

PETROPLUS LNG DEVELOPMENT ENVIRONMENTAL IMPACT ASSESSMENT

ARCHAEOLOGICAL DESK BASED ASSESSMENT



Report No. 2002/62

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JULY 2002

PETROPLUS LNG DEVELOPMENT – ENVIRONMENTAL IMPACT ASSESSMENT
ARCHAEOLOGICAL DESK BASED ASSESSMENT

By

Pete Crane BA Hons MIFA

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ARCHAEOLEG CAMBRIA

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

CAMBRIA ARCHAEOLOGY

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

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JULY 2002

This report has been prepared by Pete Crane

Position Senior Archeologist

Signature Date

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

Position Trust Director

Signature Date.....

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

**Petroplus LNG Development, Environmental Impact Assessment
Archaeological Desk-based Assessment**

Project Record Number 45243

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SUMMARY

This archaeological report has been prepared as part of the environmental impact assessment on the proposed Petroplus Liquid Natural Gas storage terminal at Waterston, Milford Haven. At least four significant or potentially significant archaeological sites were identified within the area of the proposed development. These include the site of the medieval settlement of Newton, the site of the possible medieval mansion of Newton, the site of a post-medieval 'model' farmstead and the possible site of a Bronze Age barrow or medieval castle mound. The later site is suggested by the field name of 'Mount Meadow' and aerial photographs appear to indicate the presence of a large circular feature at the eastern end of this field. Other identified sites included a circular building of post-medieval date and a mine watcher's post dating to the Second World War. In addition there are the sites of two possible wells along with field boundaries and a trackway. All of these features are of post-medieval date, although some could have earlier origins. A suggested programme of further archaeological work is proposed.

1. INTRODUCTION

1.1 Project proposals and commission

As part of the Environmental Impact on the proposed Petroplus Liquid Natural Gas storage terminal at Waterston, Milford Haven, Cambria Archaeology were commissioned by Posford Haskoning Limited, to undertake a desk-based archaeological assessment. The assessment was undertaken in July 2002.

1.2 Project aims and methodology

The aim of the project was to provide information about the likely impact of the proposed scheme on the archaeological resource. Cambria was initially provided with a detailed plan of the proposed development, together with the information that spoil from the excavations would be spread in the surrounding fields. In order to put the site in context, the study area included a 0.5km radius surrounding the proposed area of works. A search was made of documentary and cartographic records held at the County Sites and Monuments Record, the National Monuments Record and Milford Haven Museum for information on known sites. Field visits were made on 5th and 11th July to review known sites, identify any new sites, carry out rapid recording and assess the vulnerability of archaeological material that could be affected by the development.

1.3 Report outline

This report outlines the physical environment of the study area (Section 2) before summarising the archaeological resource (Section 3) and the likely impact of the proposed scheme on that resource (Section 4). Recommendations based on the results of Sections 3 and 4 are given in Section 5. Detailed supporting data are presented in a series of appendices.

1.4 Abbreviations used in this report

All sites recorded on the county Sites and Monuments Record are identified by their Primary Record Number (PRN) and located by their National Grid Reference (NGR). Any new sites were assigned a PRN and located by their NGR. References to primary cartographic and documentary evidence and published sources are given in brackets, full details are found in the bibliography.

2. THE STUDY AREA

The area of the proposed development lay between the southern edge of the Petroplus Storage facility (formerly the Gulf Refinery) and the north shore of Milford Haven (Figs 1 and 2). The Ordnance Survey grid reference is SM 930049. The location is just outside the Pembrokeshire Coast National Park but lies within the Cadw/ICOMOS 'Register of Historic Landscapes' Milford Haven Waterway (Cadw 1998).

