

AUG 2001 (-)



# **BROADMOOR SEWERAGE SCHEME, PEMBROKESHIRE**

**AN ARCHAEOLOGICAL ASSESSMENT,  
AUGUST 2001**



A R C H A E O L O G

**CAMBRIA**

A R C H A E O L O G Y

Report No. 2001/43

Report Prepared for:  
THOMAS, MORGAN AND ASSOCIATES

CAMBRIA ARCHAEOLOGY

REPORT NO. 2001/43  
PROJECT RECORD NO. 43289

AUGUST 2001

BROADMOOR SEWERAGE SCHEME,  
PEMBROKESHIRE

AN ARCHAEOLOGICAL ASSESSMENT, AUGUST 2001

By

Neil Ludlow

*Cambria Archaeology is the marketing name of the Dyfed Archaeological Trust Limited.*

*The report has been prepared for the specific use of the client. The Dyfed Archaeological Trust Ltd can accept no responsibility for its use by any other person or persons who may read it or rely on the information it contains.*

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

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

*The Trust is both a Limited Company (No. 1198990) and a Registered Charity (No. 504616)*  
CADEIRYDD CHAIRMAN: B.C.BURNHAM, MA PHD FSA MIFA. CYFARWYDDWR DIRECTOR: E G HUGHES BA MIFA

**BROADMOOR SEWERAGE SCHEME,  
PEMBROKESHIRE**

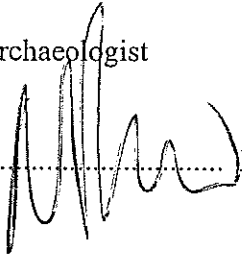
**AN ARCHAEOLOGICAL ASSESSMENT, AUGUST 2001**

**REPORT NUMBER 200143**

**AUGUST 2001**

This report has been prepared by Neil Ludlow

Position Archaeologist

Signature  Date 14/08/01

This report has been checked and approved by Ken Murphy on behalf of Cambria Archaeology,  
Dyfed Archaeological Trust Ltd.

Position Deputy Director

Signature  Date 14.08.01

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

# **BROADMOOR SEWERAGE SCHEME, PEMBROKESHIRE**

## **AN ARCHAEOLOGICAL ASSESSMENT, AUGUST 2001**

**Project Record No. 43289**

### **CONTENTS**

#### **1.0 INTRODUCTION**

1.1	Development proposals and brief	3
1.2	Project objectives	3
1.3	Project methodology	3
1.4	Categorisation of archaeological sites and features	4

#### **2.0 RESULTS OF ASSESSMENT**

2.1	Summary of the archaeological resource	7
2.2	Conclusions and recommendations	9
2.3	Acknowledgements	11
2.4	Archive deposition	11
2.5	List of sources consulted	12

#### **3.0 THE ARCHAEOLOGICAL RESOURCE**

3.1	Site location and topography	15
3.2	Landscape history and development	15
3.3	Gazetteer of sites	19
3.4	A review of the sources	27

### **FIGURES**

Fig. 1:	The project area: location map	4
Fig. 2:	The project area: the archaeological resource	5-6

### **TABLES**

Table 1	The archaeological resource: recommended response	10
---------	---	----

## **APPENDIX 1**

### **Copies of selected map sources**

Copy of National Library of Wales, 'Emanuel Bowen's Map of South Wales', 1729.

Copy of National Library of Wales, Ordnance Survey Original Surveyors' Drawings, 2" to the mile, Sheet 181, 1809-10

Copy of Ordnance Survey 1" to the mile, Old Series, Sheet 38, 1818

Copy of National Library of Wales, Parish of St Issells, Tithe Map and Apportionment, 1839

Copy of National Library of Wales, Parish of Begelly (Hamlet of East Williamston), Tithe Map and Apportionment, 1841 (west end)

Copy of National Library of Wales, Parish of Begelly (Hamlet of East Williamston), Tithe Map and Apportionment, 1841 (east end)

Copy of Ordnance Survey, 1:10560, Pembrokeshire Sheet XXXV.SW, First Edition, 1891

Copy of Ordnance Survey, 1:10560, Pembrokeshire Sheet XXXV.SW, Second Edition, 1908

## **APPENDIX 2**

### **Copy of project specification**

## **1.0 INTRODUCTION**

### **1.1 Development proposals**

Cambria Archaeology Field Operations was invited, by Thomas, Morgan and Associates, on behalf of Dwr Cymru and Morrison Construction Ltd., to provide costings for an archaeological assessment of a proposed new sewerage system route at Broadmoor, Pembrokeshire, on 26 June 2001. Cambria Archaeology accordingly submitted a specification and quotation on 28 June 2001 and were awarded the contract on 16 July 2001.

### **1.2 Project objectives**

- 1.2.1 to assess the character, extent, significance and vulnerability of the archaeological resource within the project area, namely a 15 metre wide corridor along the midline of the proposed route.
- 1.2.2 to identify new archaeological sites, features and deposits within the project area, and to assess their character, significance and vulnerability.
- 1.2.3 to identify sites, features and deposits that require further archaeological investigation to fully assess their character, extent, significance and vulnerability.
- 1.2.4 the preparation of a report fully representative of the information recovered during 1.2.1 - 1.2.3, which places the archaeological resource of the project area within its local, regional and national contexts.
- 1.2.5 The preparation of a project archive.

### **1.3 Project methodology**

- 1.3.1 a search of the County Sites and Monuments Record and the National Monuments Record for information of known sites within and around the project area.
- 1.3.2 a search of cartographic sources held in national and county records offices and other repositories for archaeological information.
- 1.3.3 a search of primary historic documents held in national and county records offices and other repositories.
- 1.3.4 a search of secondary, published sources.
- 1.3.5 the examination of relevant aerial photographic coverage.
- 1.3.6 a field visit to review the current state of archaeological sites, features and deposits identified during the searches and to identify new archaeological sites, features and deposits or areas that may contain them. In addition, where necessary, to undertake rapid recording of archaeological sites, features and deposits by photography, site notes and sketch plans, and to assess their vulnerability.

#### 1.4 Categorisation of archaeological sites and features

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

*Category A* - Sites of national importance

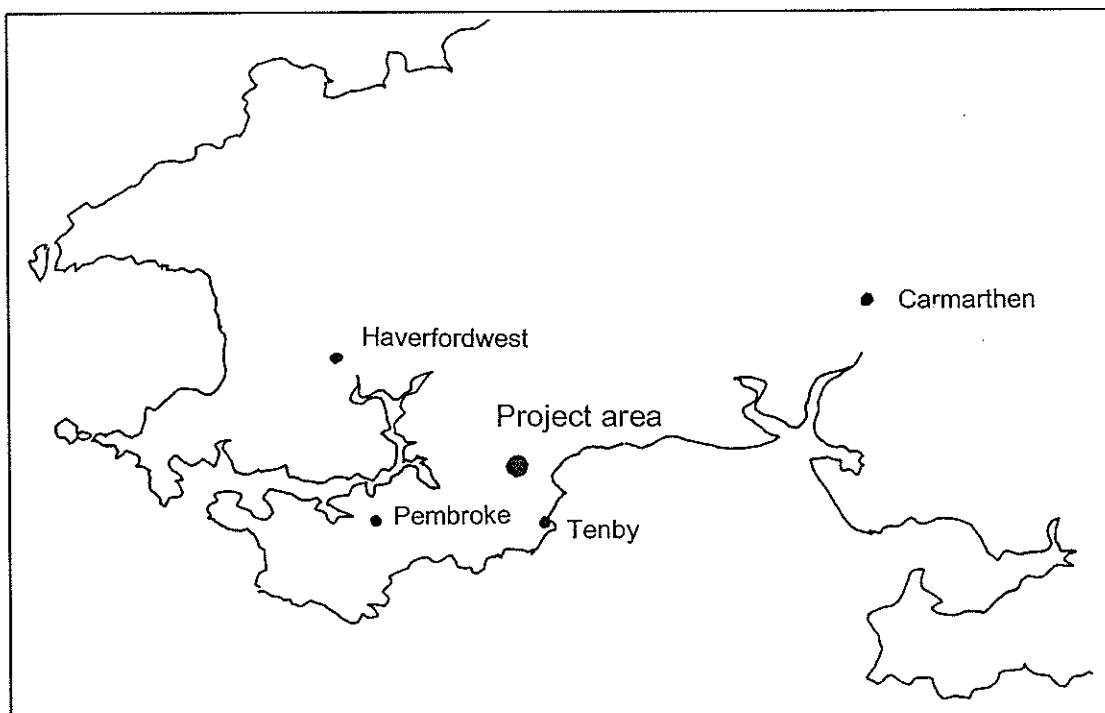
*Category B* - Sites of regional or county importance

