

PROJECT GREENWIRE, PEMBROKESHIRE: ARCHAEOLOGICAL DESK-BASED ASSESSMENT 2013



Prepared by
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For: ARUP



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**PROJECT GREENWIRE,
PEMBROKESHIRE:
ARCHAEOLOGICAL DESK-BASED
ASSESSMENT 2013**

Gan / By

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**PROJECT GREENWIRE, PEMBROKESHIRE:
ARCHAEOLOGICAL DESK-BASED ASSESSMENT**

SUMMARY

A number of sites are being investigated as part of a proposed scheme to export electricity from Ireland to the UK. This report discusses one of those proposed sites, in the Rhoscrowther region of south west Pembrokeshire. DAT Archaeological Services were commissioned by ARUP to undertake the archaeological desk-based assessment in October 2013.

The archaeological assessment has been a primarily desk-based study of the site area supplemented with a site visit and walk-over survey. The development will consist of a Drilling Site (for landfall), a Converter station Site, and a cable trench linking the two. A search area of 1.5km from a centre point on each area and 200m either side of the cable trench was established to obtain suitable information to provide an archaeological and historical background for the assessment.

The development is located within an historic landscape with known archaeological activity dating from the Mesolithic period right through to the 20th century. Two records on the regional HER are located within the Proposed Development Boundaries. The first is in the area of the Converter station, which relates to former garden features. The second, located in the Drilling Site, is a concrete platform associated with support structures for a nearby Anti-Aircraft Battery. The Anti-Aircraft Battery is a Scheduled Ancient Monument but the concrete platform lies outside the scheduled area.

The southern part of the Drilling Site lies within the 'Broomhill Burrows' SSSI (Site of Special Scientific Interest); the 'Castlemartin Coast' SPA (Special Protection Area), and also the 'Limestone Coast of South West Wales' SAC (Special Area of Conservation). The whole of western half of the development lies within the Pembrokeshire Coast National Park.

The proposed development will have a physical and visual impact on the known archaeological resource where there are proposed groundworks, and these should be given appropriate consideration as part of any planning application. Given the large number of sites relating to prehistoric activity in this region, there is also a potential for the development to uncover hitherto unknown archaeological remains, especially in terms of prehistoric flint scatters.

1. INTRODUCTION

1.1 Project Proposals and Commission

1.1.1 A number of sites are being investigated to help inform and develop a planned scheme of works related to the export of electricity from the Republic of Ireland to the UK. The proposed scheme which this desk-based assessment considers includes a Drilling Site for landfall of undersea cabling, a convertor station and a cable trench linking the two.

1.1.2 The Drilling Site is located in a field centred on NGR SM 8852 0061 to the east of the B4319. The convertor station is located in a field centred on a point at NGR SM 9300 0198. The cable trench follows a route roughly east-west leading from the Convertor Station Site before turning southwards towards the Drilling Site at NGR SM 8860 0124.

1.1.3 DAT Archaeological Services, part of Dyfed Archaeological Trust (DAT) was commissioned by ARUP to undertake an archaeological desk-based assessment of the area, to help the client determine the most appropriate siting for the development.

1.1.4 No brief for the required desk-based assessment was prepared as the proposed development is one of several sites under consideration and is not as yet within the planning process. This document will inform the client as to the suitability of this site for further consideration.

1.1.5 The archaeological assessment has been a primarily desk-based study of the site area, identifying any known archaeological or historical sites within the site and its environs, identifying potential setting impacts on Scheduled Ancient Monuments (SAMs) and listed buildings (LBs), as well as identifying any Historic Landscape Areas (HLCAs) that may be affected by the proposals. This has been supplemented by a walkover survey of the proposed development areas.

1.1.6 The specification is in accordance with the *Standard and Guidance for Archaeological Desk-Based Assessments* (Institute for Archaeologists (IfA), 1994, revised 2008).

1.2 Scope of the project

1.2.1 The assessment comprised the examination and collation of available sources of information including:

- Information on known archaeological and historic sites recorded on the regional Historic Environment Record (HER) held and maintained by DAT, including a search of available cartographic and pictorial sources, published and unpublished works, aerial photographs and any relevant web-based information;
- Relevant information held by the Royal Commission on Ancient and Historic Monuments in Wales (RCAHMW) via the Coflein online computer database and information on Conservation Areas or Historic Landscape Areas (HLCAs) within or in the vicinity of the site area from information held by DAT and CCW;
- A search of Cadw's Listed Building records and Schedule of Ancient Monuments for designated buildings and sites of archaeological and historical importance lying on or in close proximity to the site;
- A site visit to determine the presence or absence of visible archaeology or evidence for previous ground disturbance within the proposed development area.

1.2.2 The results of the assessment contained in this report are intended to identify the extent and character of the known and potential archaeological resource, to assess the likely and potential impacts of any development on that resource. The assessment should be seen only as the first stage of the archaeological process and does not preclude the possibility that further archaeological input may be required prior to, or during, any proposed development.

1.2.3 A study area of 1.5km from a central point of both the Drilling Site and convertor station, with a 200m search corridor along the route of the cable trench has been used to provide an indication of the known and potential archaeological remains in proximity to the proposed development area.

1.3 Abbreviations used in this report

1.3.1 All sites recorded on the regional HER are identified by their Primary Record Number (PRN) and located by their National Grid Reference (NGR). Sites recorded by the Royal Commission on the Ancient and Historic Monuments of Wales (RCAHMW) are identified by their National Primary Record Number (NPRN). Altitude is expressed to Ordnance Datum (OD). Pembrokeshire County Council (PCC). Dyfed Archaeological Trust (DAT).

1.4 Illustrations

1.4.1 Photographic images and printed map extracts are to be found throughout the report. Note that the printed map extracts are not necessarily reproduced to their original scale.

1.4.2 A number of the illustrations are based on information supplied by ARUP and are used within the report in order to assist with the assessment and demonstrate a clear understanding of what the proposed works are.

1.5 Timeline

1.5.1 The following timeline is used within this report to give date ranges for the various archaeological periods that may be mentioned within the text (Table 1).

Period	Approximate date	
Palaeolithic –	c.450,000 – 10,000 BC	Prehistoric
Mesolithic –	c. 10,000 – 4400 BC	
Neolithic –	c.4400 – 2300 BC	
Bronze Age –	c.2300 – 700 BC	
Iron Age –	c.700 BC – AD 43	
Roman (Romano-British) Period –	AD 43 – c. AD 410	Historic
Post-Roman / Early Medieval Period –	c. AD 410 – AD 1086	
Medieval Period –	1086 – 1536	
Post-Medieval Period ¹ –	1536 – 1750	
Industrial Period –	1750 – 1899	
Modern –	20th century onwards	

Table 1: Archaeological and Historical Timeline for Wales

¹ The post-medieval and industrial periods are combined as the post-medieval period on the Regional Historic Environment Record as held by Dyfed Archaeological Trust

2. SITE LOCATION AND TOPOGRAPHY

2.1 The eastern end of the proposed development is located c.5km to the west of Pembroke while the western end is located c.400m northeast of Freshwater West beach (Figure 1). The entirety of the development is located within the county of Pembrokeshire, and within the Historic Landscape Character area of Rhoscrowther (see Appendix 1; Figure 2). The western half of the development from NGR SM 90460 01550 lies within the Pembrokeshire Coast National Park.

2.2 The proposed development consists of two sites linked by a cable trench. The proposed Drilling Site is located in a field centred on NGR SM 8852 0061 c.400m northeast of Freshwater West beach, to the east of the B4319. The proposed Converter station is located in a field centred on a point at NGR SM 9300 0198 on the southern edge of Pembroke Power Station near to the village of Pwllcrochan. The cable trench follows a route roughly east-west leading from the Converter Station Site before turning southwards towards the Drilling Site at NGR SM 8860 0124.

2.3 The Converter Station Site consists of one very large field (c.14ha), roughly rectangular along an east-west axis. The topography is gently sloping from southwest to northeast with a shallow valley in the northeast corner following that southwest to northeast trend. There is a large water reservoir (c.500m²) in a fenced-off area in the northwest corner of the proposed development area, but the rest of the land is turned over to very rough pasture (Photo 1), with the eastern end of the area being very boggy. Recent former fence lines and trackways are still visible over the site but are mostly overgrown. To the north the site is bounded by a narrow strip of woodland behind which is the Pembroke Power Station. On its three remaining sides the site is surrounded by agricultural land. The field is very sheltered and is only visible from the agricultural land to the south and west. A small copse is present within the area of the Converter Station Site (Photo 2).

2.5 The proposed Drilling Site lies within an irregular trapezoidal field (c.0.3ha) which slopes steeply from the northeast to the southwest. The whole field is given over to pasture. There is an overgrown concrete platform in the northwest corner of the field (c.3m wide x c.7m long), on a northwest to southeast axis with numerous similar examples set out at different angles, visible in the field to the north. These are all likely to be part of a known archaeological site PRN 55454, a group of concrete foundations for support and ancillary structures associated with Whetstone Hill WWII Anti-Aircraft Battery (SAM PE494, PRN 14355).

2.6 A fenced area on the west of the boundary edge has the appearance of a small quarry. A number of bricks were visible in a section at the top of this feature (Photo 3) in a deposit of made ground. This suggests there has been some past landscaping in the field on its western boundary. The bricks most probably relate to clearance and levelling of military structures. The site is bounded by the B4319 and the small quarry on the west, pasture on the north and east boundaries, and by dunes to the south. The field is overlooked by a war memorial (PRN 59465) which is a Grade II listed structure, and is very visible from Freshwater West beach. The whole of the proposed Drilling Site lies within the Pembrokeshire Coast National Park and its southern part also lies within the SSSI site 'Broomhill Burrows', the SPA site 'Castlemartin Coast', and the 'Limestone Coast of South West Wales' SAC.