The solid geology is Devonian Red Marl, overlain by Ridgeway Conglomerates south of the stream that crosses the study area. The drift geology reflects this underlying solid geology. The current land use is pasture, or rough pasture, with some areas of scrub and mature trees. There are two trackways that meet within the study area, one of which forms part of the Pembrokeshire Coast Path and continues as a footpath to the east. The land is agricultural quality grade 3 (OS 1977 map) and is of typical brown earths-Milford (OS 1983 map). Climatically the classification for the area is slightly cool and slightly moist, exposed and generally milder winters and cooler summers with longer, less intense growing seasons (OS 1978 map).

To the north the area is dominated by the storage facility that consists of oil and gas tanks surrounded by an earth bank and a tall fence topped with barbed wire. Adjacent to this fence, to the west of the area, there is a modern metalled trackway that curves to the southeast. This trackway is used as part of the Pembrokeshire Coast Path route that continues along the boundary of the storage facility to the east. On either side of the trackway there are mature or maturing trees surrounded by scrub. Within the undergrowth there is a considerable infestation of Japanese Knotweed.

The field to the south of this trackway is marked as Pigeon Meadow on the tithe map and schedule of c.1849 (Fig. 3). The northern part of this field has some scrub and slopes down to an overgrown stream (although presently not infested with knotweed). At the eastern end of this slope there is a platform and part of a dry-stone wall of a probable building (see archaeological site PRN 45244 below). Near the eastern boundary, and just to the south of the point where the stream enters the proposed development area, there is a concrete structure, possibly a cattle trough of roughly Second World War date. Also to the south of the stream there is no scrub except in a few places on the stream bank. The ground then rises to a tree- and hedge-lined trackway (see archaeological site PRN 45245 below). The field shows some undulations, several of which maybe the remains of former north-south drains or field boundaries.

To the southwest, part of a field known as The West Field straddles the eastern end of a broad ridge. It is under pasture and contained no obvious artificial features. To the west of the proposed development area is the large World War II mine depot complex of RNAD Blackbridge (PRN 28801), Milford Haven. This was not investigated.

South of the trackway, two fields, White Field and Richard John's Park (field), are of somewhat rough pasture. Both fields slope slightly and have small natural looking undulations. The southern part of White Field drops steeply down towards the estuary where it was formerly known as Hill field or fields. No access was gained to the jetty

compound that contains the location of a mine watcher's post (see archaeological site PRN 34964 below). This was identified from aerial photographs but not visited during the 1997 fieldwork for the Cadw-funded coastal survey (Murphy and Allen 1998). A post-medieval well (PRN 45379) is also located within the compound.

To the east of Richard John's Park is Mount Meadow (see archaeological site PRN 4507 and also cropmark PRN 45247). This field straddles a low broad ridge running east-west. The higher part of the ridge is at the eastern end of the field. This field again is of slightly rough pasture and there are a number of small undulations across the field, all of which could be natural.

To the north of Mount Meadow and on the other side of the footpath are the sites of the former farmstead or mansion of Newton and a later farmstead (see archaeological sites PRN 19990 and 45248 below). This area is extremely overgrown with mature trees, scrub, nettles and probably some Japanese Knotweed. A high wire fence topped with barbed wire surrounds the area. Although access into this compound was not possible, a number of large undulations were just visible and they appeared to be artificial.

To the east of Newton Farmstead and Mount Meadow is a field, simply named as 'Field' on the tithe schedule. It is relatively level with a drop down towards its southern edge. The current field use is pasture. South of this field there is an area of scrub in the vicinity of a former cottage (see archaeological site PRN 45246 below). The scrub was too dense for access or to see any features. To the west of the field is the site of a former searchlight battery (see archaeological site PRN 35086 below). This was identified from aerial photographs but was not visited during coastal survey (Murphy and Allen 1998) or seen on this field visit.

The field boundaries are all Pembrokeshire hedge banks, some with stone facing. The hedges on top of these banks have either had little or no maintenance recently and are overgrown, containing a wide variety of plants

3. SUMMARY OF THE ARCHAEOLOGICAL RESOURCE

The study area lies within two of the historic character areas defined as part of the Historic Landscape Characterisation exercise undertaken by Cambria in 2001-02 (Murphy and Ludlow 2002). These two relevant extracts are included in Appendix 1 and they provide a useful general historic background.