*Category C* - Sites of district or local importance

*Category D* - Minor or damaged sites

*Category E* - Sites needing further investigation

*Fig. 1: The project area - location map*



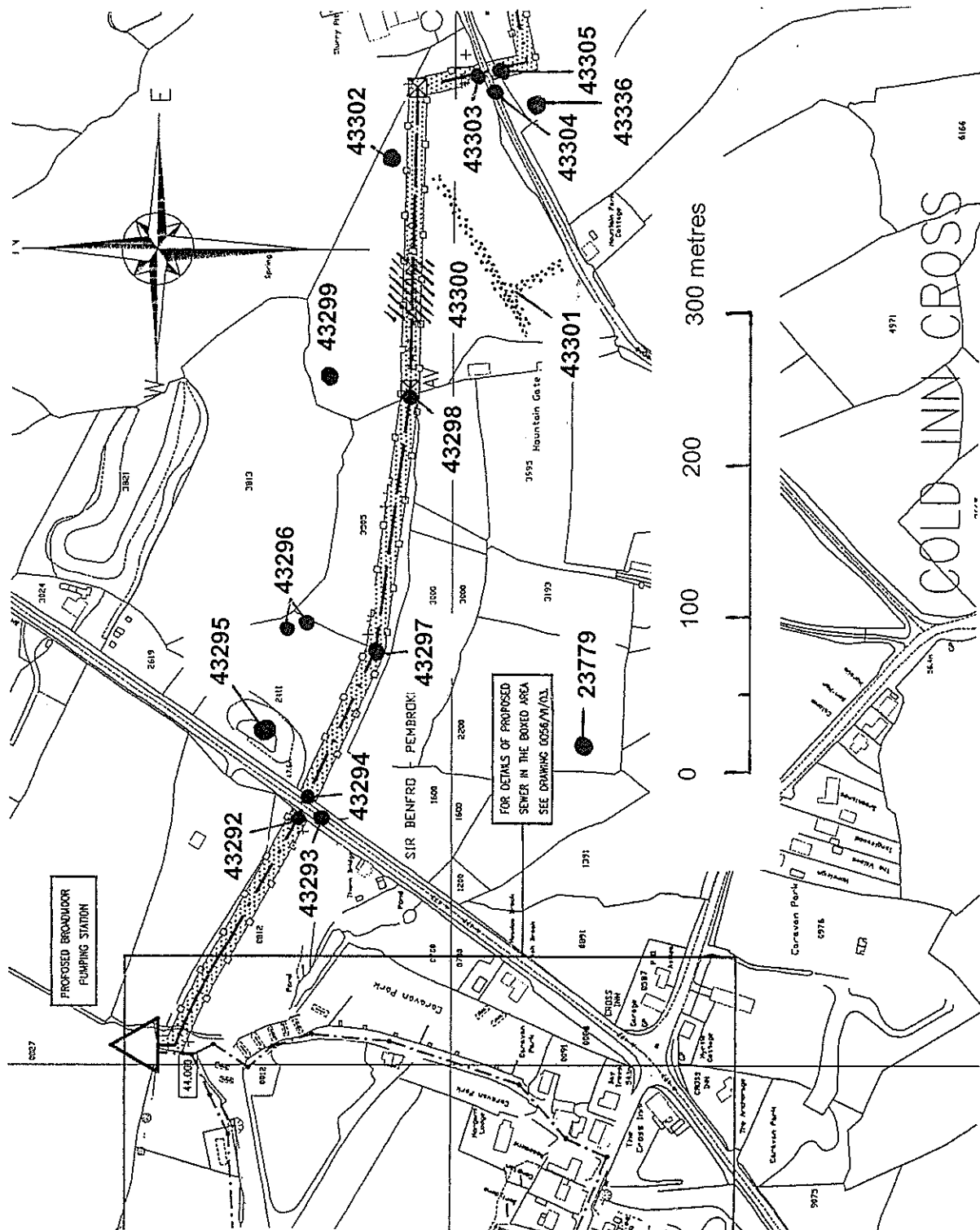
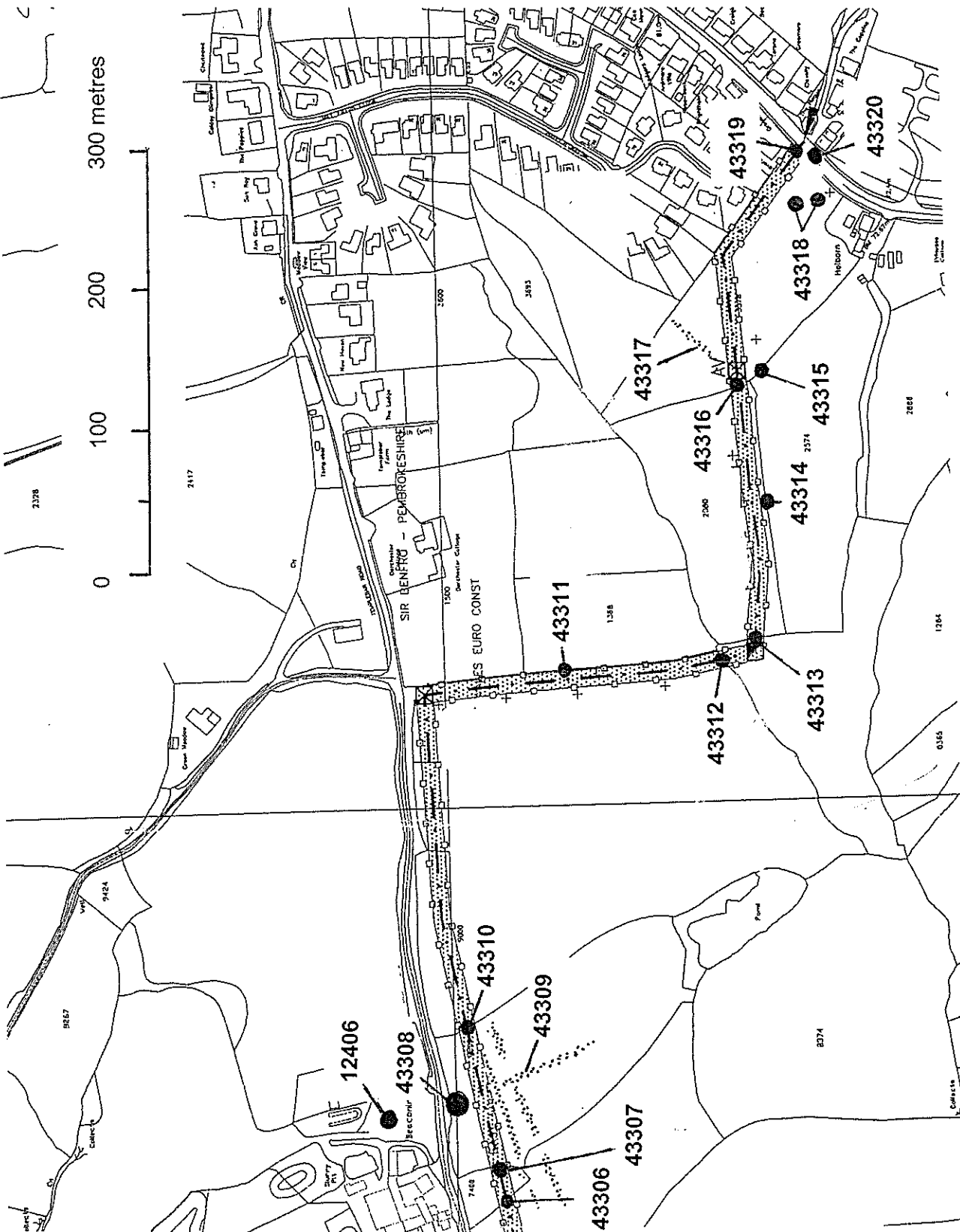


Fig. 2a: The project area, west half - the archaeological resource





*Fig. 2b: The project area, east half - the archaeological resource*

## 2.0 RESULTS OF ASSESSMENT

### 2.1 Summary of the archaeological resource

This section contains brief descriptions of archaeological/historic sites, features, buildings and deposits within the project area, namely a 15 metre wide corridor along the midline of the proposed sewerage scheme route, and relevant sites and features immediately beyond. They are listed by their type and individual Primary Record Number (or PRN) as allocated in the Sites and Monuments Record for Carmarthenshire, Ceredigion and Pembrokeshire.

Refer to Fig. 2 for PRNs given for the purpose of this project. Categories are as defined in Section 1.4.

See Section 3.3 for a gazetteer and detailed descriptions of sites.

#### *2.1.1 Sites within the proposed route corridor*

PRN 43293 – NGR SN 10 06 – EAST WILLIAMSTON ROADWAY  
roadway; post-medieval; Category D

PRN 43300 – NGR SN 105 060 – MOUNTAIN PARK EARTHWORK  
earthwork; ?medieval/post-medieval; Category E

PRN 43301 – NGR SN 105 059 – MOUNTAIN PARK CROPMARK  
cropmark; period unknown; Category E

PRN 43302 – NGR SN 1060 0613 – MOUNTAIN PARK ?MINING FEATURE  
?mining feature; ?post-medieval; Category E

PRN 43304 – NGR SN 10 05 – BEACONING ROADWAY  
roadway; post-medieval; Category D

PRN 43309 – NGR SN 108 059 – BEACONING CROPMARK  
cropmark; period unknown; Category E

PRN 43320 – NGR SN 11 05 – PENTLEPOIR ROADWAY  
roadway; post-medieval; Category D

#### *2.1.2 Relevant sites immediately beyond the proposed route corridor*

PRN 23779 – NGR SN 10 05 – WILSON'S PIT, BROADMOOR  
coalmine; post-medieval; Category C

PRN 43295 – NGR SN 102 061 – WATERS PIT SPOILHEAP  
mining spoilheap; post-medieval; Category C

PRN 43296 – NGR SN 1028 0608 – WATERS PIT ?MINING FEATURES/?ROUND BARROWS  
?mining features/round barrows; ?post-medieval/?prehistoric; ?Category E

PRN 43299 – NGR SN 1047 0610 – MOUNTAIN PARK ?MINING FEATURE  
?mining feature; ?post-medieval; Category E

PRN 43308 – NGR SN 1077 0600 – BEACONING POND  
site of earthwork; ?medieval/post-medieval; Category D

PRN 43318 – NGR SN 1142 0573 – PENTLEPOIR CROPMARK  
cropmark; period unknown; Category E

PRN 43336 – NGR SN 1063 0595 – MOUNTAIN PARK MINE SHAFT  
mining feature; post-medieval; Category E

### *2.1.3 Field boundaries*

The proposed pipeline route crosses a total of 13 field boundaries: PRNs 43292, 43294, 43297, 43298, 43303, 43305, 43306, 43307, 43310, 43312, 43313, 43316, and 43319. It also passes close to boundaries 43311, 43314 and 43315. They are mainly represented by hedgebanks of which three are accompanied by drainage ditches. Boundaries PRNs 43311 and 43312 represent the boundary between the parishes of East Williamston (formerly Begelly) and St Issells and are therefore at least of probable medieval origin, and are Category C sites. The remainder are Category D sites and in their present form, at least, are post-medieval.

It is apparent that most of the field boundaries within the project area and its environs had been established by the early 19th century. However, there is a clear distinction between the field pattern in the western two-thirds of the scheme – within East Williamston parish – and those in the eastern third, in St Issells parish. In the former area are long, narrow, curving fields which are, in the main, co-axial from roads and tracks and appear to be relict from a medieval field system. In the latter area, the field boundaries tend to be straighter and more regular, and appear to represent part of a later post-medieval re-organisation of the landscape. However further research, and physical analysis, need to be undertaken.

See Section 3.3 for descriptions of field boundaries past and present.

## 2.2 Conclusions and recommendations

### 2.2.1 Conclusions

The route corridor contains a small number of archaeological sites, features and structures. Most of these relate to the post-medieval, primarily 19<sup>th</sup> century industrial use of the landscape, when the entire East Williamston-St Issells area was exploited for coal. The route crosses, from west to east, a 19<sup>th</sup> century turnpike road (PRN 43292), an earthwork area (PRN 43300) of unknown nature that may be associated with nearby coal pits, or may be an earlier settlement site. Two cropmark sites (PRNs 43301 and 43309), again of unknown nature, are crossed, and the site of a mining feature (PRN 43302). Two further, earlier routeways (PRNs 43304 and 43320) are crossed at the centre and east end of the route.

At the west end of the route, a number of features lie immediately north of the corridor. A large coal spoilheap (Waters Pit, PRN 43295) may be associated with another earthwork (PRN 43299) and two smaller earthworks (PRN 43296); the latter, however, may have a different origin and there is the slight possibility that they are bronze age burial mounds (round barrows). A further mining feature (PRN 43336) south of the route is marked and labelled 'Old Shaft' on 19<sup>th</sup> century maps. The site of an agricultural pond lying immediately north of the centre of the route (PRN 43308) may have palaeoenvironmental potential but does not appear to be affected by the scheme. Two cropmarks (PRN 43318) immediately south of the east end of the route have the appearance of mining bell-pits (or less likely, bronze age ring ditches derived from burial mounds ie. round barrows) but similarly do not appear to be affected by the scheme.

The route also cuts through a total of 13 field boundaries, mainly represented by post-medieval hedgebanks.

The area is not included within the Cadw/ICOMOS register of Landscapes of Outstanding or Special Historic Interest in Wales.

### 2.2.2 Recommendations (Table 1)

These recommendations have been prepared following consultation with the Development Control Officer of Cambria Archaeology who provides archaeological advice to the local Planning Authority.