2.7 The development overlies numerous geological sequences comprising Ludlow rocks, Pridoli rocks, Lower Devonian rocks, Upper Devonian rocks and Dinantian rocks. There are extensive wind-blown sand deposits overlying the solid geology in this region.

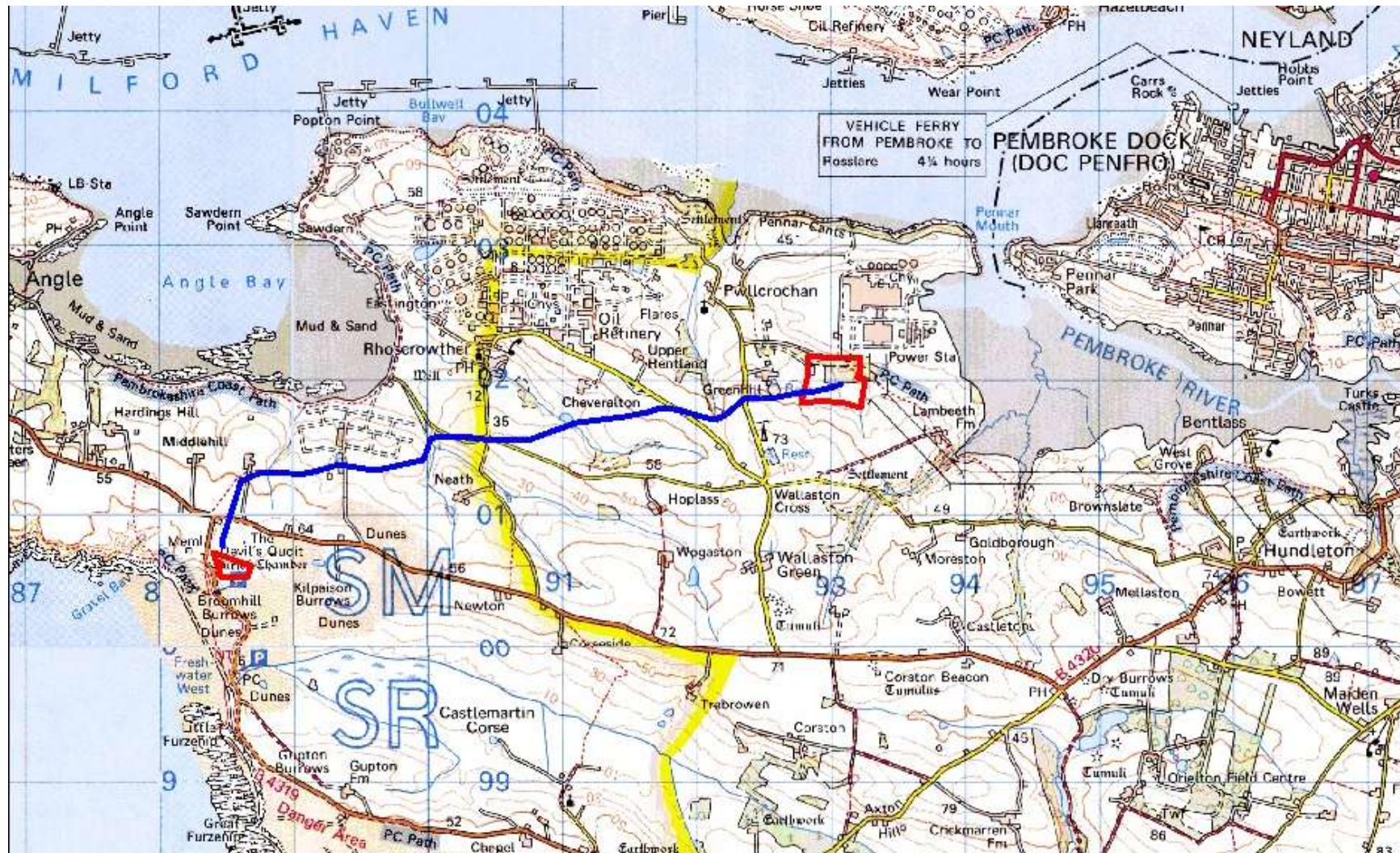


Figure 1: Location map based on the Ordnance Survey. Proposed Development boundaries in red, cable route in blue.

Reproduced from the 2012 Ordnance Survey 1:50,000 scale Landranger Map with the permission of The Controller of Her Majesty's Stationery Office, © Crown Copyright Dyfed Archaeological Trust, The Shire Hall, Carmarthen Street, Llandeilo, Carmarthenshire SA19 6AF. Licence No AL51842A

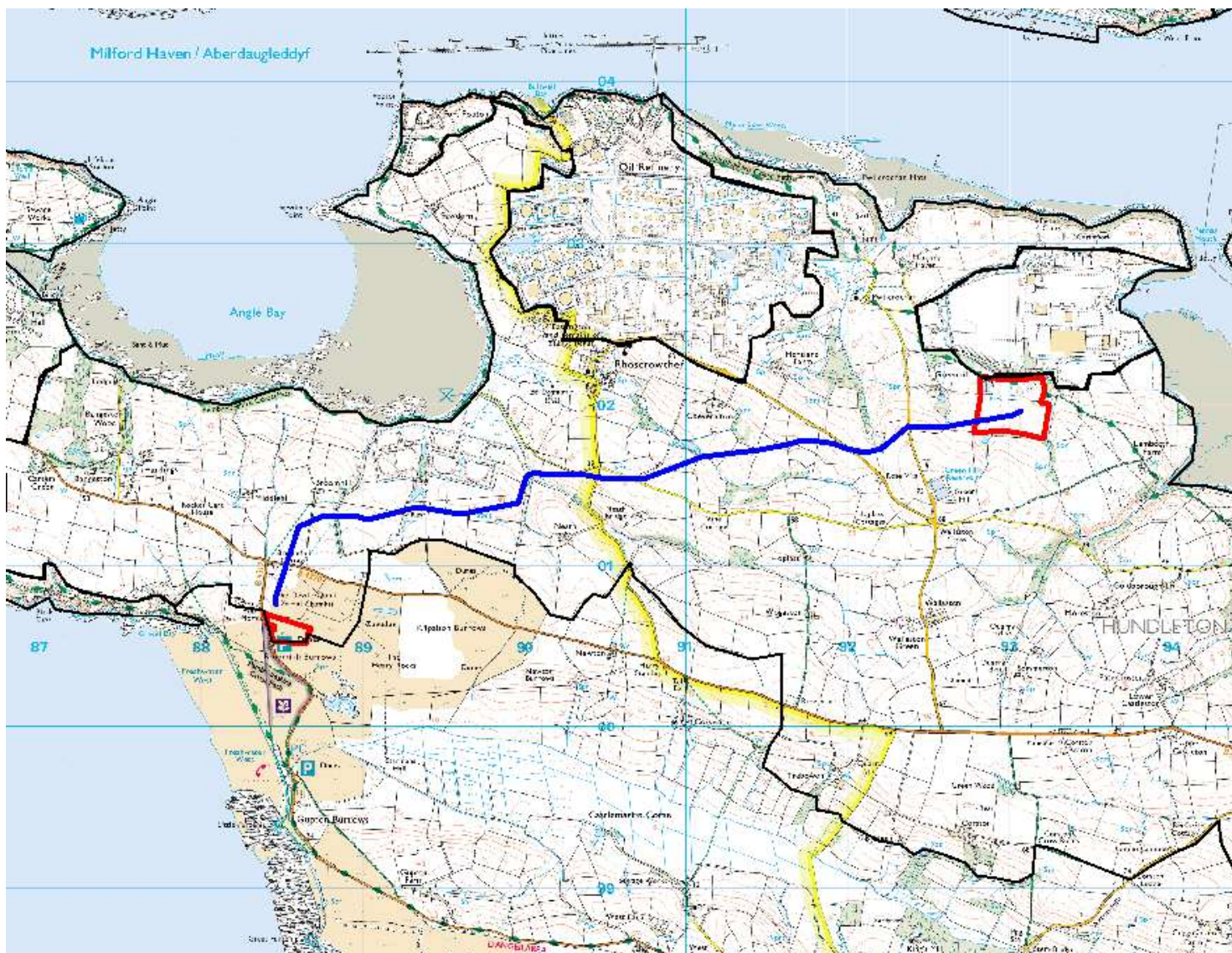


Figure 2: Site location plan with the HLC area Rhoscrowther outlined in black.

3. AIMS AND METHODOLOGY

3.1 Aims

3.1.1 The overall aim of the desk-based assessment was:

The preparation of an archaeological desk-based assessment for the proposed Project Greenwire in southwest Pembrokeshire. The report will assess the potential impact the development may have on any underlying archaeological remains, if present within the area, and an assessment of the wider impact of it on the historic environment. The assessment shall be presented within a report which will be submitted to the LPA in order that an informed decision can be made on the planning application.

3.2 Methodology

3.2.1 The archaeological desk-based assessment has been prepared using the following sources of information and methods:

- Regional HER data and other relevant information (including a review of online information held on the RCAHMW Coflein site);
- Identification of any SAMs, Listed Buildings, Conservation Areas or Historic landscape Areas within or in the vicinity of the site area from information held by DAT, CADW and Natural Resources Wales;
- A search of bibliographic information, cartographic material and photographs (including aerial photographs) held at the Regional HER;
- A map regression exercise;
- A search of information held by the Pembrokeshire Records Office;
- Relevant web-based information;
- Site visit and walkover survey;
- Assessment of the archaeological potential of the area; and
- Assessment of likely impacts on any identified remains (or potential remains) or setting issues and likely requirements, if any, for further stages of archaeological work.

3.2.2 The site visit provided an assessment of the presence of any visible archaeological remains within the development area and its visibility from nearby cultural heritage features. Photographs have been taken of the site area and its environs which have been used within the report.