Prior to this project there were three known sites within the area of proposed groundworks and a further two sites just outside. Several further sites have now been added. The full list of sites is as follows:

Sites within the proposed groundwork area

PRN 4507 (SM93050480) - The field place name, Mount Meadow (from c.1849 Llanstadwell Tithe Map) suggests the former presence of a round barrow (Bronze Age) or Motte (medieval castle mound). Aerial photographs suggest a possible site in the eastern area of the field (see also PRN 45247 below). However, there are a number of undulations and the potential site could be elsewhere within the field.

PRN 12904 (SM930048 - approximate location only – the site could cover a significant area) - The medieval settlement of Newton recorded on documents. The earliest dated document is 1407 (Charles 1992) from a catalogue of Ancient Deeds (Public Record Office, London). It is also shown on Saxton's Map of 1578 and Charles Owen's Map, first published in 1607. It was not a large settlement and was probably focused on the spring and the site of the later farmstead of Newton. By the time of the tithe map c. 1849 there were only three cottages left together with the farmhouse. The field system on the tithe map and earlier large-scale OS maps appears to indicate the remains of a medieval strip field system around Newton. There appears to be further indications of this on aerial photographs (particularly 3G/TUG/UK/93 frame 6028), although it is possible that these could be modern cultivation marks.

PRN 19990 (SM931049 - exact location unknown) - A possible medieval or post-medieval mansion recorded from documents. 'Newton was once the residence of the princely family of Craddock, lineally descended from Howel Dda, lords of this place, whose descendent Sir Richard dropped Craddock took the name of Newton', (Fenton 1811 p152). Sir Richard gave up both his Welsh name and holdings and died in 1444 and was buried in Bristol. One of his descendents was Sir Isaac Newton (Jones 1996)). There is a suggestion that there was a residence of some status in the medieval period. Fenton (1811 p152) states that there was no evidence for an ancient house but the owner Lewis Child had a comfortable house and good land. For the later farmstead see PRN 45248 below.

PRN 34964 (SM3908604553) - Mine watchers post, Second World War (located within the proposed pipeline corridor). This was identified by Roger Thomas (Thomas 1994, RT 159), but it was not visited/seen during 1997 coastal survey fieldwork (Murphy and Allen 1998). It was seen during this project, but no access was possible as it is within the fenced-off areas of the jetties. It is very overgrown with ivy. Only the western end with a doorway is visible. It still stands to its full height of c. 1.7m and 2m wide. Its length could not be determined. The walls are of

brick and mortar and the flat roof is of concrete. It is located about 40m west of field boundary junction to east and 1m south of wire fence of jetty compound. The grid reference has been revised.

PRN 45244 (SM92880500 - approximate location) - A possible building or building platform that includes part of north-south wall of dry-stone construction was identified during the field visit. The site is in approximately the same location as a circular building marked on OS 25 inch first edition (OS 1887) and second edition (OS 1908). This potentially increases its archaeological value. The platform would appear to be partly artificial and may relate to a wooded enclosure marked 252 on tithe map.

PRN 45245 (SM92350505-SM92950487) - Medieval or post-medieval trackway. This appears to form part of a post-medieval route along the north side of estuary that passed through Newton. First recorded on OS original drawings 1809-10. However, the route is likely to originate in the medieval period.

PRN 45247 (SM930477 - approximate centre) - Large circular cropmark in eastern area of Mount Field (PRN 4507). It appears as an almost complete circular scorch mark, c 50m diameter, on aerial photographs 1945 RAF 106/G/3366 and as an arc on Meridian 1995//190-200 17901-2(Photo 1). This location is on the highest part of the ridge before it levels out to the east. This is a prominent location with views down the Haven to the west. This maybe related to the place name evidence (PRN 4507). This suggests a possible archaeological site, but this is not certain.