- The present route is, overall, the optimum course for the preservation of the archaeological sites and features. However, it does cross earthwork site 43300, ?mining feature 43302 and cropmarks 43301 and 43309. It is recommended that the turf-strip in these locations is undertaken using a toothless ditching bucket and monitored by a watching archaeologist before further action is decided upon. The area of earthwork site 43300, in particular, may be of importance and a contingency for further archaeological evaluation is recommended.
- Care must also be taken to adhere to the route in the area of earthworks 43296, mine shaft 43336, pond 43308 and cropmarks 43318.
- Field boundaries are an integral part of the total historic landscape and have, in the present study, been subject only to superficial investigation. It is therefore recommended that the sections of all boundaries cut by the pipeline route are recorded; this can, for the sake of convenience, also undertaken during the initial turf-strip. The plan of the proposed scheme appears to show the east end of the route being taken through an existing gap in boundary PRN 43316, avoiding any disturbance to this boundary.

- No archaeological response is necessary in the area of routeways 43293, 43304 and 43320.
- The presence of mine shafts and pits at the west end of the route, and possible shafts and pits at the east end, must be emphasised as a practical constraint during the groundworks for the scheme, particularly when heavy machinery is brought on site.

*Table 1: The archaeological resource: summary of recommended responses*

site	nature of threat	archaeological response
Earthwork PRN 43300 (NGR SN 105 060)	on route midline	watching brief during turf-strip to assess nature of site; contingency for further evaluation
Cropmark PRN 43301 (NGR SN 105 059)	on route midline	watching brief during turf-strip to assess nature of site; contingency for further evaluation
?Mining feature PRN 43302 (NGR SN 1060 0613)	on route midline	watching brief during turf-strip to assess nature of site; contingency for further evaluation
Cropmark PRN 43309 (NGR SN 108 059)	on route midline	watching brief during turf-strip to assess nature of site; contingency for further evaluation
field boundaries	cut by route midline	watching brief during turf-strip to record all cut sections of field boundaries; contingency for further evaluation

## 2.3 Acknowledgements

This report was researched and written by Neil Ludlow of Cambria Archaeology. Acknowledgements to: colleagues at Cambria Archaeology, staff of Pembrokeshire Record Office and the National Library of for their assistance.

## 2.4 Archive deposition

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

A.1. Copy of the final report

A.4. Disk copy of report

B.4. Field notebooks

D.1. Catalogue of site photographs

D.2. Colour slides

D.3. Mono prints and negs

G.1. Source documentation

I.4. Final report - manuscript

I.4. Final report - typescript

I.4. Final report - disk

I.4. Proofs

I.4. Paste-ups

L.1. Project research design/specification

L.4. General admin.

M.1. Non-archaeological correspondence

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

## 2.5 List of sources consulted

### Databases

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

### Manuscript maps

National Library of Wales, Vol. 39, pp. 88-91, *Map of Vatson, Wooden and Kitehill in the Parish of Bigeley*, by Thomas Lewis, 1787.

National Library of Wales, Vol. 88, pp. 124-6, *East Williamston in the Parish of Bigeley, Pembs.*, 1774-5.

National Library of Wales, Vol. 88, p. 128, *Wooden in Williamston Hamlet and Bigeley Parish*, 1774-5.

National Library of Wales, Picton Castle Vol. 4, p. 95, *Masterland*, c.1850.

National Library of Wales, Picton Castle Vol. 4, p. 96, *East Williamston and Cold Inn*, c.1850.

National Library of Wales, *'Emanuel Bowen's Map of South Wales'*, 1729.

National Library of Wales, Ordnance Survey Original Surveyors' Drawings, 2" to the mile, Sheet 181, 1809-10 (revised 1836).

National Library of Wales, Parish of Begelly with East Williamston, Tithe Map and Apportionment, 1841.

National Library of Wales, Parish of St Issell's, Tithe Map and Apportionment, 1839.

Pembrokeshire Record Office, D/RTP/Pic/446, Kingsmoorhead, Leverox and Wooden Farms in the Hamlet of Williamston, Pembs., belonging to Richard Foley Esq., n.d. (c.1800).

### Published maps

British Geological Survey, 1:250000, 'The Rocks of Wales: Geological Map of Wales', 1994.

British Museum, Maps C.7 c.1., Saxton's Map of Radnorshire, Brecknockshire, Cardiganshire and Carmarthenshire, of 1578.

Ministry of Agriculture, Fisheries and Food, 1:250000, Agricultural Land Classification, Sheet 140, 1990.

Ordnance Survey, 1" to the mile Old Series, Sheet 38, 1818.

Ordnance Survey, 1:2500, Pembrokeshire Sheet XXXV.14, First Edition, 1888.

Ordnance Survey, 1:2500, Pembrokeshire Sheet XXXV.14, Second Edition, 1907.

Ordnance Survey, 1:10560, Pembrokeshire Sheet XXXV SW, First Edition, 1891.

Ordnance Survey, 1:10560, Pembrokeshire Sheet XXXV SW, Second Edition, 1908.

Ordnance Survey, 1:10000, Sheet SN 10 SW, 1964.

Rees, W., 1932, *South Wales and the Border in the XIVth century*.

Soil Survey of England and Wales, 1:250000, Sheet 2 'The Soils of Wales', 1980.

#### **Aerial photographs**

Meridian Airmaps, SN10NW, 12880-1281, 1955 (Sites and Monuments Record for Carmarthenshire, Ceredigion and Pembrokeshire).

RAF 106G/UK/1629/2050, 1946 (Sites and Monuments Record for Carmarthenshire, Ceredigion and Pembrokeshire).

#### **Unpublished works**

Kissock, J., 1993 *Historic Settlements Project - South Pembrokeshire* (unpublished Archaeoleg Cambria Archaeology client report; copy held with Sites and Monuments Record for Carmarthenshire, Ceredigion and Pembrokeshire).

Ludlow, N., 1999, 'St Issell, St Issells', *The Welsh Historic Churches Project, South Pembrokeshire* (unpublished Archaeoleg Cambria Archaeology client report; copy held with Sites and Monuments Record for Carmarthenshire, Ceredigion and Pembrokeshire).

Murphy, K., 1993 *Castlemartin RAC Electrification Scheme, 1993: Report on Archaeological Monitoring* (unpublished Archaeoleg Cambria Archaeology client report; copy held with Sites and Monuments Record for Carmarthenshire, Ceredigion and Pembrokeshire).

#### **Published works**

Anon., 1797 *Letters describing a Tour through Part of South Wales by a Pedestrian Traveller*.

Bradley, A. G., 1903 *Highways and Byways in South Wales*.

Charles, B. G. 1992 *The Place-Names of Pembrokeshire*, Vol. 2

Fenton, R., 1811 *A Historical Tour of Pembrokeshire*.

Lewis, S, 1833, *A Topographical Dictionary of Wales*, Vol II (First Edition).

Lewis, S, 1840 *A Topographical Dictionary of Wales*, Vol II (Second Edition).

Miles, D. 1994 (ed.) *The Description of Pembrokeshire by George Owen of Henllys*.

Owen, H. 1918 (ed.) *A Calendar of Pembrokeshire Records* Vol. 3.

Price, M. C., 1982 *Industrial Saundersfoot*.

Rees, W., n.d. *An Historical Atlas of Wales*.

Richards, M., 1969 *Welsh Administrative and Territorial Units*.



Thompson, M. W. (ed.), 1983 *The Journeys of Sir Richard Colt Hoare through Wales and England, 1793-1810*.

Williams, G., 1988 *The Standing Stones of Wales and South-West England* (BAR British Series 197).

### 3.0 THE ARCHAEOLOGICAL RESOURCE

#### 3.1 Site location and topography (Figs. 1 and 2)

The project area lies in the rolling countryside of southeast Pembrokeshire, 5 kilometres northwest of Tenby, within NGR SN 10 NW. The solid geology of the area, and the surrounding region, is represented by Carboniferous Coal Measures of the Westphalian series, strongly faulted, which have been exploited (as part of the Pembrokeshire coalfield) since the medieval period.

The sewerage scheme route corridor is approximately 1.8 kilometres long and runs between NGR SN 1002 0618 and SN 1145 0574. The area lies between 40 metres and 50 metres OD. In the main, it has a southerly aspect, the ground gently falling towards the south and the Moreton basin. The western third of the route occupies more level ground and terminates, at its west end, at an un-named, northwesterly flowing stream that eventually joins the Cresswell River. Soils are the typical brown earths of the 541h Neath group (Soil Survey of England and Wales, 1980).

Although there is evidence - from both the field patterns and the tithe surveys of the early 19<sup>th</sup> century - that arable farming has been practiced in the past, the soils are typical of the Coal Measures and not overly fertile. The area is currently classed as Grade 4 land throughout (Ministry of Agriculture, Fisheries and Food, 1990) and is subject to a low-intensity pastoral regime. While some of the fields towards the centre of the route are cut for fodder, some of those to the east have been left ungrazed for a considerable period of time.

The project area lies entirely within the parishes of East Williamston (formerly a hamlet of Begelly parish) and St Issells, the boundaries of which had been fixed by the late medieval period at least.

The area is not included within the Cadw/ICOMOS register of Landscapes of Outstanding or Special Historic Interest in Wales.

#### 3.2 Landscape history and development

The environs of the project area and the surrounding region have been subject to human settlement from prehistory onwards. Economically, it remained predominantly agricultural throughout most of its history, and features a relict field system derived from medieval arable farming. It returned to agricultural use during the 19<sup>th</sup> century. However, the archaeology of the area is - like this part of southeast Pembrokeshire in general - dominated by the post-medieval, industrial use of the landscape.

For detailed descriptions of sites and field boundaries see Section 3.3 below.

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

The south Pembrokeshire peninsula features, in general, a high degree of survival of prehistoric archaeology. This was a period when, towards the end of which at least, the peninsula was intensely settled, with a population perhaps approaching that of the 19th century (Murphy 1993, 4).

However, most of the archaeological sites associated with earlier neolithic and bronze age settlement, which are mainly ritual - chambered tombs, standing stones and burial mounds (round barrows) - lie outside the project region (Williams 1988, Figs. 1, 2 and 3). The B4320 to the south of the region, which follows the east-west limestone ridge across the peninsula, is traditionally held to be the line of a prehistoric trackway, 'The Ridgeway', and is rich in bronze age round barrows. A further group of barrows lie near Cresswell to the northwest of the region. The

project area and its environs are, in contrast, typical of the Coal Measures in being poorly represented by prehistoric sites.

Two earthworks at the west end of the project area, PRN 43296, have the superficial appearance of round barrows but, when viewed against this pattern of distribution, are unlikely candidates and are therefore more probably associated with post-medieval coal-mining (see Section 3.2.3). The cropmarks at the east end of the route, PRN 43318, have the superficial appearance of ring-ditches associated with such barrows, and which survive when the mound itself has been ploughed out. However, they are more likely to represent bell-pits derived from post-medieval mining (see Section 3.2.3).

The immediate region is similarly not well-represented by defended domestic enclosures from the iron age and Romano-British periods, while no accompanying field systems or settlement sites have so far been identified. Again, such sites are mainly concentrated to the north of the region, which is typified by small defended enclosures established by extended family groups, and to the south, where the limestones of the peninsula exhibit the straight, north-south field boundaries, co-axial upon contemporary east-west routeways, which have been recently proposed as Iron Age, ie. c.700 BC - 1st century AD, in origin (Murphy 1993, 4, 13). It is suggested therefore that the field system represented by boundaries in the western half of the project area – which are co-axial upon the Pentlepoir-Cold Inn road (PRN 43304), are more likely to be medieval in origin (see Section 3.2.2).

