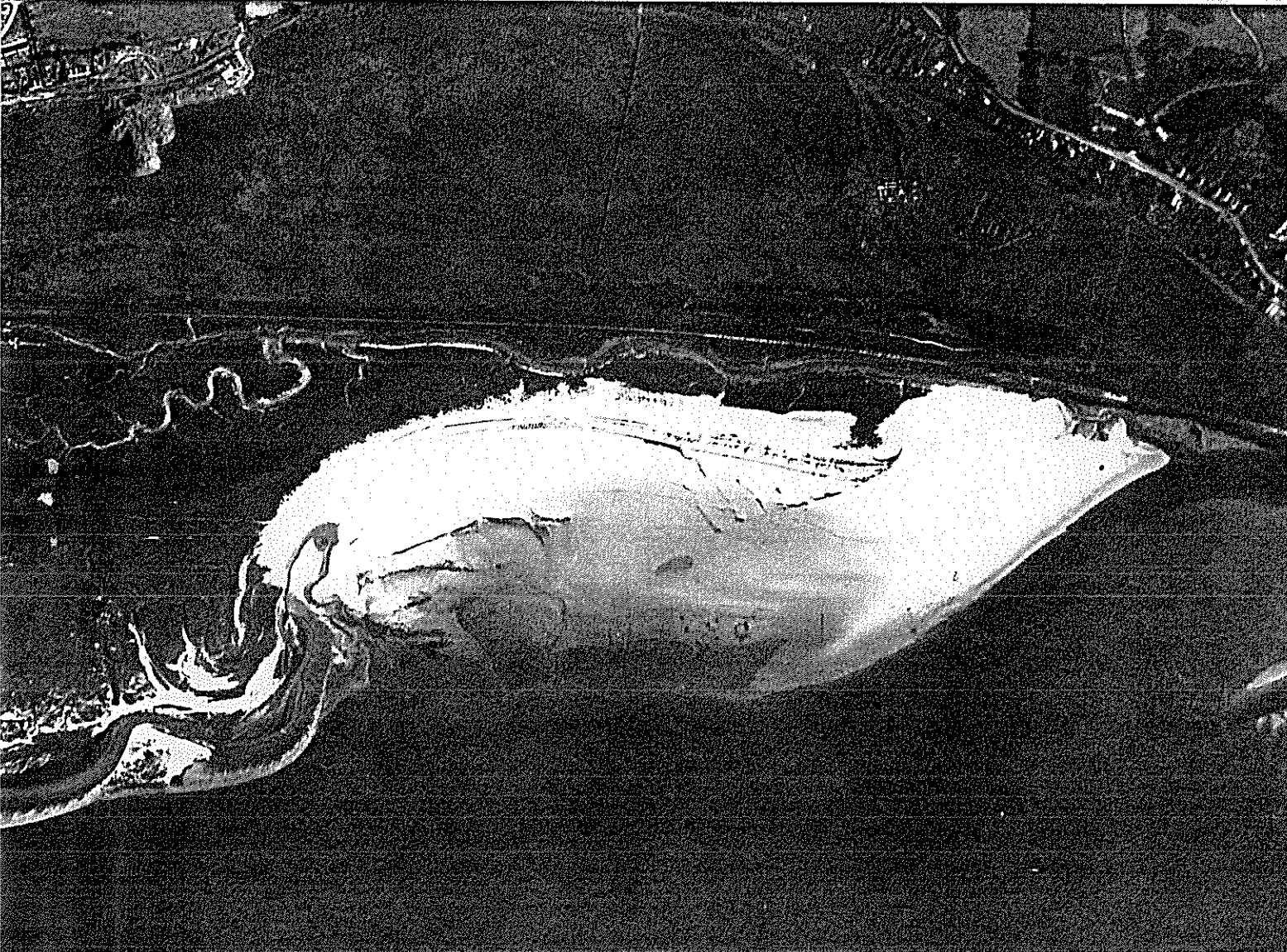


LLANELLI SEWAGE TREATMENT WORKS
Archaeological Assessment
A Report by Dyfed Archaeological Trust Ltd.

for
Wallace Evans Ltd, July 1993



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LLANELLI SEWAGE TREATMENT WORKS & PUMPING MAINS.

Introduction

The two salient facts about the history and archaeology of settlement, landuse and reclamation from the sea of the low-lying coastal land west, south and east of Llanelli are these:

1: The process of reclamation was a long and complex one, beginning in the early Middle Ages. It produced a distinctive pattern of settlements on localised patches of higher ground, with arable cultivation in open fields, surrounded by meadows and large areas of saltmarsh used for common grazing. Overlaying, but never, until the late 20th century, obliterating this agricultural pattern, was the exploitation of coal. The coal industry stimulated the development of shipping places in the creeks and pills, and the construction of harbours, canals and tramways. The 19th century saw this system of transport replaced by railways and docks and today by a new system of roads.

2 The decline of Llanelli's coal and metal industries, and changes in farming have led to widescale redevelopment over much of the coastal area. Much of this development has led to a complete remodelling of the existing landform and the consequent total removal of earlier features. There has been little or no detailed recording of the historic landscape as such in these areas, no 'preservation by record'.

However, due to the existence of coal below these lands, the historical documentary record, in the form of deeds, maps and rentals etc, is extraordinarily rich. It is possible to reconstruct the historic landscapes from such records. So although areas of intact historic landscapes (like Pen-y-Bryn) are now isolated fragments, they can and should be recorded in detail before major redevelopment, because there is a meaningful context for the information.

Brief for the Archaeological Assessment

This was drawn up by the Curatorial Section of Dyfed Archaeological Trust and accepted by Wallace Evans Ltd (see section 5.10 in their Non-Technical Summary of the Environmental Assessment undertaken for Dwr Cymru. The Assessment involved a 'desk-top' study and a rapid field survey of the route. The principal sources of information used are listed in Appendix 1 to this Assessment.