PRN 45248 (SM 93090488) – Post-medieval farmstead identified from documentary sources. This appears to be on the site of the former possible mansion (see PRN 19990 above). Lewis Child owned this farm in the early 1800s (Fenton 1811, p152). He was among the leading agricultural improvers in the late 1700s and early 1800s (Howell 1987, p314). From the slightly later tithe map (c. 1849) it can be seen that there were a number of buildings around the farmhouse, which probably reflect the farming improvements made, by Lewis Child. The Newton estate remained in the Child family until 1871. The farmhouse and buildings appear to have survived relatively intact (Photo 1) until it went out of use when the adjacent oil refinery was built in the 1960s. The historical context of the farm perhaps gives it a greater significance than most other farms of the post-medieval and modern period

PRN 45379 (SM92930496) – Post-medieval well identified from map evidence. It is indicated on first and second edition OS maps (OS 1867 and 1908). Its location is now in an overgrown area and it was not seen during the field visit.

In addition to these known or possible sites, the current field boundaries have mature hedges, and or vegetation. These boundaries are nearly all shown on the tithe map and they are therefore of historical importance.

The site of the spring (SM92950497 approx.) at Newton (see tithe map, Fig. 3) is a potential location for prehistoric activity, such as a Bronze Age burnt mound or a prehistoric settlement, especially given the commanding view down the haven.

However, any such site or sites could have been damaged or destroyed by later activity. The location is now very overgrown.

Sites just outside the proposed groundwork area

PRN 35086 (SM93220460) – World War II Searchlight Battery identified by Roger Thomas (Thomas 1994, RT 160). It was not visited/seen during the coastal survey fieldwork in 1997 (Murphy and Allen 1998). Nothing but vegetation was seen at the given location during the field. However, no access was possible as it was behind the security fence.

PRN 45246 (SM93180459) – Post-medieval cottage site. Described as two cottages and gardens in the tithe schedule and the buildings were still shown on OS 1964 map. The area is now overgrown.

PRN 45380 (SM93120453) – Post-medieval well recorded from map evidence. It is indicated on first edition OS but it is located within the oil complex and the site was not visited. It probably served a cottage to the southeast (indicated on the OS first and second editions but not on tithe map), rather than the two cottages (PRN 45246) to the north.

Sites further outside of the groundworks area

Nearly one kilometre to the east of the centre of the proposed development site are nine probable post-medieval sites and one Second World War site at Newton Wear. A similar distance to the west is the large mine depot at RNAD Blackbridge Milford Haven PRN 28801 (Murphy and Allan 1998) – this site contains over 100 individual elements. However, neither of these areas are directly relevant to this proposed development.

4. IMPACT OF PROPOSED SCHEME ON THE ARCHAEOLOGICAL RESOURCE

All of the known or potential archaeological sites within the proposed groundworks area are likely to be destroyed or their archaeological integrity significantly compromised. The exact location, extent and survival of many of these sites are unknown. Therefore it is impossible to place an archaeological value on them without further field evaluation.

The area is already dominated by the oil and gas storage tanks, and the proposed new tanks and pipelines will not noticeably increase the visual impact on the remaining historic landscape. However, it is important that any soil dump areas do not impinge on the adjacent sites, including the field boundaries, without appropriate action.

5. RECOMMENDATIONS

Introduction

There are a number of significant archaeological interest or at least sites of potential archaeological significance within the study area. Of particular interest is the site of the medieval mansion or dwelling of Newton with its historical association with the Craddock family and the subsequent establishment of the farmstead belonging to Lewis Child. As well as the direct archaeological interest of the sites themselves and the likely survival of below ground remains, both sites also have important historical associations. As indicated above, a direct descendent of the Craddock family was Sir Isaac Newton, while Lewis Child was an important agricultural reformer of his day. These historical associations give the site a wider historical value and any potential archaeological work in advance of the proposed development could perhaps be used as an opportunity for promotional material.