3.2.3 It was not possible to visit every field through which the cable trench route travels during the site visit, but as many as possible were assessed from the roadside and photographed. It was also not possible to walkover the south-eastern end of the Converter Station Site due to waterlogged ground.

3.2.4 Search areas of 1.5km radius centred on the Drilling Site and the Converter Station Site and a 200m search area on either side of the cabling route was used to determine the presence of historic environment features within and in the environs of the proposed development areas.

4. ARCHAEOLOGICAL AND HISTORICAL BACKGROUND (Appendix 2)

4.1 Period summaries

Prehistoric

4.1.1 Southern Pembrokeshire is known to contain archaeological resources relating to the Palaeolithic. Although no known sites from that period are located within the search area, the potential remains for remains of Palaeolithic date to be present within the development area cannot be discounted.

4.1.2 Numerous Mesolithic flint tools and objects have been found at the western end of the proposed development area (PRN's 501, 503, 3081, 3083, 3084, 10094 and 10095). Some of these are in very close proximity to both the Drilling Site and the cable route, including PRN's 3802 and 12223. Further sites which could be Mesolithic or Neolithic in date are found throughout the search area, including areas immediately adjacent to the Drilling Site. These include a flint working site and scatter (PRN's 3103 and 11383 respectively) and PRN's 3236, 3237, 3238 in fields adjacent to and along the cable trench route.

4.1.3 There are several finds and earthworks associated with the Neolithic in the search area, most notably the Devil's Quoit burial chamber (PRN 3071, SAM PE020). The cable trench route will run through the same field about 160m from the scheduled area. There are numerous findspots of Neolithic date in adjacent fields to the Drilling Site including a broken stone axe (PRN 3073), and a shell midden (PRN 7592).

4.1.4 There are also numerous Bronze Age findspots along the entire route, including a hoard of metalwork (PRN 14393), round barrows (PRN's 3079, 11640, 11641, 11642, 11694, 47441, 48371) standing stones (PRN's 4508, 7591) and several place-names suggesting a busy landscape during the Bronze Age period.

4.1.5 The HER entry for Horse Stone Park standing stone (PRN 4508) is located very near to the proposed cable route as it passes to the south of Cheveralton (Figure 10) and is dated to the Bronze Age. The entry is derived from place-name analysis of the tithe map for the area, and therefore refers to the whole field rather than a single point. It suggests that a standing stone may have stood in this field at that time, and that it may have been a Bronze Age monument, however no further investigation has been made of it.

4.1.6 The Iron Age is also evidenced by the presence of numerous hillforts or promontory forts in the area around the Conventor Station, including a promontory fort (PRN 3244) c.600m to the south-east of the Conventor Station Site.

4.1.7 As noted in the HLC description for Rhoscrowther (Appendix 1) within which the proposed development area lies, the B4320 follows the line of a likely prehistoric trackway known as The Ridgeway road. The field systems that are laid out in respect of this route are therefore likely to be of some antiquity.

4.1.8 There are several sites of unknown prehistoric date in the search area including several burnt mounds, which are usually attributable to the bronze Age (PRN's 3074, 3230, 3232, 3233, 3234, 3239), possible occupation site PRN 8466 and flint findspots PRN 7753, 8500. There is also an undated prehistoric, submerged forest off the coast in Freshwater West bay (PRN 11976). Such submerged forests are typically of Mesolithic date, during which period sea levels gradually rose.

Roman Period

4.1.9 There are two HER records relating to the Roman period within the search area: a findspot from the Portable Antiquity Scheme (PAS) and another of pottery, glass and metalwork both in Kilpaison Burrows to the east of the Drilling

Site. During this assessment a possible Roman occupation site or Fort has been identified from LiDAR data and a field visit, located in an area to the east of the Drilling Site (NGR SM 8950 0060). Further investigation would be needed to confirm this, but if proven correct would indicate an increased likelihood for Roman activity in this area.

Early Medieval

4.1.10 There is known activity relating to this period in the form of a burial (PRN 3080) and an early churchyard at St Mary's Church, Pwllcrochan (PRN 30131). The existence of other as yet undiscovered Early Medieval sites within the region cannot be precluded.

Medieval

4.1.11 Place name and cartographic evidence demonstrates that medieval activity in this area. Although the entries in the HER mostly refer to settlement and religious sites (PRN's 10514, 10790, 10791, 10793, 11472), the area within which the proposed development area lies would have been used for agricultural purposes throughout the medieval period.

Post-Medieval

4.1.12 The majority of entries in the HER search results date to the post-medieval period. These are a mixture of site-types, mostly related to the development of agriculture and industry, as well as public infrastructure sites, such as bridges. See Appendix 2 for a full list.

4.1.13 Historic mapping evidence shows how land use has changed from the late medieval period onwards. The different proposed development areas will be discussed separately.

4.1.14 The tithe map and apportionment (1840/1839), and the 1st edition OS map (1890) shows that the Drilling Site lay within a large area of rough pasture known as the 'Broomhill Burrows' at that time.

4.1.15 The same mapping shows that the Convertor Station Site has not always been one field, but was previously divided into several. The tithe map (1840), shows that the Convertor Station Site area formerly consisted of an unnamed cottage and garden surrounded by a number of small fields. The fields are listed in the apportionment (1839) as being cultivated in a variety of different ways. The HER entry (PRN 33154) relates to these field divisions but also indicates they were possibly linked to an unspecified farmstead which must have ceased to exist at some point before 1824. The 1st edition OS map of 1890 labels the cottage as Lane Cottage, and the small fields visible on the tithe map have been made into two fields, roughly dividing the land in half from the head of the shallow gorge to a point on the southern boundary. The small copse in the area of the Convertor Station Site (Photo 2) is thought to be the likely location for the former Lane Cottage and garden. There are no obvious remains of the trackway which once ran through this field as represented on historic mapping. A stream is visible near to the eastern boundary of the proposed development area in all of the historic mapping. During the site visit, this part of the field was very waterlogged, despite the current OS showing the stream to be redirected along the eastern boundary of the site.

4.1.16 There are numerous shipwreck sites relating to this period within the search radius in Freshwater West Bay. The precise location and state of preservation of these wreck sites is not known. They lie outside of the proposed development that is being considered by this desk-based assessment but could be affected by any cabling that crosses or is drilled below the sea bed.

Modern

4.1.17 There are numerous sites relating to this period within the search area. These relate to a mixture of military and defence structures and events, including an aircraft crash site (PRN 105259), as well as industrial sites and sea defences.

4.1.18 During the site visit a concrete platform linked to PRN 55454 was discovered. These are foundation platforms for ancillary and support structures for the nearby former WWII Anti-Aircraft battery (PRN 14355) which is a Scheduled Ancient Monument (PE494).

4.1.19 On the 2nd edition OS map (1907) we can see that at the Drilling Site there is no change from the previous mapping; this means we can be certain that the field wasn't enclosed until later in the 20th century. This activity could be linked with improvements in agricultural practices making the land suitable to turn over to pasture, or possibly with forced enclosure schemes as seen during WWII.

4.1.20 At the Convertor Station Site we can see that the field layout has not changed at all, however it is likely that, Lane Cottage is no longer occupied as it is unlabelled. At some point during this period, the trackway leading across the northeastern corner of the development is removed, along with the cottage and its small garden, and that the two fields are merged together making one large field. The reservoir is also constructed in the northwest corner. These events are likely to be linked with the construction of Pembroke Power Station in the mid-1960s, which will have involved land ownership change and significant land-use change.

The following tables include all known recorded sites within the study area. Not all of these are necessarily relevant to the proposed development area.

4.2 Designated Sites and Listed Buildings (Figures 5, 6 & 9)

4.2.1 There are 4 SAM's within the search area: PE400 - Enclosure & Earthworks at Lewiston Hall; PE262 - West Pennar Camp; PE020 - Devil's Quoit Burial Chamber; and PE494 - Gravel Bay Anti-Aircraft Battery. The cable trench route will pass through the same field as the Devil's Quoit Burial chamber, but no closer than 160m. The Drilling Site could be partially visible from PE020 and wholly visible from PE494 (Photo 4).

4.2.4 There are 9 listed buildings in the search area (see Table 2). The Drilling Site location is likely to be partially visible from PRN's 16583, 17166, 17167 and 5954; while the Grade II war memorial (PRN59465) will entirely overlook it (Photos 4 & 5).

Site/Building Name	PRN	Cadw Ref.	NGR	Designation
Devil's Quoit Burial Chamber	3,071	PE020	SM886008	Scheduled Ancient Monument
Gravel Bay anti-aircraft battery	14,355	PE494	SM882007	Scheduled Ancient Monument
Enclosure & Earthworks at Lewiston Hall	3,226	PE400	SM921031	Scheduled Ancient Monument
West Pennar Camp	3,227	PE262	SM933030	Scheduled Ancient Monument
Seaweed Hut on foreshore	4,677	16583	SR8854799424	Grade II listed
War Memorial	59,465	17162	SM8836000734	Grade II listed
Rocket Cart House	59,469	17166	SM8791701315	Grade II listed
Lookout Tower	59,470	17167	SM8792001310	Grade II listed
Corse Bridge and attached	60,022	5954	SR8855199736	Grade II listed

Walled Channel				
Former Church Of Saint Mary, Pwllcrochan	60,427	6587	SM9166102517	Grade II* Listed
Former National School Building, Pwllcrochan	60,428	6588	SM9215602621	Grade II Listed
Stone Building (Now Used As A Barn) At Old Henllan, Pwllcrochan	60,429	6589	SM9165302455	Grade II Listed
Garden Arch At Old Henllan, Pwllcrochan	60,430	6590	SM9166102517	Grade II Listed

Table 2: Designated sites and Listed Buildings within the study area

4.3 Historic Landscape Areas

4.3.1 The proposed development lies within the Rhoscrowther Historic Landscape Character Area (HLCA 341; Appendix 1; Figure 2). It is summarised as containing the following:

... a large agricultural historic landscape character area typified by large dispersed farms with regularly shaped fields. Hedges on banks are the most common boundary type, but towards the windswept western part of the area mortared stonewalls are present. There is a great variety in domestic building type, ranging in date from the medieval to the 20th century.