The Assessment is divided into two parts, firstly the pipeline route from Burry Port to the proposed STW at Pen-y-Bryn and secondly the works themselves and the pipeline route to the south east.

MAIN PUMPING ROUTES - BURRY PORT TO LLANELLI STW
(Maps 1, 2 & 3)

Burry Port STW to Bynea

Much of this route cuts through land reclaimed from the sea within the last 200 years. However there are areas which are of particular significance in terms of maritime and industrial archaeological history. As noted in previous comments on this scheme a minimum archaeological response is considered appropriate here, taking the form of an archaeological watching brief of selected stretches,:

1. Creeks and Pills - early shipping places

We note that the line to be taken will be alongside the existing railway line. The construction of the embankment for this line in the 1850s finally closed off from the sea a number of tidal pills and creeks. These were used as shipping places - sheltered anchorages for shipping where coal could be loaded, and there are records of quays and wharves and boat-building slips. The former positions of these will need to be plotted at a larger scale than the indication given on the accompanying annotated map.

It is recommended that an archaeological watching brief be maintained on the areas adjacent to and across former tidal pills to record any features, structures or finds of maritime archaeological significance

2. Llanelli

It is not possible to be precise about the course of the line through areas of former industrial importance (brickworks, metal works, dockside, ropewalks etc), without a detailed plan at 1:2500.

It is recommended that industrial archaeological information (sites of former works etc) be plotted onto 1:2500 pipeline working plans. A recommendation can then be made by Dyfed Archaeological Trust, after discussion with other bodies, as to where the archaeological watching brief should be targetted within the built up area of Llanelli

3. East of Llanelli

We note that this again runs alongside former and existing railway lines. Both these lines were laid across a landscape almost wholly reclaimed from the sea. They intersect and abut at various points earlier sea defences, tracks, pills, and creeks.

It is recommended that the above features be plotted onto 1:2500 pipeline working plans. The areas of concern can be noted by scheme engineers and further recommendations made by the curatorial section of Dyfed Archaeological Trust on where archaeological watching brief should be targetted.

Penbryn Farm:

Existing Structures

The ruined farm house and farm buildings on site are unlikely to be any earlier than the late 18th century and 19th century. However they will all be cleared away to construct the new STW.

It is recommended that a record be made of the buildings and structures on site. This should be to the standards recommended by the Royal Commission for Ancient and Historic Buildings (Wales) *Recording Historic Buildings: A descriptive Specification*, taking the form of photographs, plans and brief written descriptions. Existing colour photographs held by Wallace Evans can be utilised for part of this record.

There has not been time for a detailed search of all the early documentation, particularly deeds and rentals. However an Estate Plan Map of Penbryn of 1761 shows the Farm and its fields with field names and landuse. By that date it was evidently a valuable Farm and the Map shows a now vanished 3 chimneyed Farmhouse of some architectural pretension.

The narrow rectangular shape of the fields to the northeast of the Farm are similar to a block of strip fields formerly belonging to Bryn Carnarfon. The shape and size of these fields, together with the intermixture of ownership evident in late 18th century and early 19th century sources (such as the Tithe Map and Schedule of 1841) is telling evidence of the former existence of a medieval open field system of cultivation.

The origins of Penbryn Farm

There is no archaeological record in terms of finds or features of prehistoric occupation on the coastal areas south east of Llanelli. The quaternary history of the landscape (see D. Q. Bowen, *The Llanelli Landscape*, Llanelli Borough Council 1980) allows the possibility of prehistoric occupation on the glacially deposited moraines of localized high ground (i.e Pen-y-Bryn). Any archaeological response however in the context of the STW and pipelines scheme would be restricted to the recording of chance finds during a watching brief.

There are two possible 'models' for the origins of the Farm itself, archaeological evidence for which may be exposed and destroyed during construction works for the STW.

(i) The existence of a medieval system of arable cultivation over Pen-y-Bryn Hill suggests some settlement there, part of the ancient Manor of Berwick. This was an established native Welsh territorial and administrative unit adopted by the incoming Anglo-Norman lords of the 12th century. The settlement, perhaps a small hamlet, might be sited at any of the 3 farms now occupying the hill: Dyffryn, Pen-y-Bryn or Bryn Carnarfon.

(ii) The Farm might represent an extension of settlement and exploitation of marshland out from the core medieval areas in the 16th and 17th centuries. During this period leading gentry, notably the Vaughans, Lords of the manor, were interested in

exploiting coal and in increasing their rentals from farmland.

It is recommended that the archaeological response to the construction of the STW at Pen-y-Bryn should be principally directed to recording any features or layers which would provide information relevant to the above problems. This should involve clearing the site of existing buildings and a topsoil strip of the site before excavation for the works begins, allowing an opportunity to inspect and record the sites of the demolished buildings for any earlier foundations. Detailed specifications for this work can be drawn up by the Curatorial Section of DAT..