Although the archaeological preference is always to leave sites undisturbed if possible, it is unlikely that this scheme could proceed without causing archaeological disturbance. Consequently, it is likely that archaeological constraints will be imposed on this development. The following recommendations outline a suggested programme of works considered necessary to address the known or potential archaeological sites. However, as part of the planning process, the archaeological advisor to the local Authority will make the final recommendations regarding the scope and extent of any future archaeological works.

Suggested further archaeological works

PRN 45248/PRN 19990, post medieval farmstead and possible site of medieval mansion – Prior to the development it is recommended that the site of the farmstead (PRN 45248) and the probable the site of the medieval mansion (PRN 19990) should be carefully cleared of vegetation and a full topographic survey of any visible standing remains should be made. This should be accompanied by detailed, background historical research. If possible, it is highly recommended that the site should then be avoided during the preparation of the development proposal (preservation *in situ*). If this is not possible, it is likely that there will be a requirement for full excavation (preservation by record) of any part of this complex that will be directly affected by the development.

PRN 4507/PRN 45247, possible barrow or Motte. – It is recommended that further field evaluation needs to be undertaken in the area of the cropmarked feature and possibly elsewhere within 'Mount Meadow'. This should take the form of geophysical survey followed by trial excavation trenches. Depending on the results of this field evaluation, there maybe a further requirement for a general archaeological watching brief during the initial groundworks within 'Mount Meadow', the full excavation of specific features or even preservation *in situ*.

PRN 12904, the medieval settlement of Newton – The precise location and extent of the settlement is at present unknown. The initial stage of any further archaeological works should include the plotting of all possible earlier field systems and other

features identified from aerial photographs. There may also be a requirement for further field evaluation before a final decision can be made on the scope of any further archaeological works. At the very least any further archaeological works is likely to include an archaeological watching brief during groundworks associated with the initial stages of the development and a contingency for salvage excavation.

PRN 34964 Mine watchers' post, Second World War - It is recommended that this structure is cleared and that a rapid record is made prior to the commencement of the development.

PRN 45244 Building? Building platform? – It is recommended that further field evaluation is undertaken, involving trial trenches, should be undertaken before a final decision can be made on the scope of any further archaeological works

PRN 45245 Medieval or post medieval trackway – A rapid survey and photographic record should be undertaken prior to the commencement of the groundworks. Care should be taken not to disturb any elements of this feature that will not be affected by the development.

PRN 45379 possible post medieval well – the vegetation should be cleared to see if site can be located and rapidly recorded.

Current field boundaries and mature hedges – rapid record should be made of all sections to be affected by the proposed groundworks.

The site of the spring (SM92950497 approx.). – Particular attention should be paid to this area as part of the archaeological watching brief during the groundworks.

Should the Pembrokeshire Coast Footpath be re-routed near to the mine depot at RNAD Blackbridge Milford Haven PRN 28801 then perhaps a display board should be commissioned to explain its significance along with the other military works in the immediate area.

During the initial groundworks it is essential that any mechanical excavators are fitted with toothless ditching buckets to facilitate the identification of archaeological features. This should be incorporated into the method statement for the programme of works.

Although this is not directly an archaeological issue, it was noted that there was a considerable amount of Japanese knotweed on the site. The growth of this vegetation can adversely affect the historic landscape and as it is illegal to cause this weed to spread. Its disposal can also add to the cost of any archaeological work. It is recommended that further advice be sought from Pembrokeshire County Council's Countryside Officer (Sean Tilling, County Hall, Haverfordwest, Pembrokeshire SA61 1TP. 01437 775362).