4.4 Known Archaeological and Historical Sites (Figure 4)

4.4.1 A total of 177 known archaeological and historical sites are recorded on the regional HER (Table 3, 4, 5, 6, 7). See Appendix 2 for full listing.

PRN	Site Name	Site type	Period	NGR
501	Freshwater West	Occupation site	Mesolithic	SR88699927
503	Freshwater West	Occupation site	Mesolithic	SR881997
505	Gupton Burrows	Flint working site	Mesolithic	SR892995
3081	Kilpaison Burrows	Findspot	Mesolithic	SM8900
3083	Kilpaison Burrows	Findspot	Mesolithic	SM8900
3084	Kilpaison Burrows	Lithic scatter	Mesolithic	SM8900
10094	Freshwater West	Flint working site	Mesolithic	SR885995
10095	Weed Hut; Gupton Burrows	Flint scatter	Mesolithic	SR890993
12223	Broomhill Burrows	Findspot	Mesolithic	SM885005
510	Freshwater West	Flint working site	Neolithic, Mesolithic	SR88529940
1248	Gupton Burrows	Flint working site	Neolithic, Mesolithic	SR892995
3072	Gravel Bay	Flint working site	Neolithic, Mesolithic	SM87450075
3077	Kilpaison Burrows	Flint working site	Neolithic, Mesolithic	SM893004
3082	Broomhill	Flint working site	Neolithic, Mesolithic	SM88810165
3103	Little Furzenip	Flint working site	Neolithic, Mesolithic	SM88360057
11383	Kilpaison Burrows	Flint scatter	Neolithic, Mesolithic	SM888007
3071	Devils Quoit; Newton Cromlech	Chambered tomb	Neolithic	SM88650084
3073	Broomhill Burrows	Findspot	Neolithic	SM88350060
3075	Broomhill Burrows	Findspot	Neolithic	SM88630036
7592	Broomhill Burrows	Midden	Neolithic	SM88680031
7594	Kilpaison Burrows	Occupation site	Neolithic, Bronze Age	SM893004
502	Freshwater West	Findspot	Bronze Age	SR88689929
504	Freshwater West	Findspot	Bronze Age	SR881997

3076	Kilpaison Burrows	Findspot	Bronze Age	SM893004
3079	Kilpaison Burrows	Round barrow	Bronze Age	SM8899900643
3085	Kilpaison Burrows	Findspot	Bronze Age	SM8900
7591	Broomhill Cottages	Standing stone	Bronze Age	SM88610084
11640	Kilpaison Burrows, Round Barrow	Round barrow	Bronze Age	SM8951200611
11641	Kilpaison Burrows, Round Barrow	Round barrow	Bronze Age	SM8951500594
11642	Kilpaison Burrows, Round Barrow	Round barrow	Bronze Age	SM89500059
14393	Freshwater West	Hoard	Bronze Age	SR882999
47441	Kilpaison Burrows	Round barrow cemetery	Bronze Age	SM8951300605
3074	Middlehill	Burnt mound	Prehistoric	SM88230156
7753	Kilpaison Burrows	Findspot	Prehistoric	SM893004
11976	Freshwater West	Submerged forest	Prehistoric	SR882993
3086	Kilpaison Burrows	Occupation site, Findspot	Roman	SM8900
3080	Kilpaison Burrows	Round barrow reuse	Early Medieval	SM8899900643
11459	Kilpaston; Kilpaison	Dwelling	Medieval	SM89250168
3070	Bangeston	Mansion	Post-medieval	SM87450165
4675	Gupton Burrows Bridge	Bridge	Post-medieval	SR88559974
4676	Freshwater West	Seaweed drying shed	Post-medieval	SR885998
4677	Freshwater West	Seaweed drying shed	Post-medieval	SR8854799424
15916	Starmans Hall	Dwelling	Post-medieval	SR89139972
15979	Mill Pond	Mill pond	Post-medieval	SM894017
26348	Gupton Burrows	Quarry	Post-medieval	SR88809916
35006	Angle Bay	Agricultural clearance	Post-medieval	SM88560209
44751	Middle Hill	Quarry	Post-medieval	SM8849701649
59465	War Memorial	War memorial	Post-medieval	SM8836000734
59469	Rocket Cart House	Rescue team cart house	Post-medieval	SM8791701315
59470	Lookout Tower	Lookout tower	Post-medieval	SM8792001310
60022	Corse Bridge And Attached Walled Channel	Bridge	Post-medieval	SR8855199736
103163	Jeffersonwalls	Well	Post-Medieval	SM87480143
34629	Angle Bay	Mill	Post-medieval, Medieval	SM89380176
14355	Broomhill Burrows	Battery	Modern	SM88260077
33440	Angle	Weapons pit	Modern	SM88040063
35007	Angle Bay	Sea defences	Modern	SM89150188
44604	RAF Angle	navigation aid	Modern	SM87300096
55453	Whetsone Hill	World War 2 defence	Modern	SM88360076
55454	Whetstone Hill	World War 2 defence	Modern	SM88400073
101391	RAF Angle	Airmen's ablutions	Modern	SM87550148
101393	RAF Angle	Games room	Modern	SM87610152
101394	RAF Angle	Institute	Modern	SM87580153
101395	RAF Angle	Grocery and local produce stor	Modern	SM87570155
101396	RAF Angle	Blast shelter	Modern	SM87600154
101397	RAF Angle	Stand-by set house	Modern	SM87510150
101398	RAF Angle	Christian association hostel	Modern	SM87540155
101399	RAF Angle	Settlement tank	Modern	SM87540155
102546	RAF Angle	Air raid shelter	Modern	SM87530153
102547	RAF Angle Site No 2	Military camp	Modern	SM87650151
102549	RAF Angle Site No 2	Military camp	Modern	SM87650151

102551	RAF Angle Site No 4	Military camp	Modern	SM88140126
105259	Vickers Wellington XII MP638	Air crash site	Modern	SR882997
10521	Newton Burrows	Unknown,Building?	Unknown	SM883008
13056	Hardingshill	Enclosure	Unknown	SM877018
13059	Broomhill	Unknown,Cropmark	Unknown	SM885011

Table 3: Regional HER sites recorded within the 1.5km search radius around the proposed Drilling Site (further information included in Appendix 2)

NPRN	Site Name	Site type	Period	NGR
401459	Disused Oil Refinery, Angle	Industrial	Modern	SM895016
273193	Willemoes	Wreck	Modern	SM8797700291
273157	Margaret Ann	Wreck	Modern	SR8824799778
22195	Jeffersons Walls, Angle	Domestic	Post Medieval	SM8852001432
270759	Gun Emplacement, Angle	Defence	Post Medieval	SM87160127
270760	Weapons Pit, Angle	Defence	Post Medieval	SM88050063
272601	Thomas M Reed	Wreck	Post Medieval	SM8790500227
272181	Harmony	Wreck	Post Medieval	SR8809199874
273340	Princess Elizabeth	Wreck	Post Medieval	SR8833399519
273023	Astronomer	Wreck	Post Medieval	SM8808700275
272992	Mary E Wadham	Wreck	Post Medieval	SM8829900355
272855	Unknown	Wreck	Post Medieval	SM8795900024
272829	Blessing	Wreck	Post Medieval	SM8805200087
273486	Mary Ann	Wreck	Post Medieval	SR8819999959
272837	Express	Wreck	Post Medieval	SM8786000474

Table 4: National Monuments Record sites within the 1.5km search radius around the proposed Drilling Site excluding those already listed in the HER

PRN	Site Name	Site type	Period	NGR
3237	Tilley Cottage	Flint working site	Neolithic, Mesolithic	SM935030
3238	Tilley Cottage	Flint working site	Neolithic, Mesolithic	SM92070267
3250	Hoplass Cottage	Flint working site	Neolithic, Mesolithic	SM934007
3255	Lambeeth	Flint working site	Neolithic, Mesolithic	SM930030
11694	Lambeeth Farm	Round barrow	Bronze Age	SM93980087
48371	Lambeeth Farm	Round barrow pair	Bronze Age	SM93620080
3226	Martin's Haven	Promontory fort	Iron Age	SM93170298
3227	West Pennar Rath	Hillfort	Iron Age	SM9202
3244	Lambeeth	Promontory fort	Iron Age	SM92130308
33150	Eastern Middle Park	Bank (earthwork)	Iron Age	SM92000233
35093	Pennar Mouth	Hillfort	Iron Age	SM916025
29593	Pipers Park	Non-antiquity,Hillfort	Iron Age,	SM916025
3230	Upper Hentland	Burnt mound	Prehistoric	SM92390066
3232	Hoplass	Burnt mound	Prehistoric	SM92160262
8466	West Pennar Rath	Occupation site	Prehistoric	SM92590225
8500	West Pennar	Findspot	Prehistoric	SM92350126
30131	Pwllcrochan Parish Church; St Mary's	Churchyard	Early Medieval	SM9213802739
3373	Cross Park	Cross	Medieval	SM9202
10514	Pwll Crochan; St Mahoney	Chapel	Medieval	SM93610064
10790	Goldborough	Settlement	Medieval	SM9202
10791	Moryston; Moreston	Settlement	Medieval	SM9211602646
10793	West Pennar	Settlement	Medieval	SM92050257
11472	Pwllcrochan; Peterachon	Settlement	Medieval	SM92130264
7610	Pwllcrochan	Findspot	Post-medieval	SM92340309
7733	Greenhill	Clearance cairn	Post-medieval	SM9236803145
7745	Lower Henllan	Mansion	Post-medieval	SM92330314