Sea Defences, Coal Mining and Canals

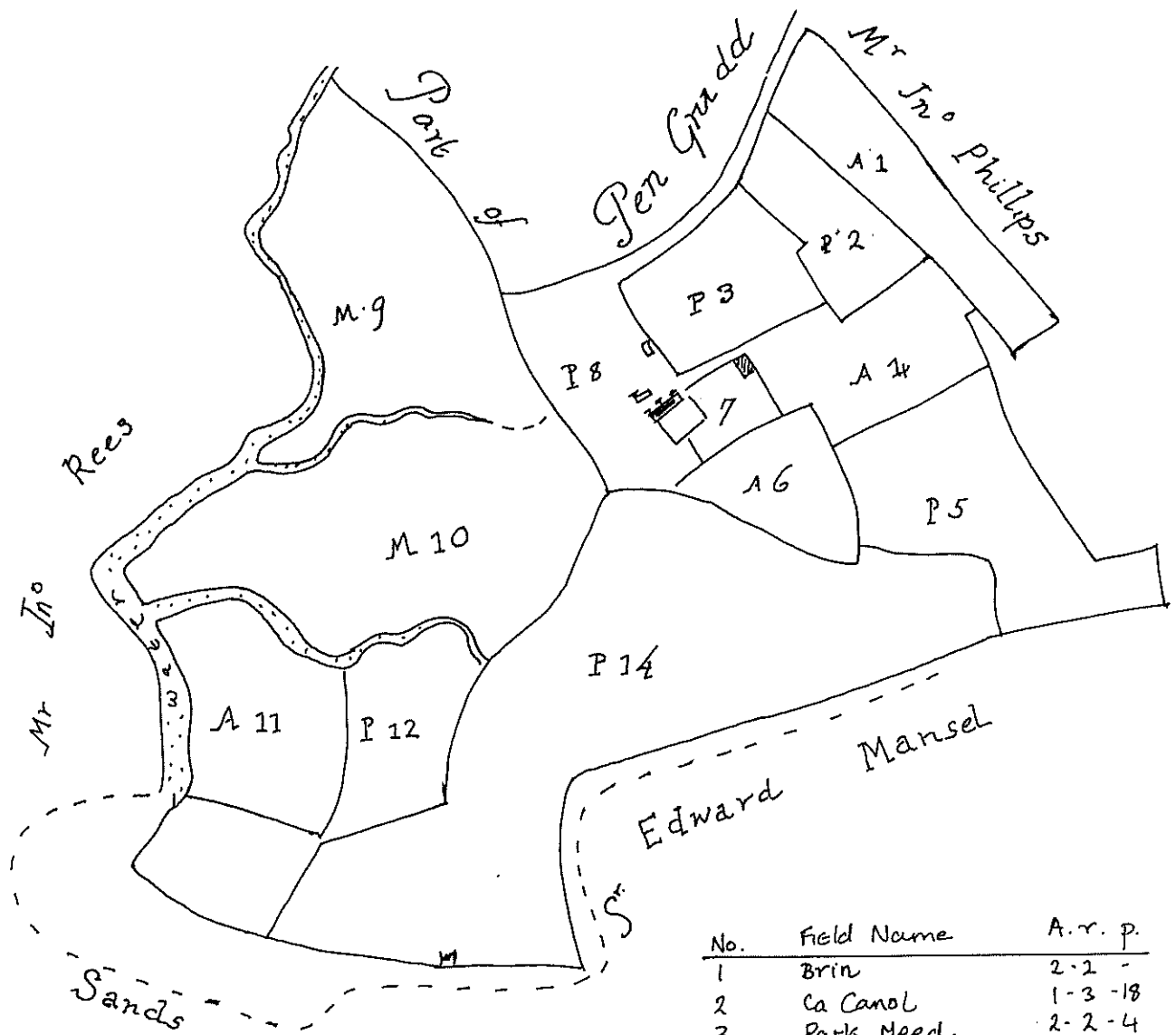
In this section the archaeological implications of the STW at Pen-y-Bryn are grouped together with the construction of pipeline(s) in the area to the east and west of the site.

The final enclosure of 'Morfa Berwig' was brought about by the 1810 Enclosure Award. A continuous sea wall was built east from the mouth of the Dafen to 'Pill y Ceven' on the south west side of Spitty bank. Before this date embanking and reclamation of former saltmarshes had proceeded by enclosure outwards from the slightly higher ground. In between there remained large areas of *morfeydd* or saltmarshes, used as common pasture, criss-crossed by numerous tracks and separated by tidal creeks and pills. Some of the early tracks were evidently along lengths of seabanks. The angular changes on the track leading to Pen-y-Bryn might indicate such a combined track and bank/ditch around enclosed land. To judge from the pipeline routes shown at 1:50,000 scale, this track will form the approach route of the pipeline to the Pen-y-Bryn works after it has followed the line of the railway.

It is recommended that there should therefore be an archaeological watching brief of this stretch to record any evidence of early enclosure banks and tracks.

The earliest record of coal mining at the Bryn Carnarfon site is in 1794 when John Vaughan leased coal to Revd. David Hughes of Ffosfach and Joseph Jones of Bryn Carnarvon. The colliery was sited on and to the south of the Carnarfon Fault. It was never easy to work although exolited through the 19th century and finally abandoned in 1927. The surviving above ground traces of this industrial activity, notably the remains of the colliery stack, are not affected by the STW & pipelines. However on p. vi of the Non-Technical Summary of the Environmental Assessment, Geotechnics and Geology, two mine shafts are noted within the study area, also the possibility of unrecorded shafts. This latter possibility is substantiated by a rapid search of the documentary sources, nortably mid 19th C. Stepney leases of coal below Pen Bryn.