APPENDIX ONE: HISTORY OF THE SITE

Extracts from report by Ken Murphy and Neil Ludlow (Murphy and Ludlow 2002)

HISTORIC LANDSCAPE CHARACTER AREA: 310 GULF OIL REFINERY

GRID REFERENCE: SM 933052

AREA IN HECTARES: 199

Historic Background

Apart from a very narrow strip of land comprising sea cliffs and cliff top, this historic landscape character area is entirely taken up by an oil refinery and a small industrial estate. Prior to construction of the oil refinery this was an agricultural landscape, almost entirely lying within Llanstadwell parish. It occupied the medieval manor of Waterston, which was a 'mesne' lordship of the Lordship of Haverford. On the tithe map of 1849 a very distinct landscape of enclosed strip fields surrounded Waterston village, including the area to the south of the village now occupied by the refinery. These strip fields were clearly the enclosed remnants of the open fields of Waterston manor and township. Later maps show the strip fields, but during the later 19th century and the 20th century some had been merged into larger, squarer enclosures. Elsewhere the pre refinery landscape comprised regularly-shaped fields associated with Newton Farm – labelled Newton Demesne on the tithe map. These fields and farm no longer exist. Construction began on the Gulf refinery in 1966, and the first tanker unloaded crude oil in 1968.

Description and essential historic landscape components

This historic landscape area comprises a late 20th century oil refinery. It includes all the installations, including jetties for the unloading of crude oil and a mainline railway. Also included in this area is a small industrial estate. A short section of sea cliff and cliff top between the refinery and the sea is the only component of the landscape not built upon.

This is a very distinct area with clear boundaries. It stands in sharp contrast to the surrounding farms and villages.

Conservation priorities

Some consideration will need to be given to the nature of land restoration following decommissioning of the refinery. It may also be appropriate to record the refinery prior to decommissioning and its removal.

Sources: McKay 1993; Llanstadwell Parish Tithe Map, 1849; Ordnance Survey 6" to 1 mile 1st Ed. XXXIII, XXXIX, 1874; Richards 1969

HISTORIC LANDSCAPE CHARACTER AREA: 322 SCOVESTON - BURTON

GRID REFERENCE: SM 926082

AREA IN HECTARES: 2550

Historic Background

A large character area lying the north of the Milford Haven waterway, within the ecclesiastical parishes of Llangwm, Llanstadwell, Rosemarket and Steynton. Much of the area formed part of the medieval Manor of Pill, part of the larger Manor (or Sublordship) of Pill and Roch, which was created under the de Roches between 1100 and 1130. Its relationship with the Lordship of Haverford, of which

it was notionally a member, was always a matter of dispute. Pill was a large and important manor with a *caput* at the head of Castle Pill (pill is a local term for a tidal inlet) at the west end of the area – possibly on the site of an iron age hillfort and later a Civil War defence. The southeast end of this area lies within the parish of Burton, which represented a detached portion of the Lordship of Pembroke. Burton parish church was present by 1291. The Manor (and parish) of Llangwm, to the north, was a holding of the de Vales until a Roche kinsman, Gilbert de la Roche, acquired it in the late 13th century. The Roches granted ‘six bovates of land in Studdolph, and five acres of land with half a carucate of land in the same township’ to the Tironian Pill Priory in its late 12th century foundation charter. Hayston was present in the 14th century. The present settlement pattern appears to be of relatively late origin as only a few of today’s farms and landholdings can be identified with medieval manors and townships. Scoveston is not recorded until the mid 15th century, while the remainder – Jordanston, Norton, Milton, Westfield etc – were not recorded until the 16th- and 17th-centuries. Some, such as Oxland, are 18th century in origin. Nevertheless, these different periods of origin are not reflected in any differing tenurial arrangements, and a homogenous pattern of enclosure has resulted. By the time of the first estate maps in the late 18th century and the tithe survey in the 1840s the landscape of today had been established. There are hints that at least parts of the area had evolved from open field systems. For instance, enclosed strip fields are shown on estate maps on the east side of Castle Pill and close to the very small village of Burton. No traces of these strips now remain. The area has remained primarily agricultural but its military potential has long been apparent. Castle Pill was fortified by Royalist forces in 1643, with an 18 gun fort garrisoned by 300 men. The massive inland Scoveston Fort was the only defensive work to be constructed after the 1860 Royal Commission report on defence proposed a ring of forts around the Milford Haven waterway to prevent it from landward attack. Railways also crossed the area, to Neyland in 1856 and Milford Haven in 1859.