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7746	Lower Henllan	Park	Post-medieval	SM9233702807
10092	Wallaston Methodist Chapel	Chapel	Post-medieval	SM92360279
17876	School	School	Post-medieval	SM92110289
17877	Mill	Mill	Post-medieval	SM922031
17879	Blacksmith	Blacksmiths workshop	Post-medieval	SM92380283
17947	Rectory	Rectory	Post-medieval	SM92390313
24120	Greenhill	Dwelling	Post-medieval	SM92410319
25439	Hundleton	Blacksmiths workshop	Post-medieval	SM92940294
28005	Pwllcrochan	Settlement	Post-medieval	SM92360317
29575	Pwllcrochan	Cottage	Post-medieval	SM933022
29576	Pwllcrochan	Cottage	Post-medieval	SM932021
29577	School Cottage	Cottage	Post-medieval	SM9384801432
29578	Lanicle Field	House	Post-medieval	SM9412001886
29579	Martin's Haven	House	Post-medieval	SM93150233
29580	Martin's Haven	Lime kiln	Post-medieval	SM93860140
29581	Clerk's House	Cottage	Post-medieval	SM93980087
29584	Venny-Lake	Cottage	Post-medieval	SM93970087
29592	Martin's Haven	Bridge	Post-medieval	SM9215202616
29596	Martin's Haven	Harbour	Post-medieval	SM9205102657
30147	Venny Lake	Cottage	Post-medieval	SM9215602621
30148	Martin's Haven	Quarry	Post-medieval	SM9165302455
30149	Martin's Haven	Quarry	Post-medieval	SM9166102517
30150	Pembroke Power Station	Findspot	Post-medieval	SM93160082
30153	Martin's Haven	House	Post-medieval	SM93120080
33153	Pennar Gut	Quarry	Post-medieval	SM92050266
33154	Pennar Mouth	Garden, Farmstead	Post-medieval	SM925012
34614	Cocheston Pill	Mill	Post-medieval	SM92380286
34615	Cocheston Pill	Lime kiln	Post-medieval	SM92410285
34618	Pwllcrochan	Lime kiln	Post-medieval	SM9317402930
35056	Cocheston Pill	Bridge	Post-medieval	SM92020255
39354	Goldborough Farm	Pigsty	Post-medieval	SM92090262
39356	Goldborough Farm	Building	Post-medieval	SM93300305
59755	Former National School Building, Pwllcrochan	School	Post-medieval	SM93100309
60427	Former Church Of Saint Mary, Pwllcrochan	Church	Post-medieval	SM93100323
60428	Former National School Building, Pwllcrochan	Schoolroom	Post-medieval	SM942021
60429	Stone Building (Now Used As A Barn) At Old Henllan, Pwllcrochan	House	Post-medieval	SM931029
60430	Garden Arch At Old Henllan, Pwllcrochan	Garden arch	Post-medieval	SM929026
103265	Margery Bottom	Well	Post-Medieval	SM94130190
103266	Margery Bottom	Cottage	Post-Medieval	SM94050200
3223	Pwllcrochan Parish Church; St Mary's	Church	Post-medieval, Medieval	SM931023
7932	Wallaston Cross	Cross	Post-medieval, Medieval	SM93950144
29582	Venny-Lake	Cottage	Post-medieval, Medieval	SM920028
29583	Venny-Lake	Cottage	Post-medieval, Medieval	SM935030
33151	West Pennar Farmstead	Farmstead	Post-medieval, Medieval	SM92070267
46850	Pwllcrochan	Deserted settlement	Post-medieval, Medieval	SM934007
26242	Pwllcrochan	Searchlight battery	Modern	SM930030
26243	Pennar Cants	Searchlight battery	Modern	SM93980087
26244	West Pennar	Anti aircraft battery	Modern	SM93620080
35041	Pwllcrochan	Pipeline	Modern	SM93170298
35059	Cocheston Pill	Findspot	Modern	SM9202
3218	West Pennar	Unknown, Earthwork	Unknown	SM92130308
30151	Pembroke Power Station	Peat bog	Unknown	SM92000233
34616	Cocheston Pill	Quarry	Unknown	SM916025

34617	Cocheston Pill	Quarry	Unknown	SM916025
34619	Pwllcrochan	Quarry	Unknown	SM92390066
35057	Cocheston Pill	Quarry	Unknown	SM92160262
29594	Martin's Haven	Peat bog		SM92590225

Table 5: HER sites within the 1.5km search radius around the proposed Converter Station Site (further information included in Appendix 2)

NPRN	Site Name	Site type	Period	NGR
411074	Greenhill Farm, Rhoscrowther	Farmhouse	19th Century?	SM92450208
90546	Shipwrecks Near Pembroke Power Station	Wreck	Modern	SM94420182
22049	Henllan (Upper And Lower); Upper Hentland, Rhoscrowther	House	Post Medieval	SM91600223
274846	Lune	Wreck	Post Medieval	SM9201
300012	Pembroke Power Station	Coal Fired Power Station	Post Medieval	SM933025
22012	Greenhill Farm, Pwllcrochan	Farmhouse	Post Medieval	SM93530215
270775	Weapons Pit, Hundleton	Weapons Pit	Post Medieval	SM93270307
270774	Weapons Pit, Hundleton	Weapons Pit	Post Medieval	SM93250304
270773	Gun Emplacement, Hundleton	Gun Emplacement	Post Medieval	SM93020309

Table 6: National Monuments Record sites within the 1.5km search radius around the proposed Converter Station Site excluding those already listed in the HER

PRN	Site Name	Site type	Period	NGR
3235	Hilton	Flint working site	Neolithic, Mesolithic	SM905019
3236	Cheveralton	Flint working site	Neolithic, Mesolithic	SM911018
3237	Tilley Cottage	Flint working site	Neolithic, Mesolithic	SM917016
3238	Tilley Cottage	Flint working site	Neolithic, Mesolithic	SM919020
3243	Hoplass	Flint working site	Neolithic, Mesolithic	SM914011
4508	Horse Stone Park; Horse Stone Mount	Standing stone	Bronze Age	SM913017
3232	Hoplass	Burnt mound	Prehistoric	SM91910152
3233	Cheveralton	Burnt mound	Prehistoric	SM91250152
3234	Cheveralton	Burnt mound	Prehistoric	SM91210156
3239	Neath Bridge	Burnt mound	Prehistoric	SM90500128
3078	Cross Park	Cross	Medieval	SM905017
34629	Angle Bay	Mill	Post-medieval, Medieval	SM89380176
34630	Kilpaison Mill	Mill	Post-medieval, Medieval	SM8985401746
15923	Kiln	Kiln	Post-medieval	SM8944601881
15979	Mill pond	Mill pond	Post-medieval	SM894017
17878	Neath Bridge	Bridge	Post-medieval	SM90480126
28007	Rhoscrowther	Settlement	Post-medieval	SM9002
34610	Angle Bay	Saw pit	Post-medieval	SM8941001856
35008	Angle Bay	Sea defences	Post-medieval, Modern	SM89510195

Table 7: HER sites within the 200m search radius along the route of the proposed cable trench (further information included in Appendix 2)

4.5 Previous Archaeological Work

4.5.1 A number of previous archaeological investigations have been undertaken within the search area. Only two are directly relevant to the two main areas of the proposed development (Historic Landscape Characterisation (Appendix 1)), and two Pembroke Power Station archaeological studies (Murphy 1995; Sambrooke 1996).



Photo 1: Converter Station Site facing east. Showing the nature of the rough pasture and height of grasses.



Photo 2: Small copse in the proposed Convertor Station Site which is thought to be the location of Lane Cottage and Gardens.



Photo 3: Bricks visible in section above quarry feature on western boundary of Drilling Site. Facing east.



Photo 4: view from Drilling Site indicating location of PE494 and the Grade II Listed Broomhill Burrows War Memorial (PRN49465) to demonstrate potential visual impact. Facing west



Photo 5: view from War memorial (PRN59465) across the Drilling Site. Facing east-southeast.