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

The medieval period was characterised by equally intense settlement in south Pembrokeshire, which extended into the project area.

The Rhoscrowther area lay within the early medieval administrative 'cantref' of Penfro, one of the seven cantrefs belonging to, and at the heart of, the Welsh Kingdom of Dyfed. Cantref Penfro was further divided into two 'commotes', Manorbier and Coedrath; a third, Penfro, has recently been dismissed as spurious (Charles 1992, 672). A model for the pre-Norman (c.400-1093) settlement pattern within south Pembrokeshire has been suggested by Kissonock on the understanding that each commote may have comprised 12 linked townships ('multiple estates') which possibly formed the basis of the later parishes, and two extra townships ('*tir bwrdd*') which provided for the king; Kissonock has suggested that Jeffreyston, immediately west of the project area, formed one of the *tir bwrdd* (Kissonock 1993, 4-5). St Issells, just to the east of the area, was moreover a pre-Conquest ecclesiastical centre being the site of a 'Bishop house', a quasi-collegiate foundation of St Davids which was probably located at or near the present parish church (Ludlow 1999). However, field archaeology that can be attributed to the pre-Norman period is absent within the project area and its immediate environs.

Coedrath became a manor of the lordship of Pembroke soon after the Norman conquest of southwest Wales, and the establishment of Pembroke Castle, in 1093. The manor included, at least, the present parishes of Amroth, St Issells and East Williamston. The process of sub-infeudation, by which lesser holdings within the manor were held of its lord, by feudal tenure, appears to have been weak within the manor, which as one of the chief economic components of the lordship, always remained under the direct control of the Lords of Pembroke. It was exploited for its woods – the manor is referred to as 'Coedrath Forest' in contemporary accounts (Owen 1918, 111) – grazing (largely on the common at Kilgetty), turf for building and fuel (Owen 1918, 92) and, most significantly for its later development, coal.

The development of coal-mining within the area was a product of the later medieval period. While contemporary accounts record the cutting of turves and the felling of trees – for instance, '3000 green oaks' were taken from the forest in 1386 (Owen 1918, 105) – and other woodland profits, the manorial rolls were recording the exploitation of the coalfield as early as 1324. The *Inquisition Post Mortem* of Aymer de Valence, Earl of Pembroke, who died in 1324 records 'a mine of sea-

coal, paying a yearly rent of 16s 4d' while the underwood and 'pannage' (foraging for swine) within the forest was assessed at only 3s yearly (Owen 1918, 84).

Nevertheless a number of townships (or 'vills'), of a purely agricultural nature, existed within the Manor of Coedraith. A number of names that are cited in records from the 13th to the 15th centuries are today represented by villages or farmsteads, for instance Jeffreyston, Begelly and East Williamston (Owen 1918). The classic model of Anglo-Norman agricultural practice is the 'open field' system in which long strips of land, held collectively of the vill or manor, lay within large unenclosed fields. The long, narrow fields south of the Pentlepoir-Cold Inn road (PRN 43304), in the centre of the project area, are typical of the post-medieval enclosure of such a medieval open-field system, and indeed the road itself is shown as a medieval trackway on Rees' map (Rees 1932). The series of earthworks at Mountain Park (PRN 43300) may have origins as a settlement site, perhaps associated with this field system and of similar age.

However, it may or may not be significant that medieval accounts make no mention of any of the associated settlements or farmsteads, for instance Bush (which is first mentioned in 1618) or Beaconing (Charles 1992, 473). Furthermore, the name Beaconing has been interpreted as being derived from a beacon that may have occupied the site (and given the PRN 12046). If this is true, then the farm probably post-dates the beacon and will therefore probably be post-medieval. It is probable, nevertheless, that pond 43308 is associated with the establishment of the farmstead of Beaconing.

Rees also depicts the A478 through Pentlepoir (PRN 43320) as a medieval route (Rees 1932); both routes are marked on 18<sup>th</sup> century estate maps and the OS original surveyor's drawing of 1809-10. Pentlepoir itself is first mentioned in 1542 (Charles 1992, 551).

Side-by-side with the manorial administration was that of the church. The boundaries of the parishes of Begelly (East Williamston hamlet) and St Issell's had become firmly fixed by the end of the medieval period, and are represented by the straight field boundary, with a bank, ditch and mature standard trees, running north-south through the middle of the project area (PRNs 43311 and 43312).

In summary, therefore, no demonstrable medieval sites occur within or around the project area, but the turf-strip in the area of earthworks 43300 may provide new evidence.

### *3.2.3 The post-medieval period (1500 - 2000 AD)*

The project area was, during the earlier post-medieval period, primarily agricultural and saw the establishment of a number of new farmsteads, possibly as a result of the abandonment of feudal methods of tenure and open-field farming. It has been noted that Beaconing Farm may be post-medieval, while the farm names Cold Inn, Mountain Park and Temple Bar all betray post-medieval, probably 17<sup>th</sup>-18<sup>th</sup> century origins; the latter is first mentioned in c.1773 (Charles 1992, 475). All these farms, and Bush, are depicted on the OS original surveyor's drawing of 1809-10.

Whilst the field system south of the Pentlepoir-Cold Inn road (PRN 43304), in the centre of the project area, may have medieval origins (see Section 3.2.2) it is apparent that the pattern of enclosures at both the east and west ends of the area is later. Emmanuel Bowen's map of 1729 labels that area at the west end of the scheme as 'Big Moor' (ie. the present Broadmoor) suggesting that it was then unenclosed; the pattern of boundaries here does indeed have a later appearance but had been established by 1774 (National Library of Wales, Vol. 88, pp. 124-6, *East Williamston in the Parish of Bigeley, Pembs., 1774-5*). The pattern at the east end however, east of the parish boundary, is later still, a very different system being shown on an estate map of c.1800 (Pembrokeshire Record Office, D/RTP/Pic/446.). The present pattern had been established by 1839 (National Library of Wales, Parish of St Issell's, Tithe Map and Apportionment, 1839), and represents a major piece of landscape re-organisation but one that

was fairly widespread at the time, and in no sense beyond the means of the landowner, Admiral Richard Foley.

Coal-mining increasingly became the dominant economic activity within the area, and had an increasingly adverse affect on its agriculture. George Owen, writing in c.1600, describes a 'vein of coal... at Jeffreyston (which) passes east to Saundersfoot and there... to the sea' (Miles 1994, 91). He describes how it 'is called stone coal for the hardness thereof and is burned in chimneys and grates of iron' and 'is not noisome for the smoke'. It is a hard, smokeless anthracite which was always in demand for domestic use. Several localities were then being exploited including Saundersfoot, Begelly and Jeffreyston. Emmanuel Bowen's map of 1729 only shows those pits around Moreton, just south of the project area, but of those there were several. However, until the end of the 18<sup>th</sup> century the industry, in Pembrokeshire, remained primitive (Price 1982, 20).

Production increased during the early 19<sup>th</sup> century under the initiative of the Picton estate, the major landowner in the region, and many new pits were established under both the estate and other landowners. Wilson's Pit (PRN 23779), just south of the route corridor, probably established in the 1820s under Lewis Wilson and James Wilson of Cresswell, was first mentioned in 1833 when it was well-established. However, it had probably closed by 1854 (Price 1982, 74).

Waters Pit, the large spoilheap which lies at the west end of the project area (PRN 43295) is not so well-known. It may have been linked to Wilson's Pit (*ibid.*) but the evidence is lacking. It too probably closed in 1854. The two low earthwork mounds represented by PRN 43296, and PRN 43299, are probably associated with this colliery. The pits at Beaconsing are equally little-known (*ibid.*) but were probably contemporary; all pits in the area had become disused by the time of the OS survey of 1907. The 'old shaft' marked and labelled on the OS 1:10560 of 1891 (PRN 43336), when it was clearly disused, was probably associated with this colliery, as was the former earthwork, PRN 43302, which was probably a spoil-tip. Cropmarks PRN 43318 at the east end of the route (see Section 3.2.1 above) probably represent bell-pits derived from mining, a simple form of pit in which the spoil was cast around the edge of the shaft. They are not marked on either historic maps or on Price's distribution maps (Price 1982), but simple pits such as this could date from any period.

Railways were constructed between the collieries at Moreton, Kilgetty and Thomas Chapel, and the port of Saundersfoot, during the 1830s and operated under the Saundersfoot Railway and Harbour Co, and the South Wales Railway. (Price 1982, 21-5). By 1867, 146,000 tons of coal were being exported from the region annually. However, although railways or tramways were proposed within the project area, none were constructed, most of its coal being exported from Cresswell Quay to the west (Price 1982, 74). However, the line of the A477(T) from Kilgetty to Redberth (PRN 42393) was established, probably as a turnpike, between 1818 and 1841. Prior to this the Pentlepoir-Cold Inn-East Williamston road represented the only east-west route, and the construction of the present road may have been initiated by the developing coal industry.

After 1867, a slow decline set in and many pits closed during the 1880s and 1890s. There were brief revivals, for instance in the 1930s, but the last pit closed in 1950 bringing coal mining in the district to an end (Price 1982, 33)

### 3.3 Gazetteer of sites

This section contains detailed descriptions of archaeological sites and features within the proposed route corridor, namely a 15 metre wide corridor about the proposed route midline, and descriptions of sites and features immediately beyond the corridor that may be relevant to the study.

Refer to Fig. 2 for PRNs (Primary Record Numbers) and field numbers allocated for the purpose of the project (see Section 3.3.3 below).

Refer to Appendix 1 for copies of selected map sources.

PRN	23779
NGR	SN1005
NAME	WILSONS PIT BROADMOOR
TYPE	COALMINE
PERIOD	Post Med
FORM/CONDITION	Documents
SITE_STATUS	
DESCRIPTION	

PRN	43292
NGR	SN10180610
NAME	THE BRAMBLES
TYPE	FIELD BOUNDARY
PERIOD	Post Med
FORM/CONDITION	Earthwork/A
SITE_STATUS	
DESCRIPTION	

Hedgebank. Boundary established alongside road PRN 43293 between 1818 and 1841.

PRN	43293
NGR	SN1006
NAME	EAST WILLIAMSTON
TYPE	ROADWAY
PERIOD	Post Med
FORM/CONDITION	Earthwork/A
SITE_STATUS	
DESCRIPTION	

The line of the A477(T) from Kilgetty to Redberth was established, probably as a turnpike, between 1818 and 1841. Prior to this the Pentlepoir-Cold Inn-east Williamston road represented the only east-west route.

PRN	43294
NGR	SN10190611
NAME	EAST WILLIAMSTON
TYPE	FIELD BOUNDARY
PERIOD	Post Med
FORM/CONDITION	Earthwork/A
SITE_STATUS	
DESCRIPTION	

Hedgebank. Boundary established alongside road PRN 43293 between 1818 and 1841.