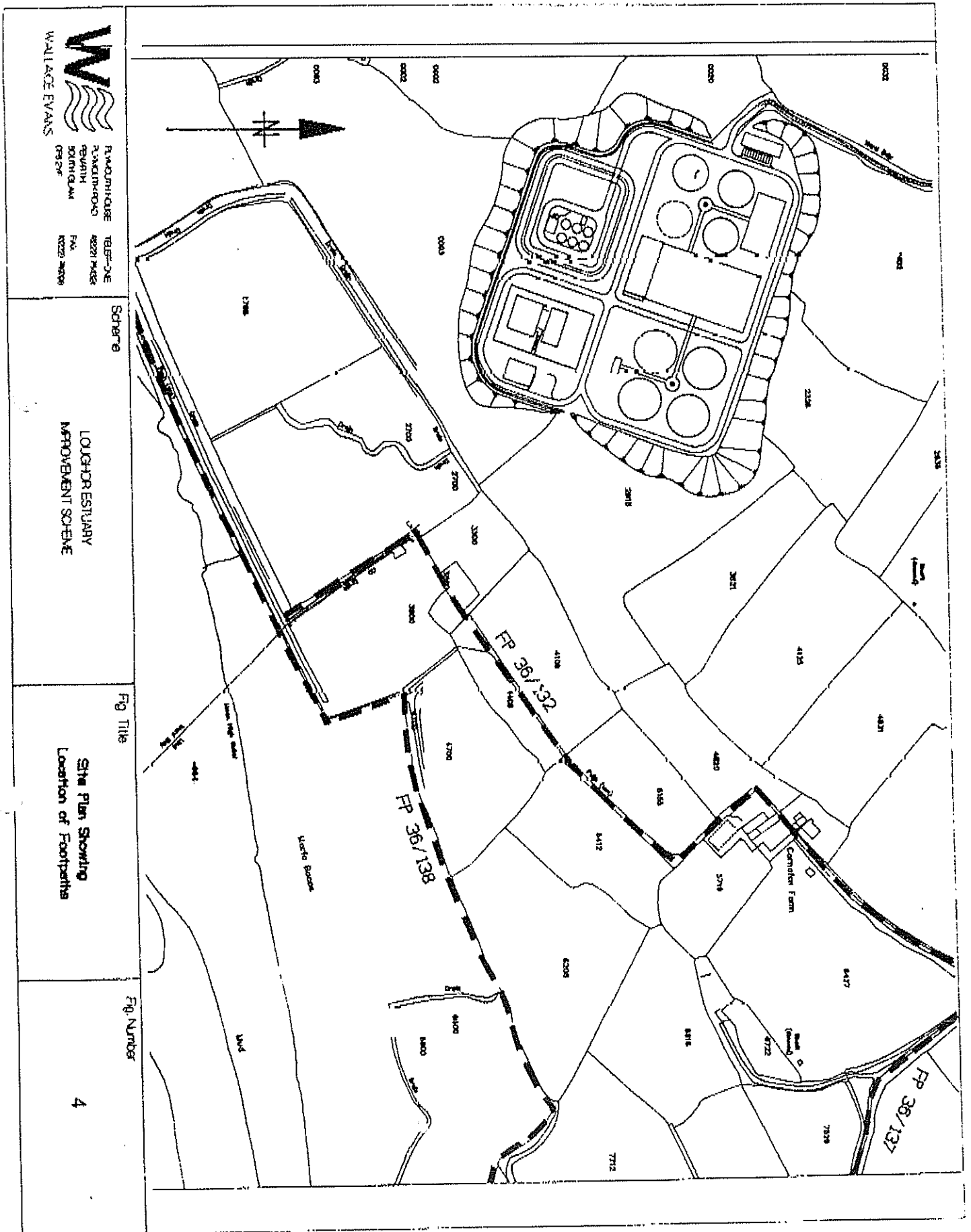
It is recommendaed that any surface evidence of former coal workings exposed during construction work be recorded as part of the area's mining history.



"A Map of Pen-y-Bryn Farm
in p'h Llanelly oc. by late
Francis Wm, under tenant to
M^r Ed. Dalton."

No.	Field Name	A. r. p.
1	Brin	2.2 -
2	Ca Canol	1.3 - 18
3	Park Need	2.2 - 4
4	Ca Skybor	2.2 - 34
5	Erwch	4.2 - 16
6	Park fa	1.3 - 00
7	Grofft	1.3 - 24
8	Ca Lloi	2.3 - 04
9	Han yr yscall	7 - 0 - 14
10	Han y Bont & hays call	9 - 1 - 36
11	Han Fawr	3 - 3 - 31
12	Ca Trwgelly	2 - 1 - 24
13	Han lās	1 - 3 - 11
14	Han Fwning	15 - 2 - 02
15	Without the Bulwark	64 - 3 - 14

Copy of Estate Map of Pen Bryn, from William Chambers' Mapbook, 1760
Carmarthen Record Office, Stepney Collection SE 72.



The Baccas Canal.

The 1794 lease mentioned above also permitted Hughes and Jones to make " . . a navigable cut or Canal from the said collieries through and over the Common or Waste called Baccas to and as far as the River called Loughor. . " The coal was transported from the pit head by barges to a tidal pill, Pill y Ceven, leading to Townsend's Pill where there was a shipping place, allowing it to be loaded onto sea going brigs.

The course of the Bacas Canal survives almost intact as a silted up, but still considerable, length of ditch, now inside the sea defences. Many of the other early canals on the coastal plain have been destroyed, giving a high value to what survives.

It is recommended that care be taken in the construction of the pipeline to minimise damage to the Baccas canal and its ancilliary features. A detailed record should be made at the points where the canal is sectioned for pipeline(s)

Map of the Baccas Canal, reproduced from M. Symons, *Coal Mining in the Llanelli Area, Vol. 1: 16th century to 1829*, Llanelli Borough Council, 1979. p. 190