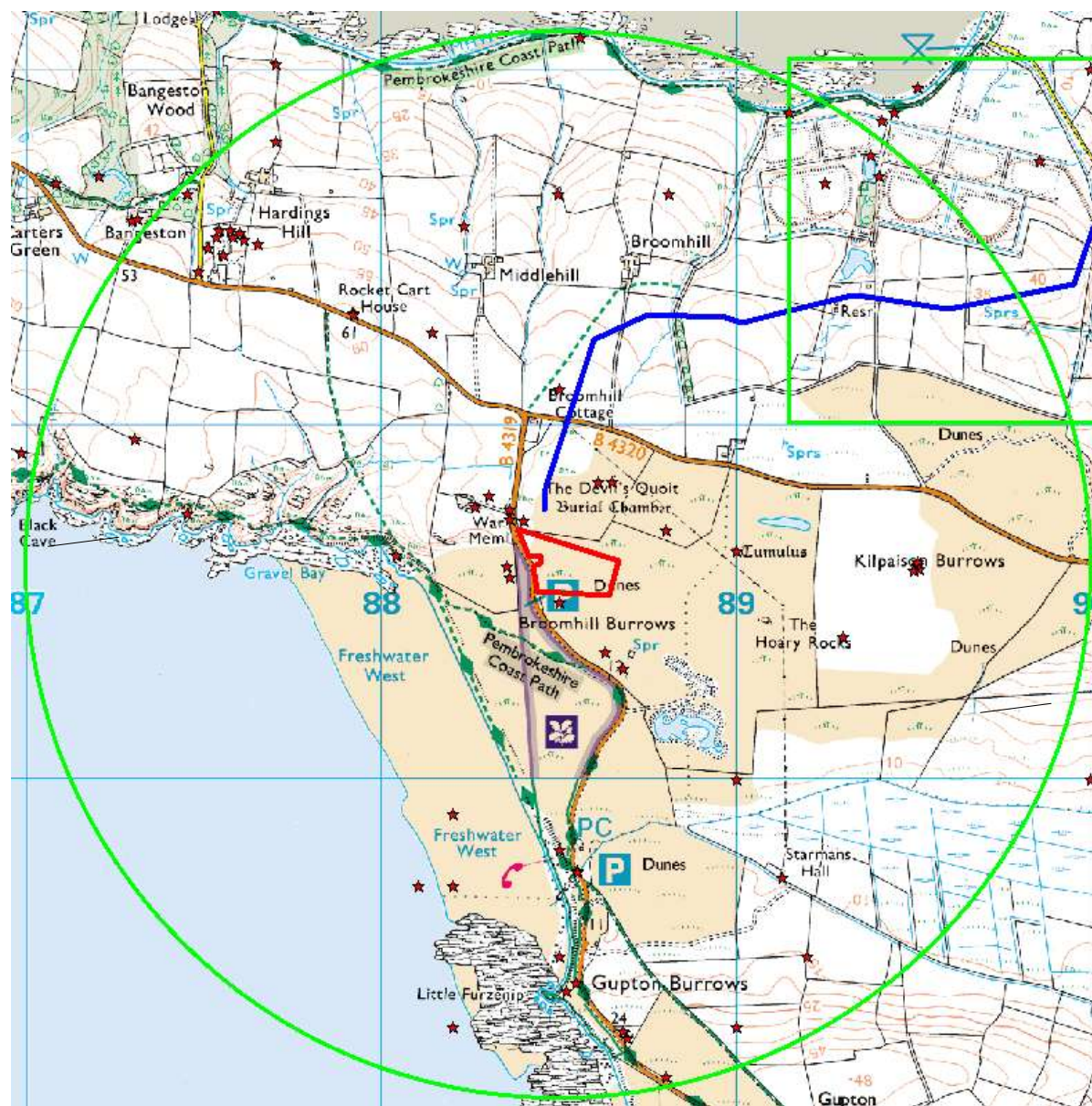


Figure 3: HER search radius of 1.5km of Drilling Site location results. Search radius in green, HER entries as red stars.

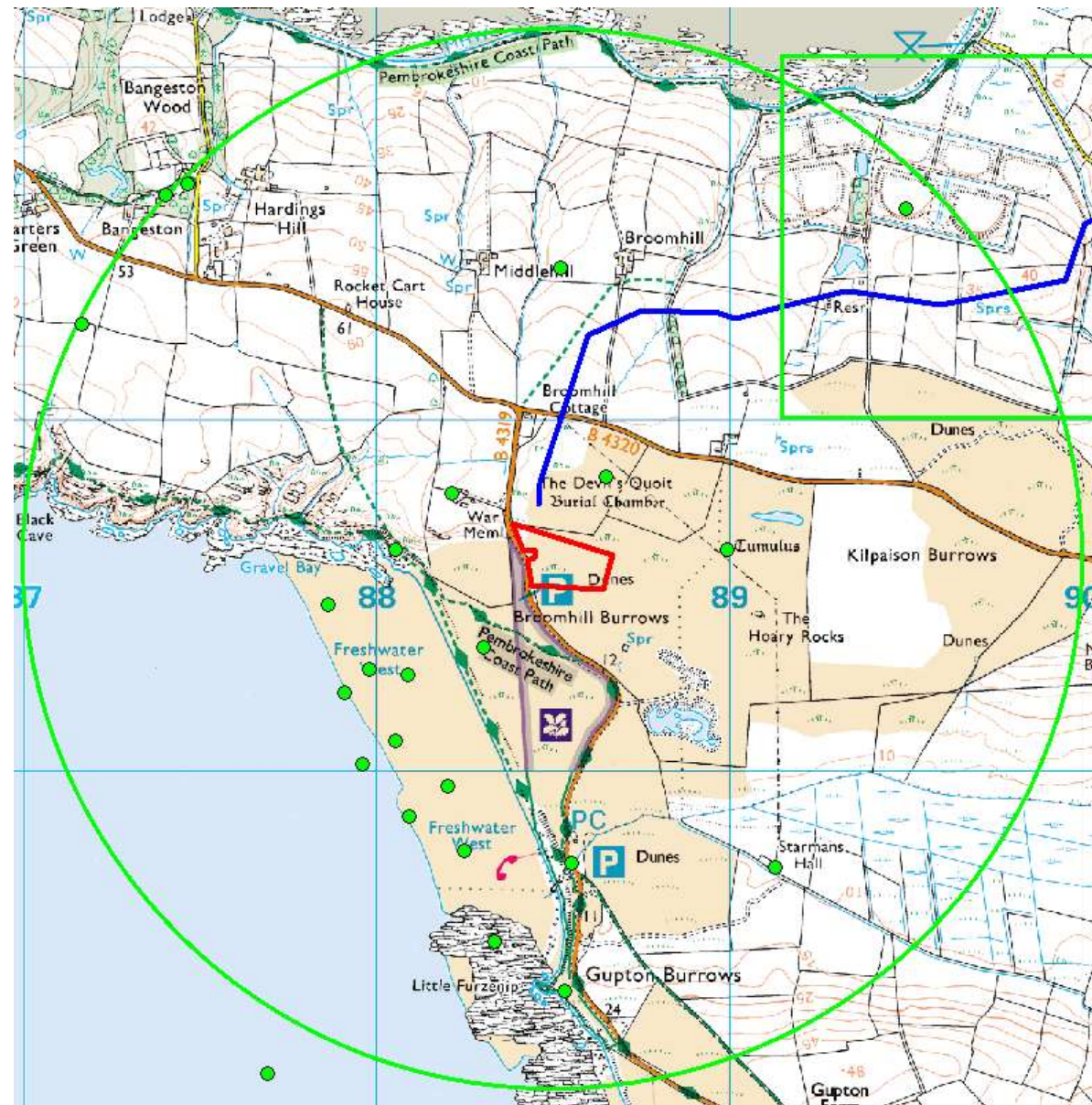


Figure 4: 1.5km search radius of NMR sites centred on proposed drilling site location. Search radius in green, NMR sits as green dots.

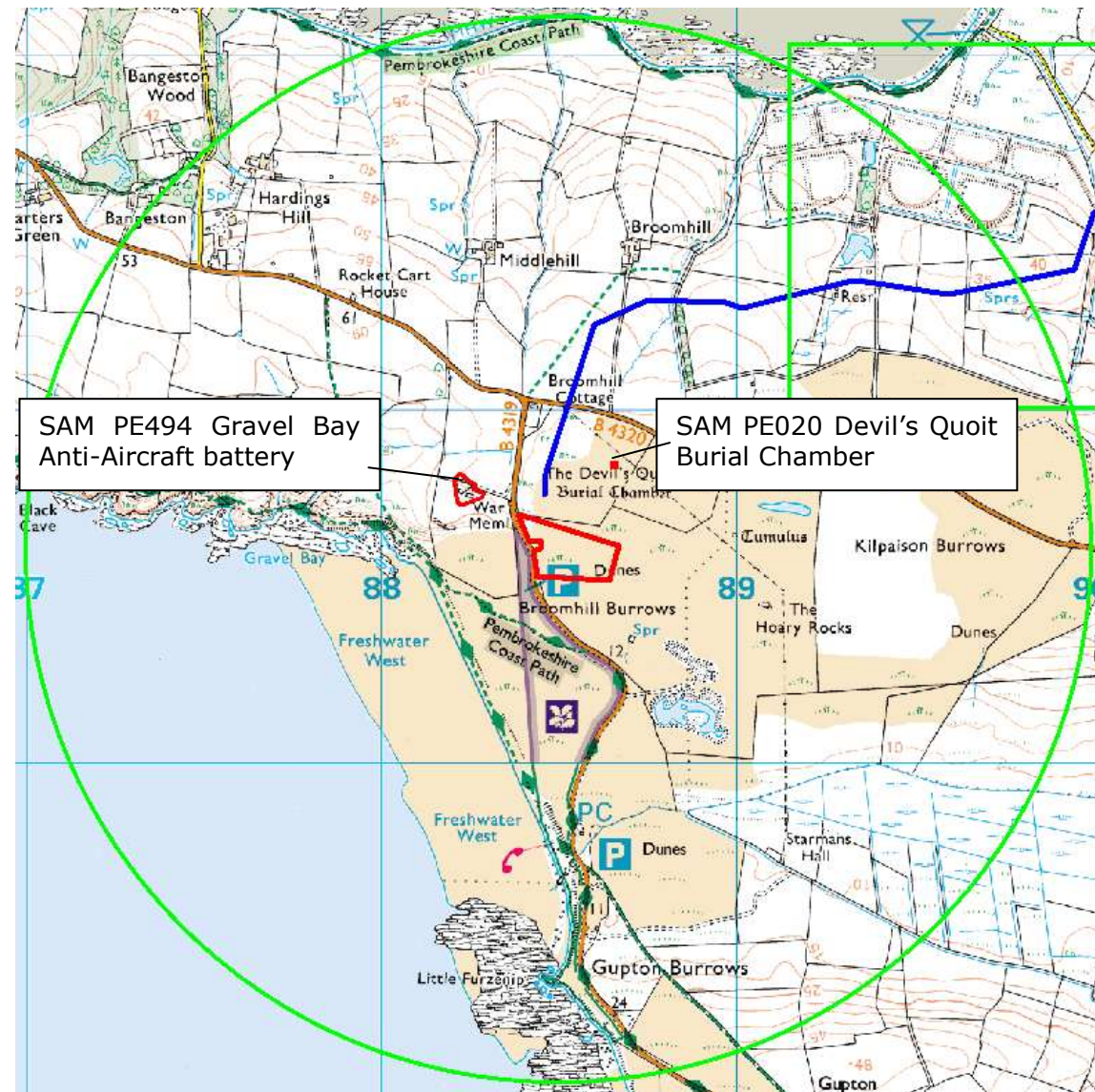


Figure 5: SAM sites search radius of 1.5km of Drilling Site location results. Search radius in green, SAM sites labelled.