PRN 43295  
 NGR SN102061  
 NAME WATERS PIT  
 TYPE SPOIL HEAP  
 PERIOD Post Med  
 FORM/CONDITION Earthwork/A  
 SITE\_STATUS

**DESCRIPTION**

Large spoilheap belonging to Waters Pit, a coal mine established during the 19<sup>th</sup> century, perhaps linked to the nearby Wilson's Pit (PRN 23779) and similarly probably having closed by the later 19th century. The spoilheap is approx. 50m wide and 6m high, and is now overgrown with oaks etc.

PRN 43296  
 NGR SN10280608  
 NAME WATERS PIT  
 TYPE MINING FEATURES?  
 PERIOD Post Med  
 FORM/CONDITION Earthwork/A  
 SITE\_STATUS

**DESCRIPTION**

Low circular earthwork in west corner of field OS No. 2411, approx. 12m in diameter and 1m in height. Partly underlies field boundary 43297 which was established between 1841 and 1907. A possible similar (but slighter) earthwork may be contiguous to the north. The earthwork probably relates to Waters Pit (see PRN 43295), a coal mine established during the 19th century, perhaps linked to the nearby Wilson's Pit (PRN 23779) and similarly probably having closed by the later 19th century. However, it is not marked on the OS map of 1907 which shows many such mining features. There remains the possibility that it has different origins - possibly a bronze age round barrow?

PRN 43297  
 NGR SN10280609  
 NAME EAST WILLIAMSTON  
 TYPE FIELD BOUNDARY  
 PERIOD Post Med  
 FORM/CONDITION Earthwork/A  
 SITE\_STATUS

**DESCRIPTION**

Boundary established between 1841 and 1907. Hedgebank.

PRN 43298  
 NGR SN10430605  
 NAME MOUNTAIN PARK  
 TYPE FIELD BOUNDARY  
 PERIOD Post Med  
 FORM/CONDITION Earthwork/A  
 SITE\_STATUS

**DESCRIPTION**

Hedgebank. Boundary established before 1841.

PRN 43299  
NGR SN10470610  
NAME MOUNTAIN PARK  
TYPE MINING FEATURES?  
PERIOD Post Med  
FORM/CONDITION Earthwork/A  
SITE\_STATUS  
DESCRIPTION

Low circular earthwork in north corner of field OS No.??, approx. 20m in diameter and 1.5m in height. Marked on the OS map of 1907. The earthwork, like PRN 43296, appears to relate to Waters Pit (see PRN 43295), a coal mine established during the 19th century, perhaps linked to the nearby Wilson's Pit (PRN 23779) and similarly probably having closed by the later 19th century. However, see PRN 43300.

PRN 43300  
NGR SN105060  
NAME MOUNTAIN PARK  
TYPE EARTHWORK  
PERIOD Post Med  
FORM/CONDITION Earthwork/B  
SITE\_STATUS  
DESCRIPTION

An area of amorphous earthworks within field OS No.???. The area, which measures approx. 50m square, appears to be 'terraced' into a series of low but fairly well-defined earthworks, but no real form is discernible on the ground. The earthworks, moreover, are not visible on aerial photographs. They may, like PRNs 43296 and 43299, be associated with Waters Pit (see PRN 43295), a coal mine established during the 19th century, which had probably closed by the later 19<sup>th</sup> century. However, they are not marked on the OS map of 1907, which shows many such mining features, and may be earlier - possibly even representing a settlement site.

PRN 43301  
NGR SN105059  
NAME MOUNTAIN PARK  
TYPE UNKNOWN  
PERIOD Unknown  
FORM/CONDITION Cropmark  
SITE\_STATUS  
DESCRIPTION

Two faint, linear positive cropmarks visible on aerial photographs within field OS No.???. One runs N-S and forms a 'T'-junction with the second, which runs E-W. They appear to represent boundaries but none are depicted in this location on historic maps.



PRN 43302  
NGR SN10600613  
NAME MOUNTAIN PARK  
TYPE MINING FEATURES?  
PERIOD Post Med  
FORM/CONDITION Earthwork/U  
SITE\_STATUS  
DESCRIPTION

Earthwork feature marked on the OS map of 1907, when it was approx. 20m in diameter, but no longer visible in the field or on aerial photographs. The earthwork, like PRN 43299, may have related to Waters Pit (see PRN 43295) - or possibly Beacons Colliery - coal mines that were established during the 19th century, and which had probably closed by the later 19th century. However, see PRN 43300.

PRN 43303  
NGR SN10670600  
NAME BEACONING  
TYPE FIELD BOUNDARY  
PERIOD Post Med  
FORM/CONDITION Earthwork/A  
SITE\_STATUS  
DESCRIPTION

Hedgebank and ditch along N side of road between Pentlepoir and Cold Inn (PRN 43304), which had been established by 1809.

PRN 43304  
NGR SN1005  
NAME BEACONING  
TYPE ROAD  
PERIOD Post Med  
FORM/CONDITION Earthwork/A  
SITE\_STATUS  
DESCRIPTION

The road between Pentlepoir and Cold Inn, which had been established by 1809. Rees (1932) suggests that the road may have medieval origins.

PRN 43305  
NGR SN10670598  
NAME BEACONING  
TYPE FIELD BOUNDARY  
PERIOD Post Med  
FORM/CONDITION Earthwork/A  
SITE\_STATUS  
DESCRIPTION

Hedgebank and ditch along S side of road between Pentlepoir and Cold Inn (PRN 43304), which had been established by 1809.

PRN 43306  
 NGR SN10700595  
 NAME BEACONING  
 TYPE FIELD BOUNDARY  
 PERIOD Post Med  
 FORM/CONDITION Earthwork/A  
 SITE\_STATUS  
 DESCRIPTION

Hedgebank. The boundary appears to have been established by 1809 at least, when it formed the east side of a trackway that ran between Beaconing and Pentlepoir. It may be earlier, as the form of the field system to the south of the Pentlepoir-Cold Inn road (PRN 43304) appears to suggest medieval origins. The trackway is not marked on the East Williamston tithe map of 1841 and now lacks physical evidence either in the field or on aerial photographs.

PRN 43307  
 NGR SN10740596  
 NAME BEACONING  
 TYPE FIELD BOUNDARY  
 PERIOD Post Med  
 FORM/CONDITION Earthwork/A  
 SITE\_STATUS  
 DESCRIPTION

Hedgebank. The boundary had been established by 1841. It may be earlier, as the form of the field system to the south of the Pentlepoir-Cold Inn road (PRN 43304) appears to suggest medieval origins.

PRN 43308  
 NGR SN10770600  
 NAME BEACONING  
 TYPE POND  
 PERIOD Medieval?; Post Med  
 FORM/CONDITION Earthwork/U  
 SITE\_STATUS  
 DESCRIPTION

Site of pond shown on maps of 1907 and 1964. Pond now gone, but there is a marked depression on its site, at the north end of field OS No. ???. It may have had earlier (medieval?) origins and the site may still have palaeoenvironmental potential.

PRN 43309  
 NGR SN108059  
 NAME BEACONING  
 TYPE UNKNOWN  
 PERIOD Unknown  
 FORM/CONDITION Cropmark  
 SITE\_STATUS  
 DESCRIPTION

Two faint, linear positive cropmarks visible on aerial photographs, of unknown nature, running E-W within fields OS Nos. 7400, 7489 and ???. They are 15m - 20m apart and appear to define a linear area. They are crossed by a third, N-S cropmark which runs S from pond site PRN 43308 and may represent a former overflow channel from the pond.

PRN 43310  
NGR SN10850596  
NAME BEACONING  
TYPE FIELD BOUNDARY  
PERIOD Post Med  
FORM/CONDITION Earthwork/A  
SITE\_STATUS  
DESCRIPTION

Two hedgebanks either side of a S flowing stream. The boundary had been established by 1841. It may be earlier, as the form of the field system to the south of the Pentlepoir-Cold Inn road (PRN 43304) appears to suggest medieval origins.

PRN 43311  
NGR SN110059  
NAME BEACONING  
TYPE FIELD BOUNDARY;PARISH BOUNDARY  
PERIOD Post Med  
FORM/CONDITION Earthwork/A  
SITE\_STATUS  
DESCRIPTION

Field boundary representing the parish boundary between East Williamston and St. Issells. Hedgebank and ditch/stream, supporting mature standard trees. The boundary had been established by 1839. It may be earlier, as the form of the field system to the south of the Pentlepoir-Cold Inn road (PRN 43304) appears to suggest medieval origins.

PRN 43312  
NGR SN11080579  
NAME WOODEN  
TYPE FIELD BOUNDARY;PARISH BOUNDARY  
PERIOD Post Med  
FORM/CONDITION Earthwork/A  
SITE\_STATUS  
DESCRIPTION

Field boundary representing the parish boundary between East Williamston and St. Issells. Hedgebank and ditch/stream, very overgrown, supporting semi-mature standard trees. The boundary had been established by 1839. It may be earlier, as the form of the field system to the south of the Pentlepoir-Cold Inn road (PRN 43304) appears to suggest medieval origins.

PRN 43313  
NGR SN11100577  
NAME WOODEN  
TYPE FIELD BOUNDARY  
PERIOD Post Med  
FORM/CONDITION Earthwork/A  
SITE\_STATUS  
DESCRIPTION

Hedgebank and shallow ditch, very overgrown, supporting semi-mature standard trees. The boundary appears to have been established between 1800 and 1839, the field system shown in this area in a map of c.1800 being very different in appearance from that present on the tithe map, and today (major early C19 re-organisation?).

PRN 43314  
NGR SN112057  
NAME WOODEN  
TYPE FIELD BOUNDARY  
PERIOD Post Med  
FORM/CONDITION Earthwork/U  
SITE\_STATUS  
DESCRIPTION

Boundary, gone, now represented by a barbed-wire fence. The boundary appears to have been established between 1800 and 1839, the field system shown in this area in a map of c.1800 being very different in appearance from that present on the tithe map, and today (major early C19 re-organisation?).

PRN 43315  
NGR SN113057  
NAME WOODEN  
TYPE FIELD BOUNDARY  
PERIOD Post Med  
FORM/CONDITION Earthwork/U  
SITE\_STATUS  
DESCRIPTION

Boundary, gone, now represented by a barbed-wire fence. The boundary appears to have been established between 1800 and 1839, the field system shown in this area in a map of c.1800 being very different in appearance from that present on the tithe map, and today (major early C19 re-organisation?).

PRN 43316  
NGR SN11270580  
NAME PENTLEPOIR  
TYPE FIELD BOUNDARY  
PERIOD Post Med  
FORM/CONDITION Earthwork/A  
SITE\_STATUS  
DESCRIPTION

Hedgebank with some semi-mature standard trees. The boundary appears to have been established between 1800 and 1839, the field system shown in this area in a map of c.1800 being very different in appearance from that present on the tithe map, and today (major early C19 re-organisation?).

PRN 43317  
NGR SN11300581  
NAME PENTLEPOIR  
TYPE FIELD BOUNDARY  
PERIOD Post Med  
FORM/CONDITION Earthwork/U  
SITE\_STATUS  
DESCRIPTION

Boundary, gone before 1964, but visible as a positive cropmark on aerial photographs. The boundary appears to have been established between 1800 and 1839, the field system shown in this area in a map of c.1800 being very different in appearance from that present on the tithe map, and today (major early C19 re-organisation?).