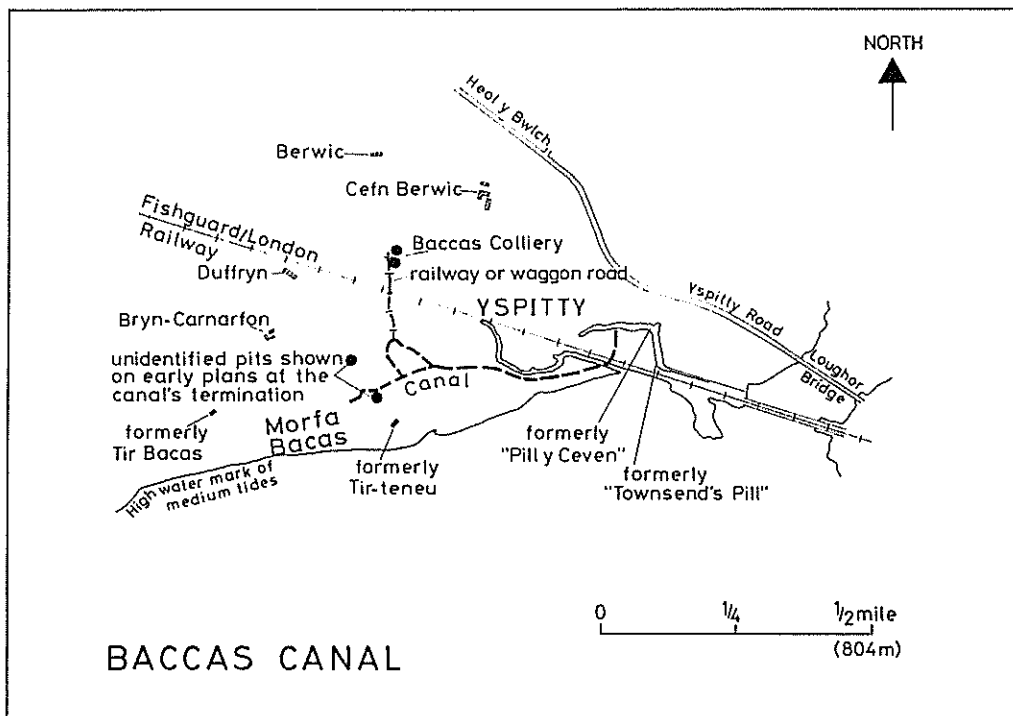


Fig. 24

Appendix 1

Principle primary sources:

Dyfed Archaeological Trust Sites and Monuments Record.
Vertical Air Photographs, RAF sorties, 1946
Selected Vertical colour Air Photographs, Geonex 1992 Survey of Wales for CCW, 1:2500 scale.

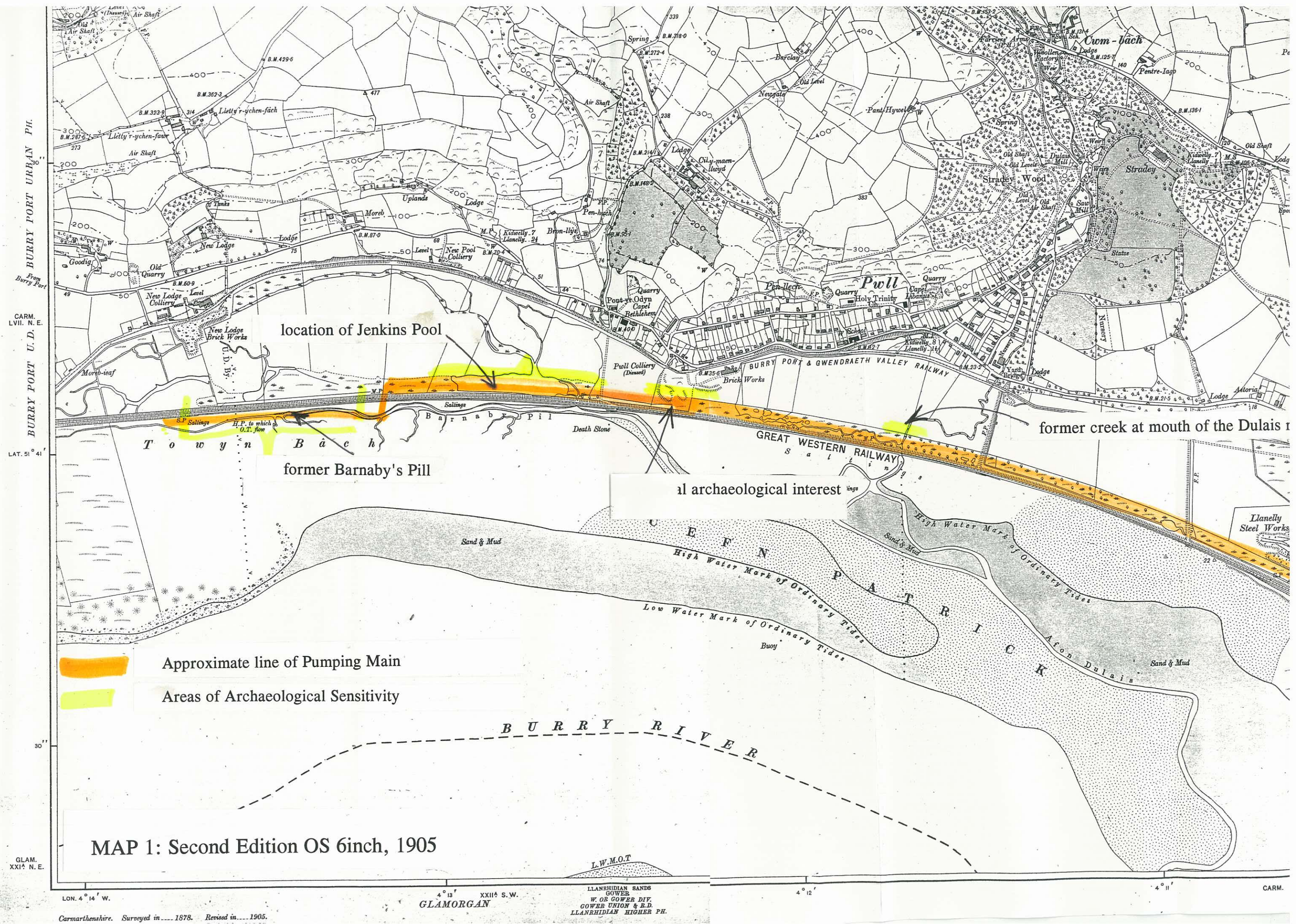
Past Land Use Survey of the Coastal Area South east of Llanelli, Commissioned by The Countryside Council for Wales from Dyfed Archaeological Trust, March 1993.