Description and essential historic landscape components

This very extensive historic landscape character area extends from the town of Milford Haven in the west, along the northern shore of the waterway past Neyland and up to and past the village of Llangwm. Despite its size it is a remarkably coherent landscape consisting of large farms, dispersed houses and large, regular fields. Although it lies close to Milford Haven waterway, this area only directly borders the sea at a few locations near Burton and Llangwm. Pasture is the dominant land-use, with a little arable land particularly in the western part of the area. There is virtually no rough or waste ground. Apart from deciduous trees on steep valley sides, such as at Castle Pill and Barnwell Pill, in some sheltered hollows, and on the banks of the Milford Haven waterway, this is not a landscape characterised by woodland. Occasional trees are also present in some hedgerows. Earth banks topped with hedges are the main boundary type. Hedges are generally well-maintained, although in the northern part of the area some are becoming overgrown and a few are derelict. Burton Mountain and Williamston Mountain, once one of the few open areas on the Milford Haven waterway is divided into large fields by banks and hedges. Apart from Burton village the settlement pattern is one of dispersed farms and houses. There are several mansions and large farms within this area, including Jordanston Farm, Williamston, East Hook and Studdolph Hall. Some of these houses are of some antiquity, such as East Hook, a 17th century and 18th century house next to the ruins of a 16th century house, and others indicate the minor gentry origins of the larger farms, such as the three storey Georgian house of Jordanston. Some of the larger houses, Castle Hall for example, have been demolished. Attached to most of these large houses are ranges of stone-built, 19th century, and sometimes earlier, outbuildings, often arranged around a courtyard, and sometimes set some distance from the dwelling. The wide range of buildings at Castle Hall Farm are a good example of this type. Gardens and parkland survive at some of these larger houses. Interspersed across the landscape are smaller farms. The houses take a variety of forms, but in the main they date to the 19th century, and are stone-built, rendered, slate-roofed, and broadly in the Georgian tradition. Many have been modernised. Older farmhouses and modern farmhouses are also present, presumably replacements of earlier structures. Old outbuildings are also stone-built, but usually of just one or two ranges. Most farms of this size have large ranges of modern steel and concrete outbuildings. Dispersed modern houses are present in this area, but are not a defining characteristic, apart from west and north of Jordanston. Here mid 20th century semi-detached houses in a fairly dense scatter are a distinct feature of the landscape. At Burton, the only village within this area, the medieval parish church of St Mary together with a cluster of late 18th century and 19th century dwellings is surrounded by late 20th century housing, including a small estate. Other buildings include the massive remains of Scoveston Fort, an element of the mid 19th century military defence of the Milford Haven waterway. Given the large extent of this area it is not surprising that there are a large number and variety of archaeological sites. However, these do not greatly characterise

the landscape. Of interest are: several prehistoric funerary and ritual sites, including standing stones, chambered tombs and round barrows, an iron age fort with the slight remains of a Civil War fort, several prehistoric find spots, medieval mill and windmill sites, and World War 2 defensive features.

To the south and east the boundary of this area is very well-defined against the Milford Haven waterway, the town of Milford Haven, the town of Neyland, an Oil Refinery and a large tract of woodland. On other sides this area is very difficult to define, and any boundary should be considered a zone of change rather than hard-edged.

Conservation priorities

The majority of the historic landscape components in this area are well managed and in good condition. However, the condition of field boundaries should be monitored to ensure no deterioration takes place. Currently the boundary between this area and the neighbouring urban areas is precise. Careful management of this urban fringe should continue to maintain the present distinction. Some consideration should be given to the possible re-used of those historic farm buildings that may be coming to the end of their agricultural life.