PRN 43318  
NGR SN11420573  
NAME PENTLEPOIR  
TYPE UNKNOWN  
PERIOD Unknown  
FORM/CONDITION Cropmark  
SITE\_STATUS  
DESCRIPTION

Two faint, slender, positive cropmarks visible on aerial photographs. They appear to form two discrete circles, both approx. 15m in diameter, lying N-S, 5m apart, at the E end of field OS No. 3578. They are of unknown nature. The form is suggestive of bronze age ring-ditches (i.e.. derived from round barrows) but they are more likely to represent coal-mining bell-pits of probable post-medieval date.

PRN 43319  
NGR SN11430573  
NAME PENTLEPOIR  
TYPE FIELD BOUNDARY  
PERIOD Post Med  
FORM/CONDITION Earthwork/A  
SITE\_STATUS  
DESCRIPTION

So-called 'Pembrokeshire' hedgebank, with rubble dry-stone facing on both sides, recently built - presumably as a result of road-widening. However, it occupies the general line of a boundary which had been established, like the road that it defined (PRN 43320), before c.1800 when it was depicted on an estate map.

PRN 43320  
NGR SN1105  
NAME PENTLEPOIR  
TYPE ROAD  
PERIOD Post Med  
FORM/CONDITION Earthwork/A  
SITE\_STATUS  
DESCRIPTION

The road between Pentlepoir and Moreton, now part of the A478, which had been established before c.1800 when it was depicted on an estate map. Rees (1932) suggests that it may have medieval origins.

PRN 43336  
NGR SN10630595  
NAME MOUNTAIN PARK  
TYPE MINE SHAFT  
PERIOD Post Med  
FORM/CONDITION Earthwork/U  
SITE\_STATUS  
DESCRIPTION

Feature marked and labelled 'Old Shaft' on the OS map of 1891. Not marked on the OS map of 1907. There is now no physical evidence for this feature. It was probably associated with Beaconing Colliery which was established during the 19th century, and had probably closed by the later 19th century.

### 3.4 A review of the sources

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

#### 3.4.1 Documents

From a historical perspective, Pembrokeshire is fortunate in that much of its medieval primary source documentation was transcribed and published by Henry Owen in 1918 (Owen 1918). In addition, an extensive eyewitness account of Pembrokeshire was produced by George Owen in c.1600 (much of it reproduced in Miles 1994) providing a snapshot of the state of the county at the close of the Elizabethan age. The account details, *inter alia*, land-use, the economy, and an early description of the Pembrokeshire coal industry

Later primary sources such as Samuel Lewis's *Topographical Dictionary*, and traveller's accounts by eg. Richard Fenton, and Sir Richard Colt Hoare, provide much information on landscape development and the significance of landscape features.

The history of the coal industry in the region has been the subject of a comprehensive account by the historian Martin Connop Price (Price 1982).

#### 3.4.2 Historic maps

Historic maps can establish the antiquity and significance of landscape features and standing buildings, and can also show potential ground disturbance.

There are a large number of antique maps of the project area, eg. the 16th century Saxton map and Bowen's 1729 map, the latter showing the extent of contemporary coal-mining in the region. The 18<sup>th</sup>-19<sup>th</sup> century estate maps at the National Library of Wales and Pembrokeshire Record Office are of varying usefulness, but they do show field boundaries and within the project area they prove that a major landscape re-organisation occurred around Pentlepoir/Wooden in the early years of the 19<sup>th</sup> century. The Ordnance Survey Original Surveyors' Drawing of 1809-10, the tithe maps and schedules of 1839 and 1841 serve to qualify those changes.

Ordnance Survey 1:2500 First and Second Edition map cover, of 1888 and 1907 respectively, is complete, and provide additional information of the post-mining topography of the area.

Copies of relevant map sources are reproduced within this report, and form part of the project archive.

#### 3.4.3 Aerial photographs

Aerial photographs are an important source of archaeological information, particularly in rural areas. Buried features can show as crop- or parchmarks, and earthworks are strongly revealed when the sun is low on the horizon. When dated, they also indicate subsequent development. The Sites and Monuments Record for Carmarthenshire, Ceredigion and Pembrokeshire has an extensive collection of both vertical and oblique aerial photographs. They revealed evidence for a number of cropmark sites, as well as recent landscape change. The project deadline did not permit examination of aerial photographs held at the Royal Commission for Ancient and Historical Monuments (Wales), Crown Buildings, Plas Crug, Aberystwyth, Ceredigion.

#### *3.4.4 Field walkover*

The project area, ie. a 15 metre wide corridor, was fieldwalked on 1 August 2001. The condition of archaeological sites, features and deposits identified during the documentary research was noted and new sites, features and deposits were identified. All were recorded via photography and site notes, whilst their vulnerability was assessed. In addition, all field boundaries crossed by the proposed route were recorded via photography and site notes.

#### *3.4.5 Previous archaeological work*

No structured archaeological work has been carried out within the project area itself (and therefore no disturbance to potential deposits through archaeological excavation).

#### *3.4.6 Geotechnical work*

No geotechnical work has been carried out along the route as far as Cambria Archaeology are aware.

## APPENDIX 1

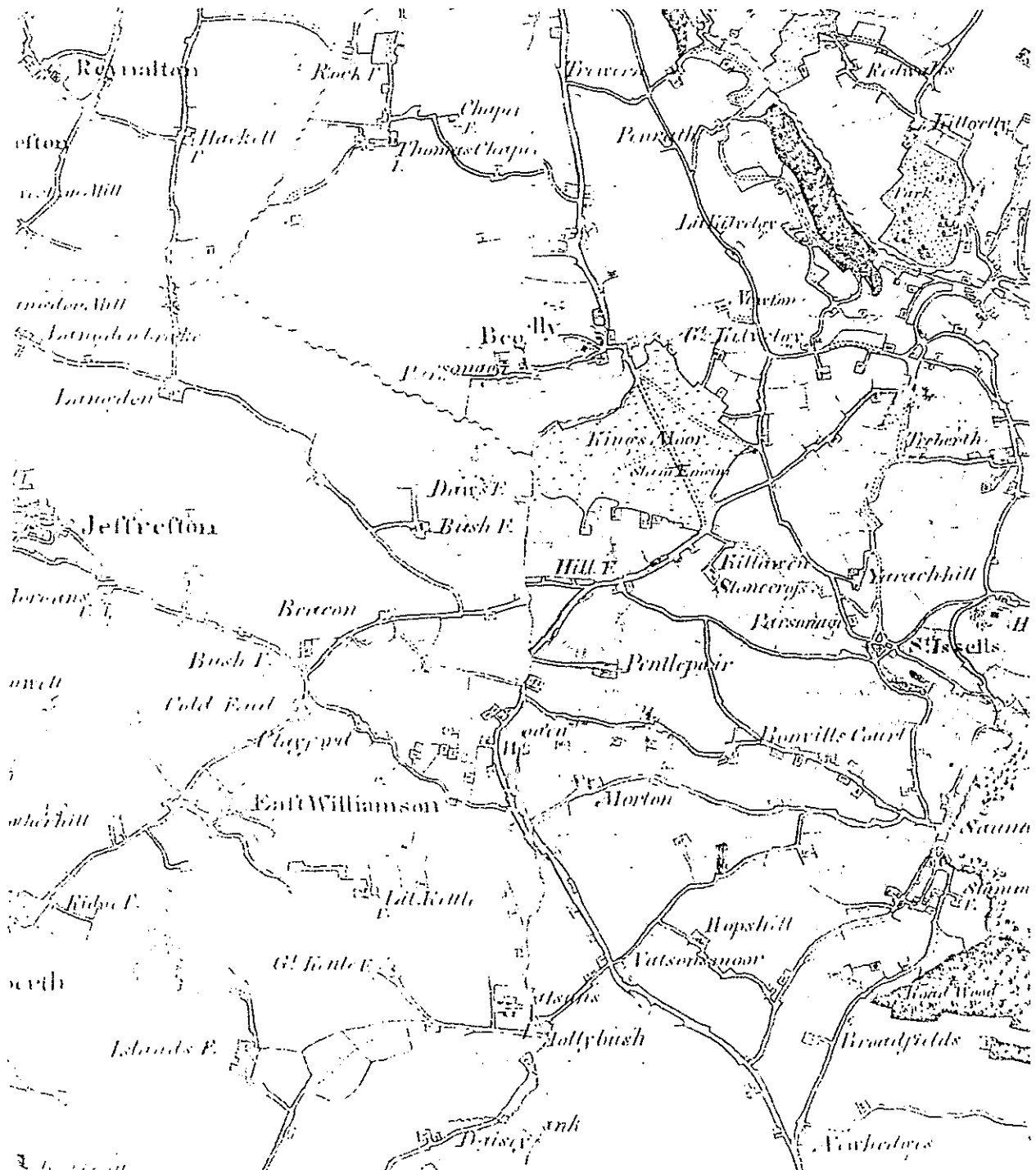
### Copies of selected map sources

Copy of National Library of Wales, 'Emanuel Bowen's Map of South Wales', 1729.