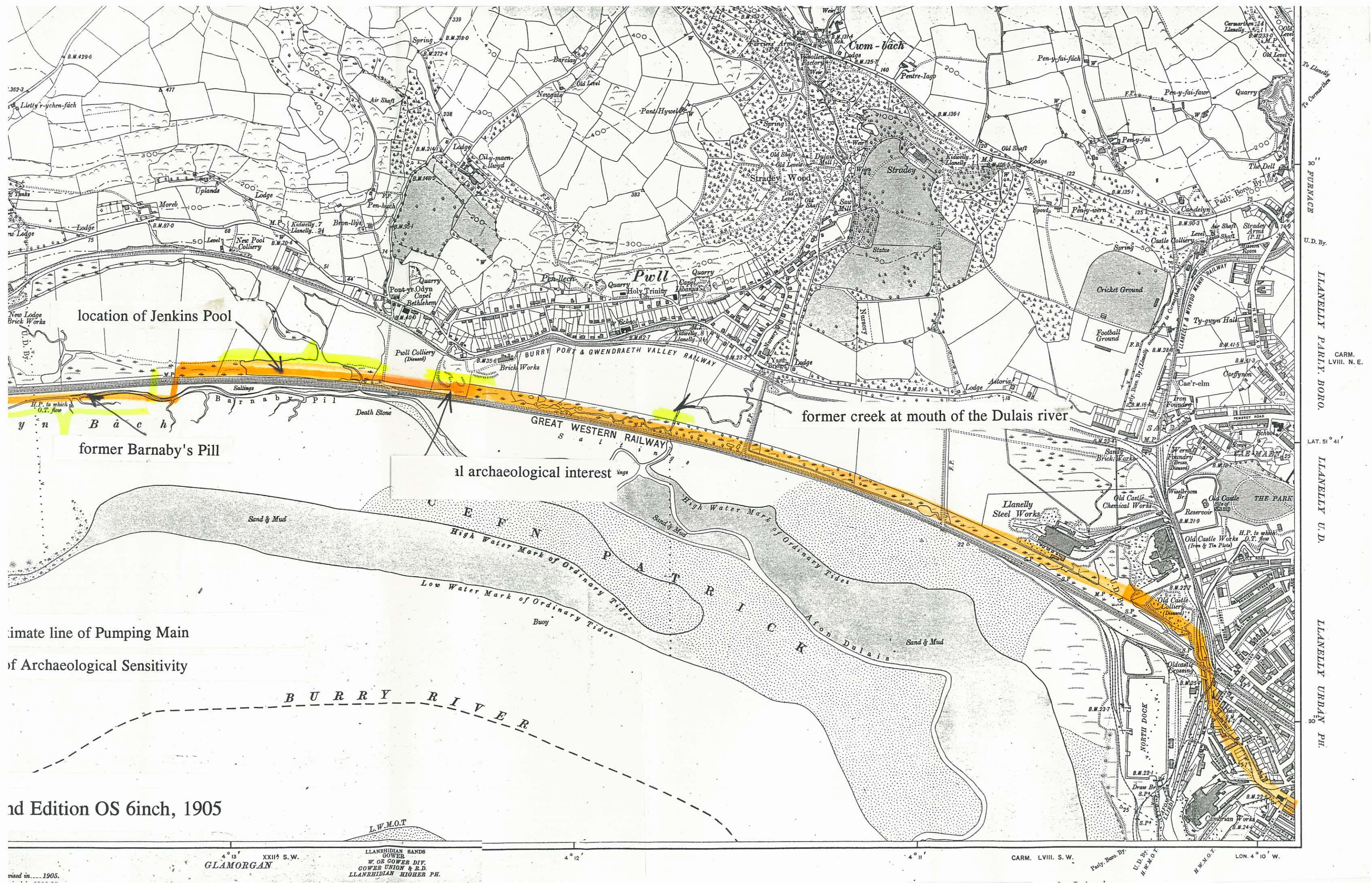
Historic cartographic & documentary sources:

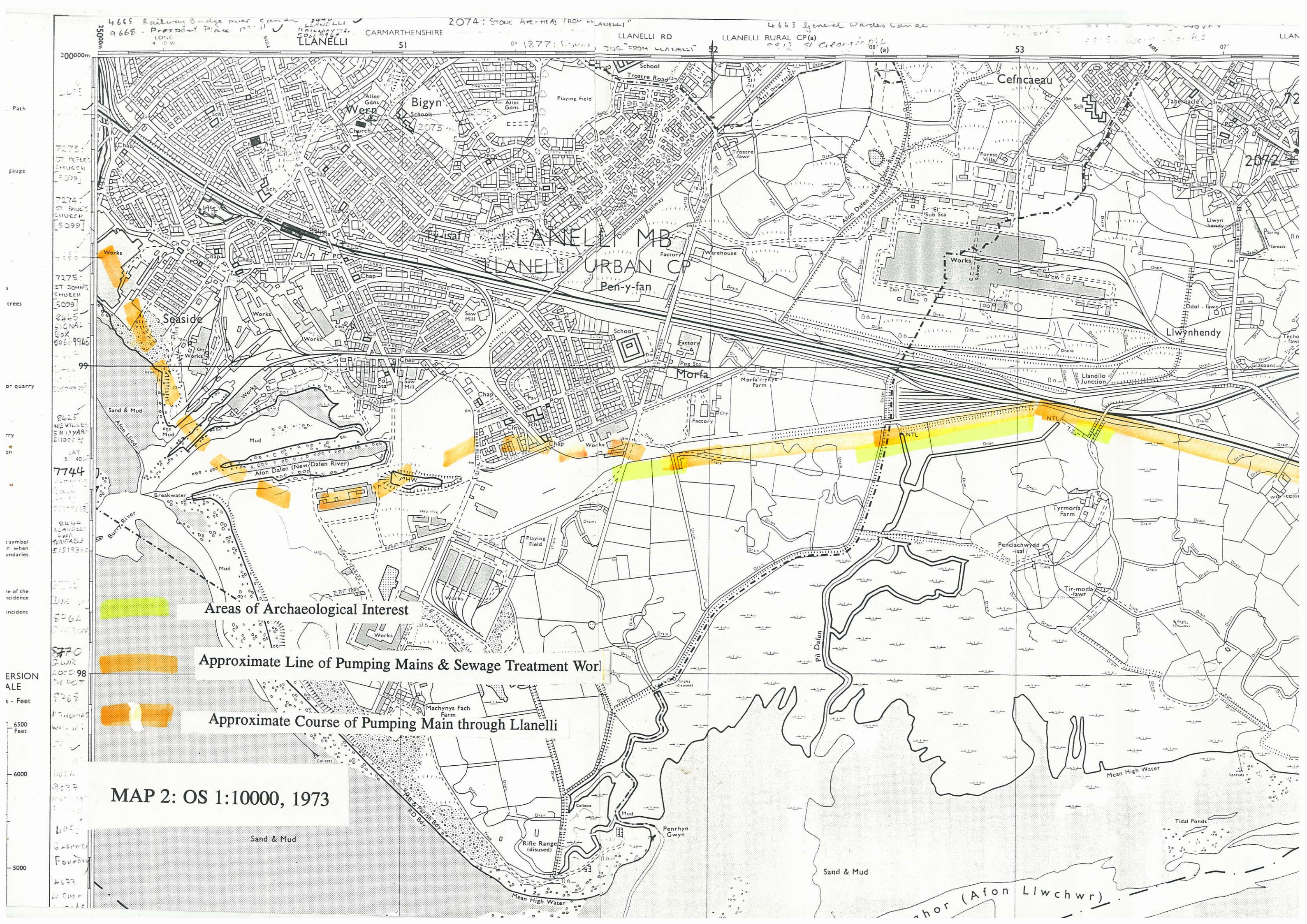
1761 Map of Pen-y-Bryn Farm, William Chambers' Map Book, Stepney Colln. Carmarthen Record Office
Map of South Wales, Emmanuel Bowen 1740
Chart of South Wales, Murdoch Mackenzie, 1775
Chart of Burry bar and Harbour, John Wedge, 1808
Chart of the Burry or Llanelly Inlet, H.M. Denham, 1830
Ordnance Surveyors' drawings, 2" to the mile, 1813
First Edition OS one inch to the mile, 1840.
Plan of the Sea Shore and lands adjacent, pembrey and Llanelli parishes, surveyed by T. Spowith for her majesties' Commissioners of Woods and Forests, 1845, CRO Stepney P15.
First and Second Edition OS 6 inch and 1:2500 maps,

Principal Secondary Sources:

M. V. Symons, *Coal Mining in the Llanelli Area: Vol.1: 16th Century to 1829*, Llanelli Borough Council, 1979.
D. Q. Bowen, *The Llanelli Landscape*, Llanelli Borough Council, 1980.
John A. Nicholson, *Pembrey and Burry Port: Their harbours, Shipwrecks and Looters*, Llanelli Borough Council.