Sources: Burton Parish tithe map 1840; Charles 1992; Jones 1996; Llangwm Parish tithe map 1841; Llanstadwell Parish tithe map 1849, Llanstadwell Third Part tithe map 1830; Ludlow 2002; NLW PICTON CASTLE VOL 1; NLW R .K. LUCAS NO. 17, 19 & 25; Page 2001; Price 1986; Pritchard 1907; PRO D/RKL/1194/4; PRO RKL/841; Rees 1975; Rosemarket Parish tithe map 1843; Saunders 1964; Stainton Parish tithe map 1843

APPENDIX TWO: PRIMARY CARTOGRAPHIC AND DOCUMENTARY SOURCES

Anonymous, Mid 18th Century map of Pembrokeshire and Carmarthenshire in Milford Haven Museum

Kip W, 1607, Map of Pembrokeshire based on George Owen's survey
Lewis Morris, 1801, A Plan of Milford Haven in the County of Pembroke

Ordnance Survey 1809-10 Original survey drawings 2 inch to mile sheets 181-2

Ordnance Survey 1887 First Edition 6 inch Pemb XXXIII SW

Ordnance Survey 1887 First Edition 6 inch Pemb XXXIII SE

Ordnance Survey 1887 First Edition 6 inch Pemb XXXIX NE

Ordnance Survey 1887 First Edition 25 inch Pemb XXXIX, 2

Ordnance Survey 1887 Second Edition 6 inch Pemb XXXIX NE

Ordnance Survey 1908 Second Edition 25 inch Pemb XXXIX, 2

Ordnance Survey 1976 Geological Map Haverfordwest Sheet 228 Drift

Ordnance Survey 1976 Geological Map Haverfordwest Sheet 228 Solid

Ordnance Survey 1977 Agricultural Land Classification 1:250000

Ordnance Survey 1978 Soil Survey of England and Wales Bioclimatic Classification

Ordnance Survey 1980 1:25000 SM 80/90

Ordnance Survey 1983 Soil Survey of England and Wales 1:250000

Ordnance Survey card index for PRN 4507 No trace of antiquity

Saxton C 1578 Map of Pembrokeshire

Speed John Map Pembrokeshire (Newton indicated)

Tithe Map (c. 1849) and schedule Llanstadwell Parish

APPENDIX THREE: AERIAL PHOTOGRAPHIC SOURCES

Held at Cambria Archaeology Sites and Monuments Record

Meridian

1995//190-200 17901-2

Held at RCAHM Wales Aberystwyth

RAF verticals

Library No	Sortie No	Frame No
417	106G/UK/1625	6354-6
411	106G/UK/1629	3133-4
1910	58/2985	245-6
337	106G/UK/1425	3366-68
	106G/UK/1399	4208
270	3G/TUG/UK/93	6028

RAF obliques 1950 540/396 UK 3678 no 0059 Newton farm surrounded by trees and cottage to NW still standing

On loan from Air Photographs Library of Wales, Cardiff. Large scale and recent

Library No	Sortie No	Frame No
7804		184-186, 162-164
8301		5083: 169-171
7741		34-36
9313		221-222
8514		73
	OS 93-128	42-56
	OS 95-120	186-191

APPENDIX FOUR: CATALOGUE OF RESEARCH ARCHIVE

The project archive has been indexed and catalogued according to National Monument Record (NMR) categories and contains the following:

- A. Copy of the report.
- B. Notes from site visits.
- D. Site photographs - catalogue, colour slides.
- G. Documentary data, including primary and published sources.
- I. Draft copies of report.
- J. Publication drawings.
- M. Miscellaneous correspondence

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

The project archive is currently held by Cambria Archaeology Field Operations, Llandeilo, as project number 45243.

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Arch Camb 3rd series Vol 11 p25

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Thomas Roger J C 1994 *Survey of 19th and 20th Century Military Buildings of Pembrokeshire*. Unpublished report on behalf of the Pembrokeshire Coast National Park, the Welsh Development Agency and Cadw. Copy held in Cambria Archaeology SMR

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No mention of Newton



Photo 1: Newton Farmstead. 1955. View South (Meridian1955//190-200 17901)