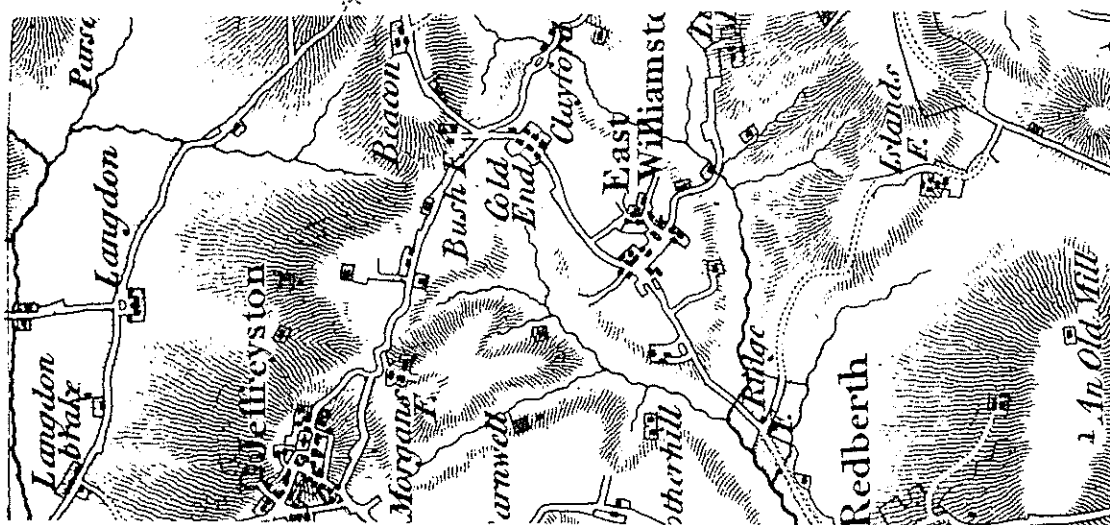
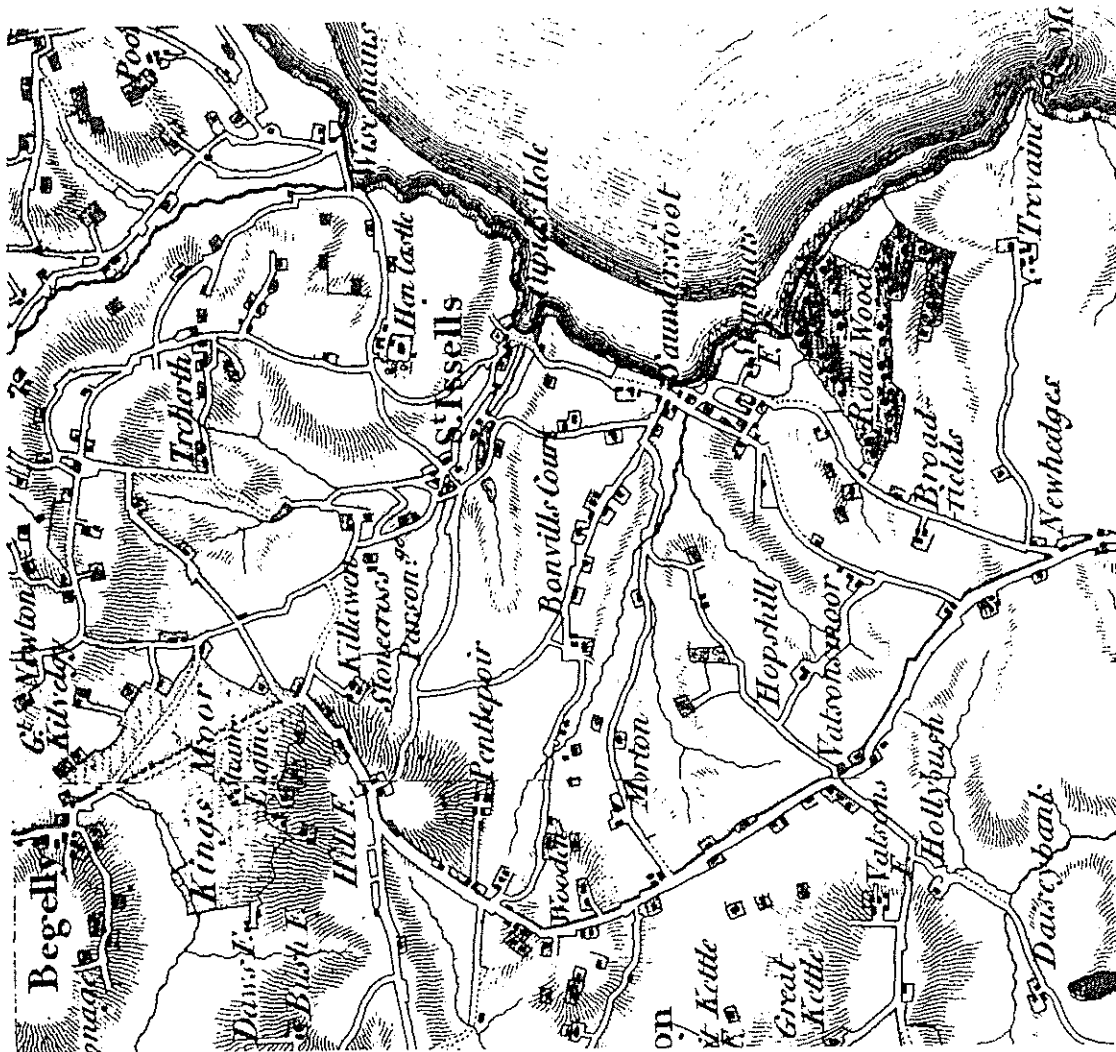




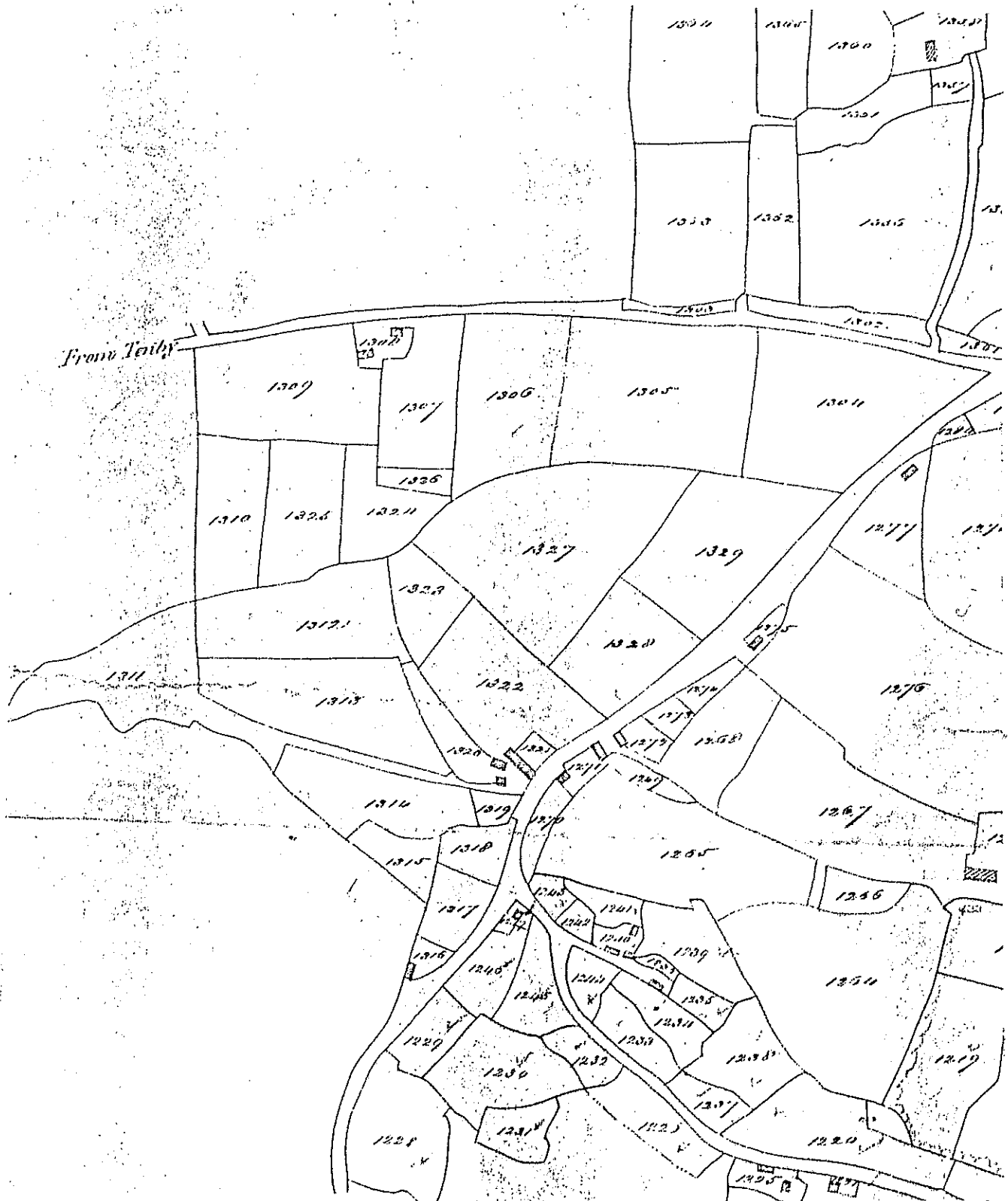
Copy of National Library of Wales, Ordnance Survey Original Surveyors' Drawings,  
2" to the mile, Sheet 181, 1809-10



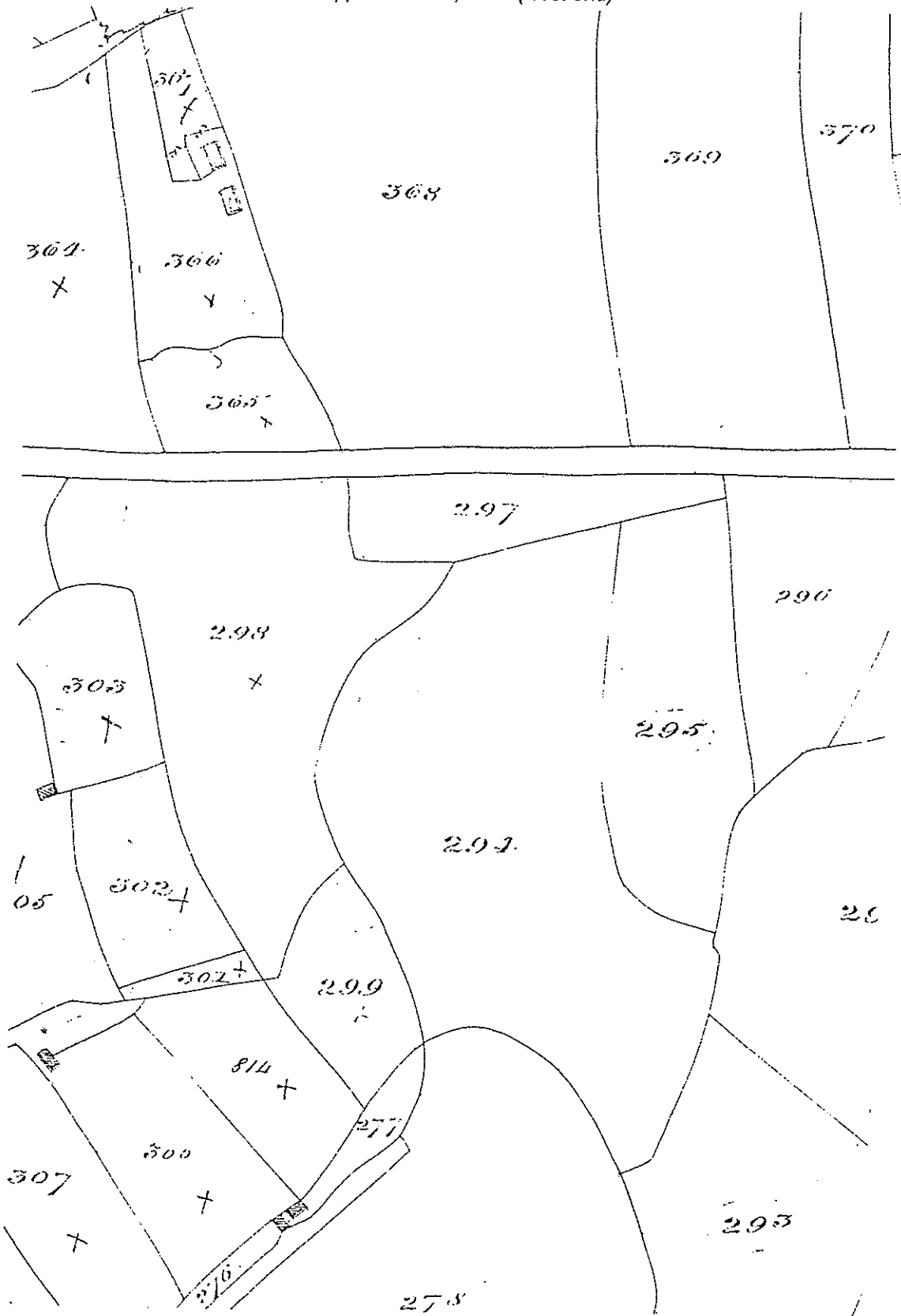
Copy of Ordnance Survey 1" to the mile, Old Series, Sheet 38, 1818