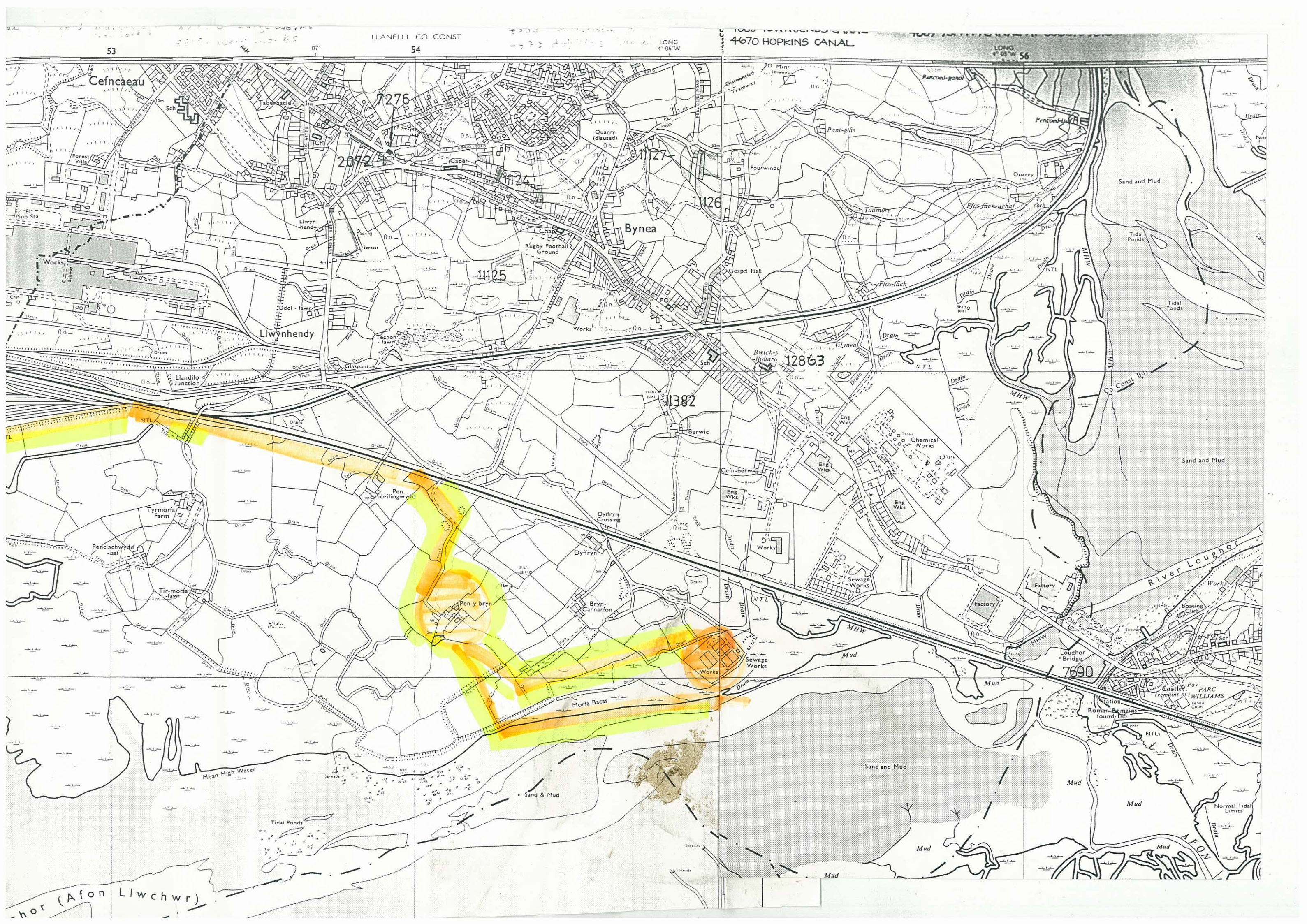


MAP 2: OS 1:10000, 1973

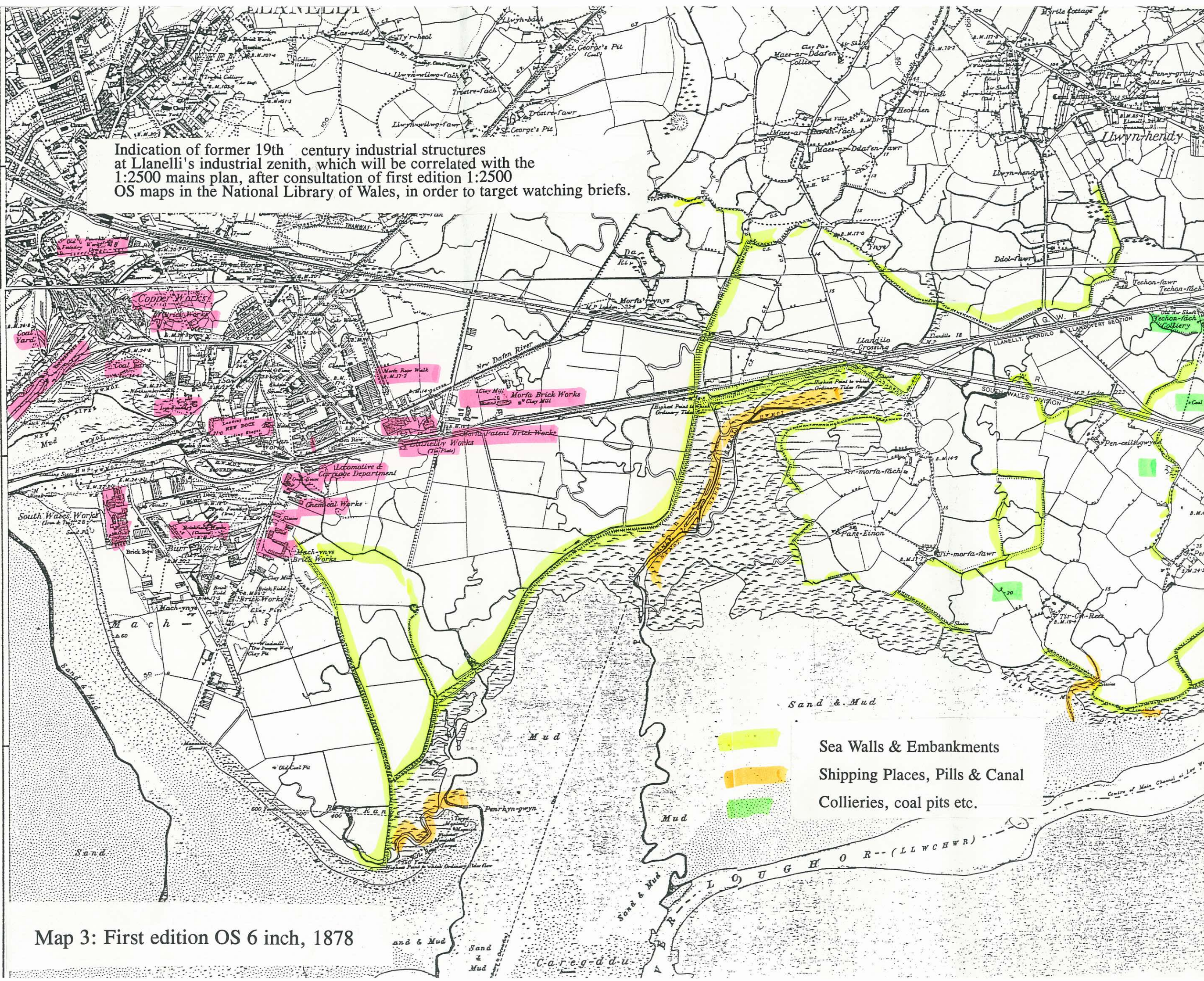
Areas of Archaeological Interest

Approximate Line of Pumping Mains & Sewage Treatment Works

Approximate Course of Pumping Main through Llanelli



Indication of former 19th century industrial structures at Llanelli's industrial zenith, which will be correlated with the 1:2500 mains plan, after consultation of first edition 1:2500 OS maps in the National Library of Wales, in order to target watching briefs.



Map 3: First edition OS 6 inch, 1878