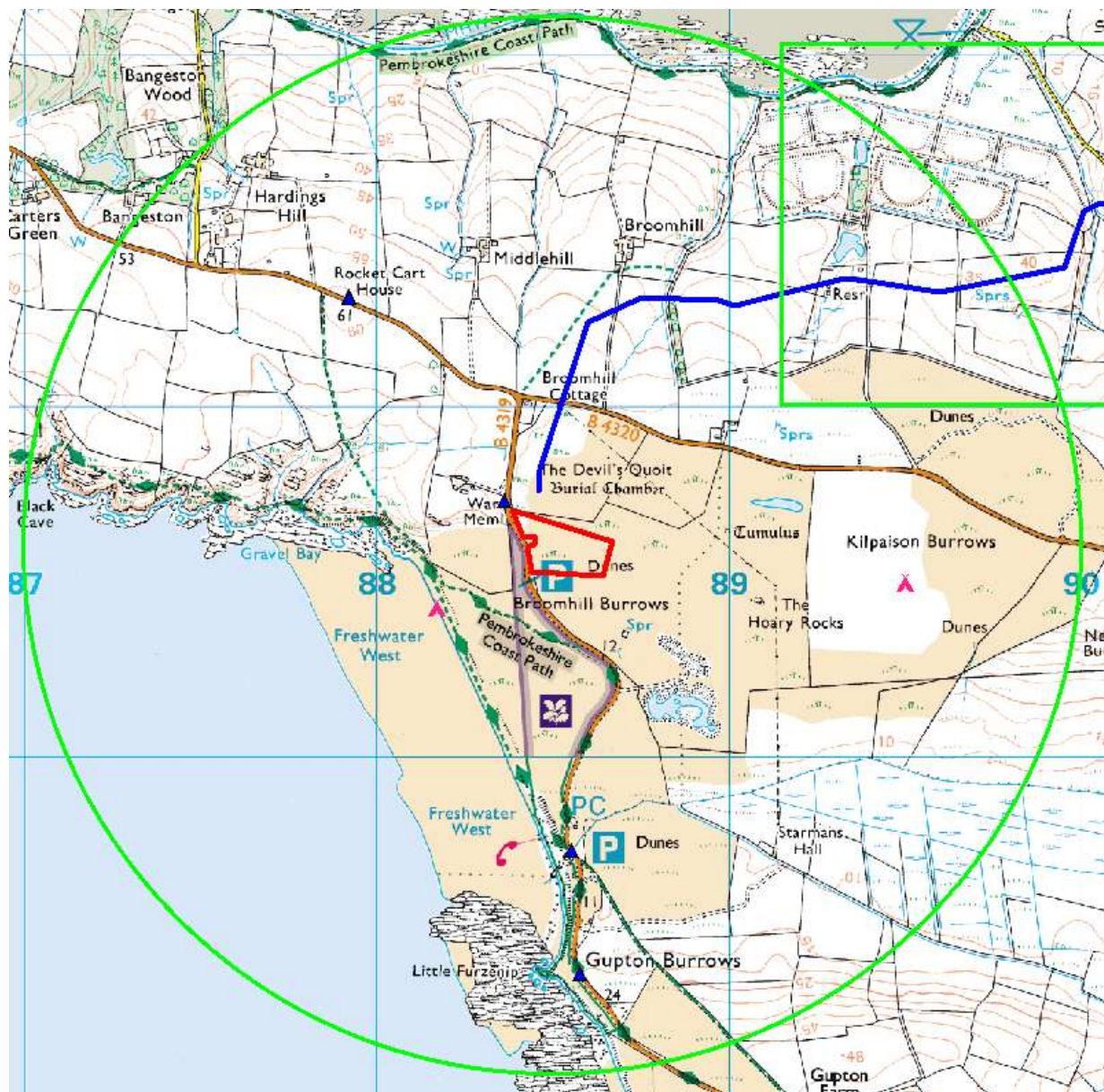


Figure 6: Listed Building within the 1.5km search radius of the drilling site, Indicated as blue triangles.

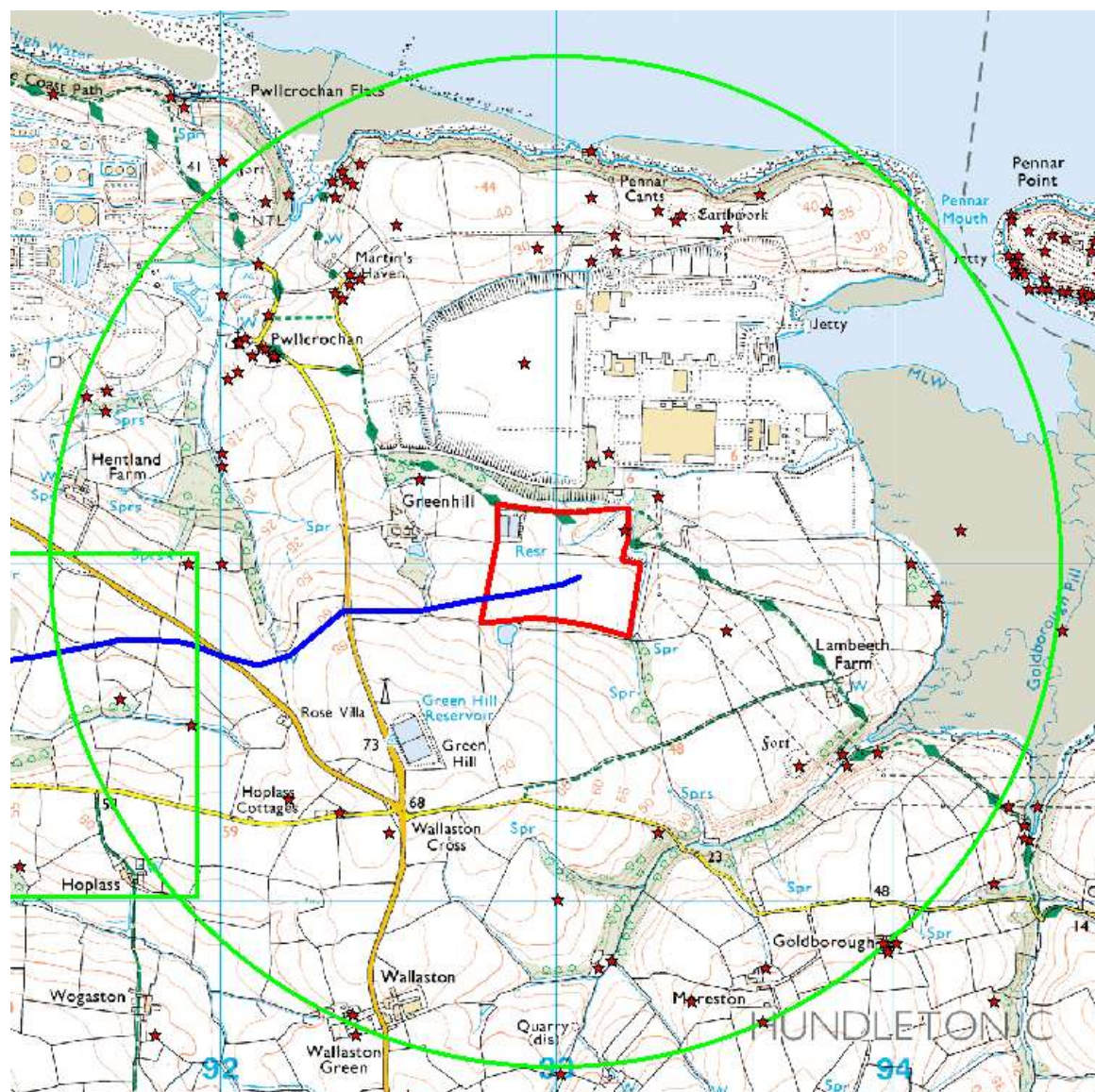


Figure 7: HER search radius of 1.5km of Convertor tation Site location. Search radius in green, HER entries as red stars.