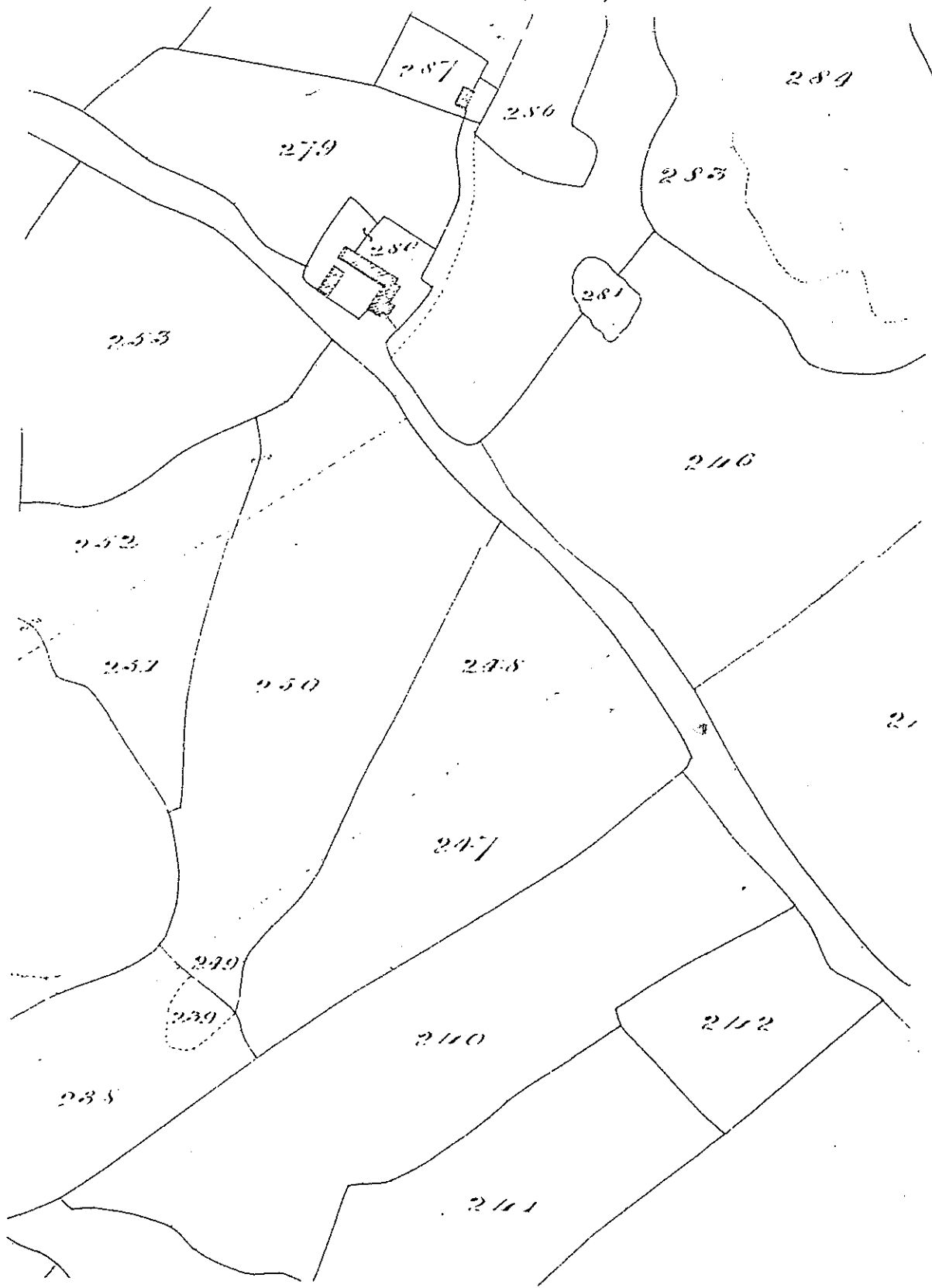
Copy of National Library of Wales, Parish of St Issells,  
Tithe Map and Apportionment, 1839



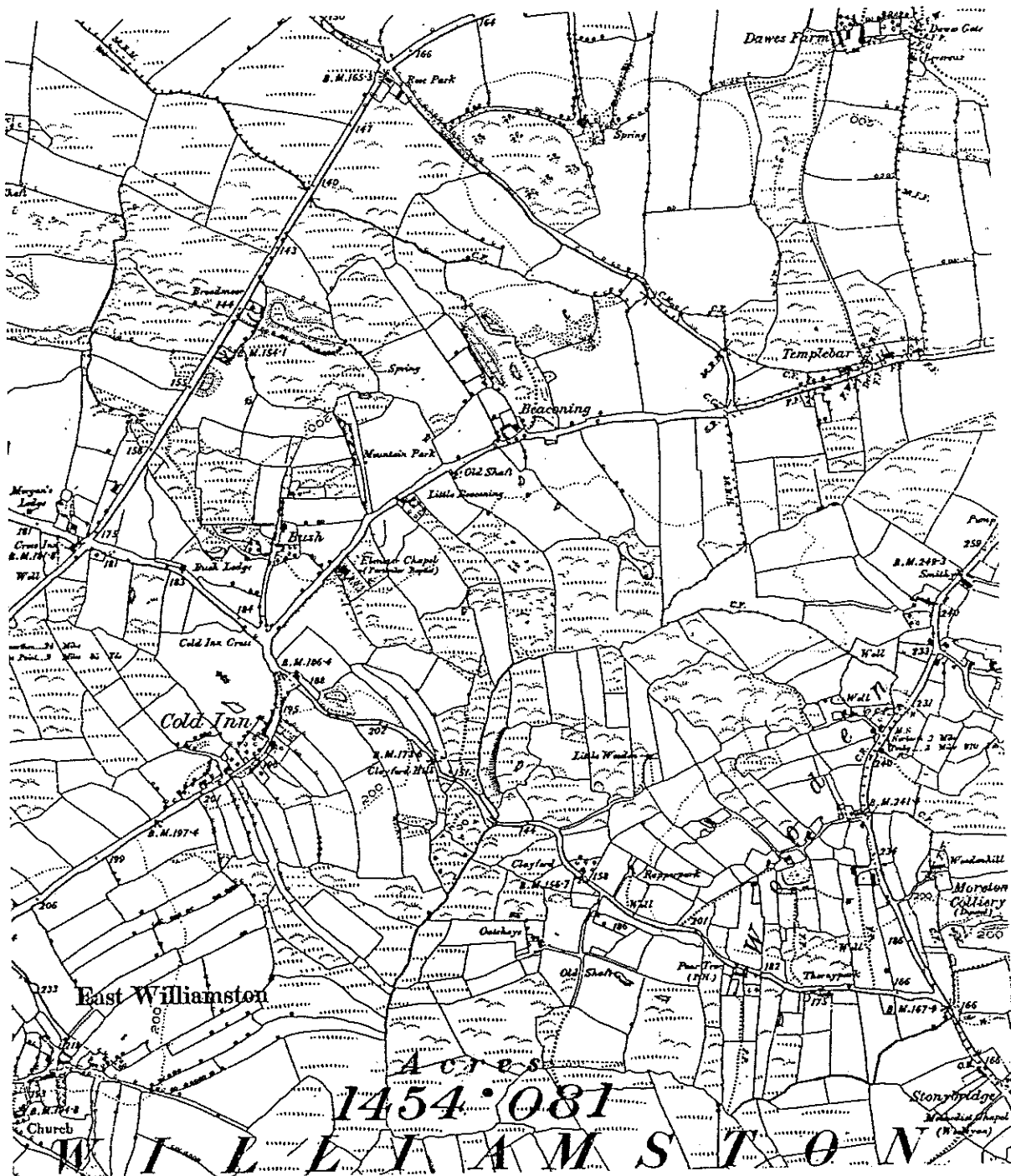
Copy of National Library of Wales, Parish of Begelly (Hamlet of East Williamston), Tithe Map and Apportionment, 1841 (west end)



Copy of National Library of Wales, Parish of Begelly (Hamlet of East Williamston), Tithe Map and Apportionment, 1841 (east end)



Copy of Ordnance Survey, 1:10560, Pembrokeshire Sheet XXXV.SW,  
First Edition, 1891



Copy of Ordnance Survey, 1:10560, Pembrokeshire Sheet XXXV.SW,  
Second Edition, 1908



**SPECIFICATION FOR  
ARCHAEOLOGICAL DESK-BASED ASSESSMENTS  
AT BROADMOOR FIRST TIME SEWERAGE  
AND PENTRELLWYN FIRST TIME SEWERAGE**

**Introduction**

This project specification has been prepared by Cambria Archaeology Field Operations in response to a request by Thomas, Morgan & Associates. It has been prepared in accordance with the *Standard and Guidance for Archaeological Desk-Based Assessments* (Institute of Field Archaeologists, 1994).

Cambria Archaeology Field Operations has considerable experience of this type of project and always operates to best professional practice. The conclusions will be based on a considered assessment of the collected data. Cambria Archaeology Field Operations has its own Health and Safety Policy, and all works are covered by appropriate Employer's Liability and Public Liability Insurances. Copies of all are available on request.

**1. Project objectives**

- 1.1 The examination of existing written, photographic and cartographic information to assess the character, extent, significance and vulnerability of the archaeological resource within the proposed development area.
- 1.2 To identify new archaeological sites, features and deposits within the proposed development area, and to assess their character, extent, significance and vulnerability.
- 1.3 The identification of sites, features or deposits that require further archaeological investigation to fully assess their character, extent, significance and vulnerability.
- 1.4 The preparation of a report fully representative of the information recovered during 1.1, 1.2 and 1.3, which places the archaeological resource of the survey area in its local, regional and national contexts.

**Documentary, cartographic and photographic research of the proposed development area**

- 2.1 Search of County Sites and Monuments Record and National Monuments Record for modern written and other records.
- 2.2 Search of cartographic and documentary sources held in national and county records offices and other repositories.
- 2.3 Search of local history collections for printed records.



- 2.4 Examination of vertical and oblique aerial photographic coverage.

#### **Field visits**

- 3.1 To review the current state of archaeological sites, features and deposits identified during the documentary research.
- 3.2 To identify new archaeological sites, features and deposits, or areas that may contain them.
- 3.3 To carry out rapid recording of archaeological sites, features and deposits by photography, site notes and sketch plans.
- 3.4 To assess the vulnerability of archaeological sites, features and deposits.

#### **4. Assessment and reporting**

- 4.1 Collation of information gathered during the documentary research and fieldwork into a project archive catalogued in accordance with the National Monuments Record's recommended procedures.
- 4.2 Assessment of the information gathered during the documentary research and fieldwork.
- 4.5 Preparation of a report fully representative of the information gathered during the documentary research and the fieldwork which details the potential impacts of the proposed schemes on the archaeological resource. Any legal constraints such as, Scheduled Ancient Monuments will be identified in the report. The report will be prepared in a form that will allow considered judgements to be made on the potential for further archaeological work on the site.
- 4.6 A copy of the report will be deposited with the County Sites and Monument Record and the National Monuments Record. These reports will become public documents six months after completion, unless otherwise requested.

#### **5. Timing**

- 5.1 Research and fieldwork will be carried out in late July - early August 2001, with reports produced in mid August 2001.