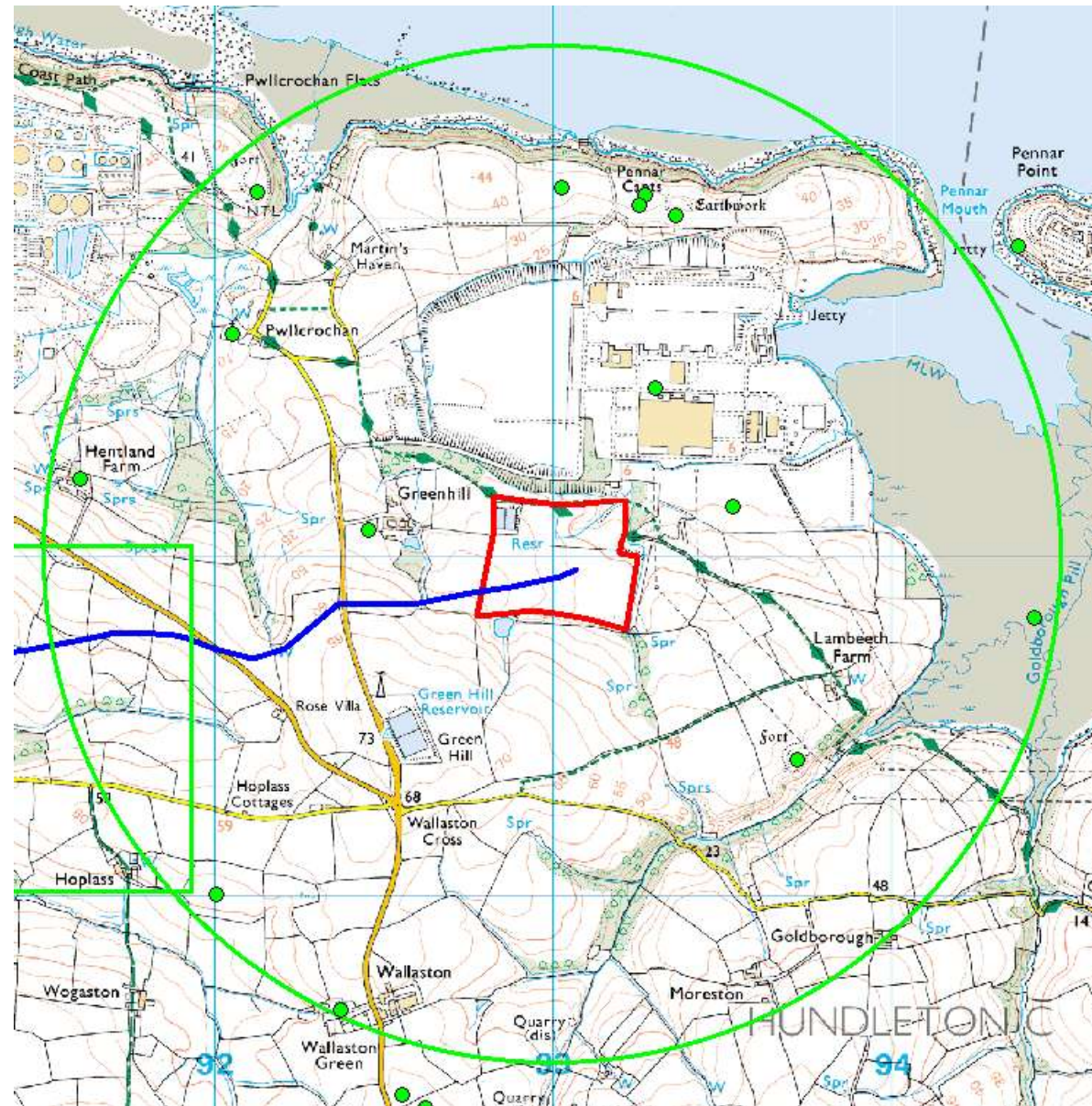


Figure 8: NMR search radius of 1.5km of Converter Station location. Search radius in green, NMR entries as green dots.

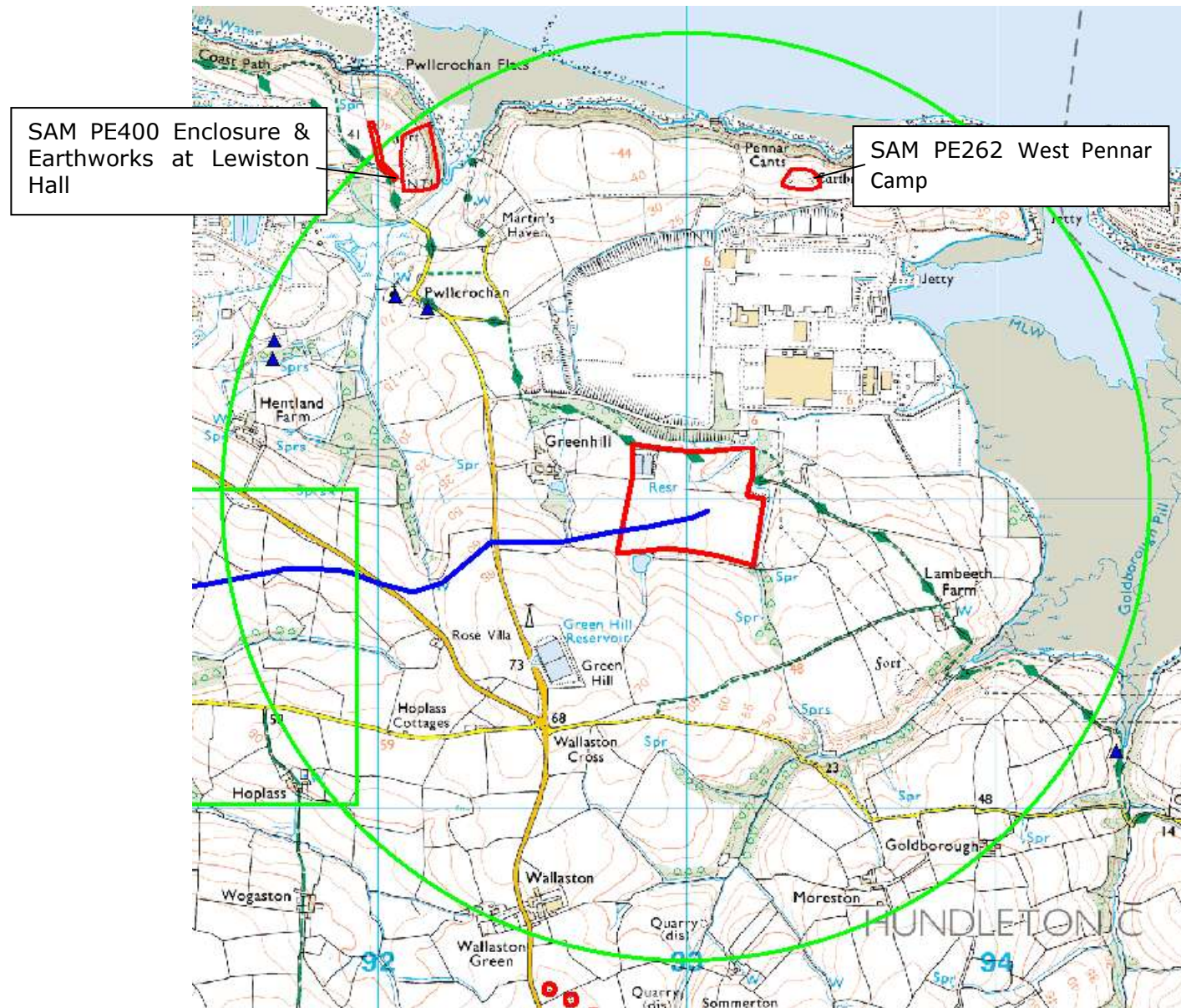


Figure 9: SAM and Listed Building locations within search radius of 1.5km of Converter station location. Search radius in green, Listed Buildings as blue triangles and SAM's labelled.

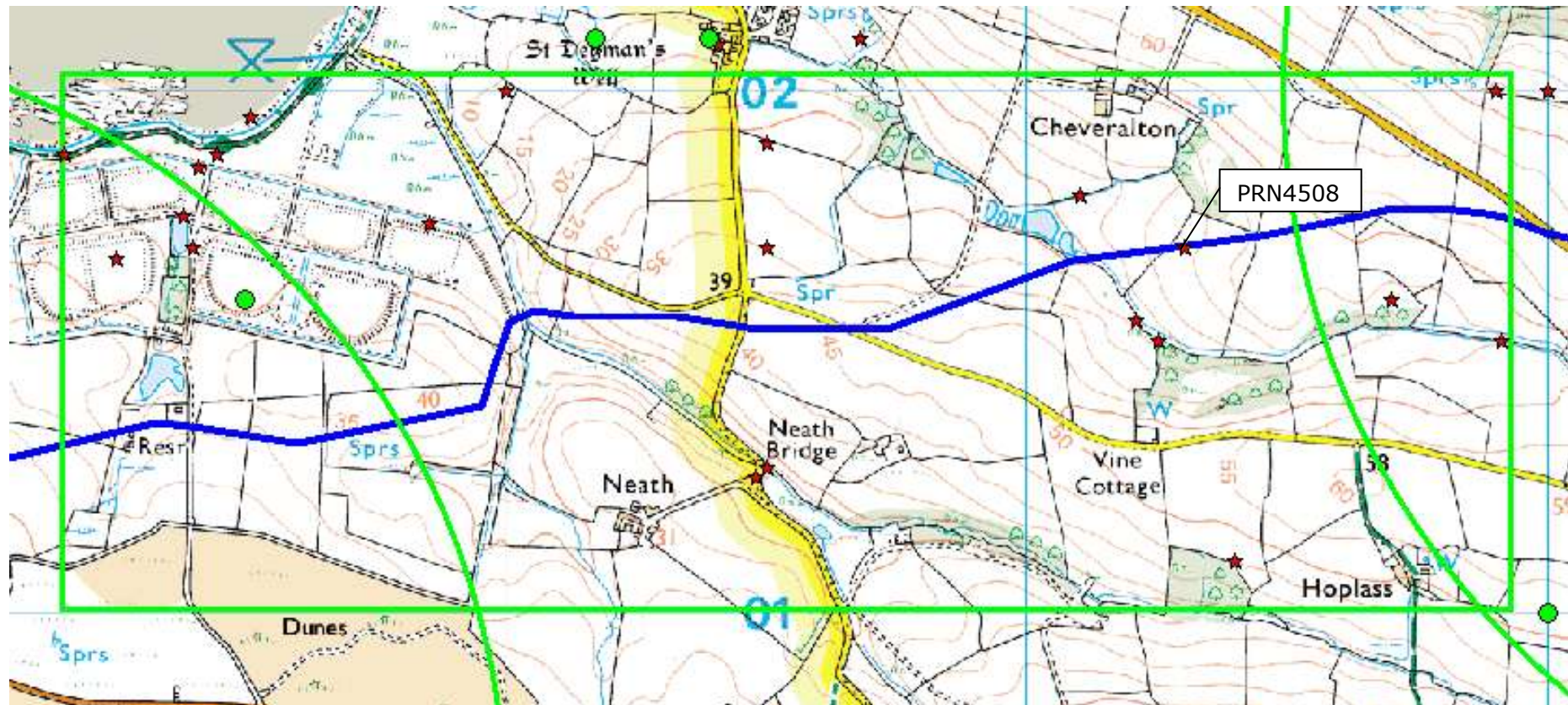


Figure 10: HER and NMR search radius of 200m either side of cable trench route. Search radius in green, HER sites as red stars, NMR sites as green dots.

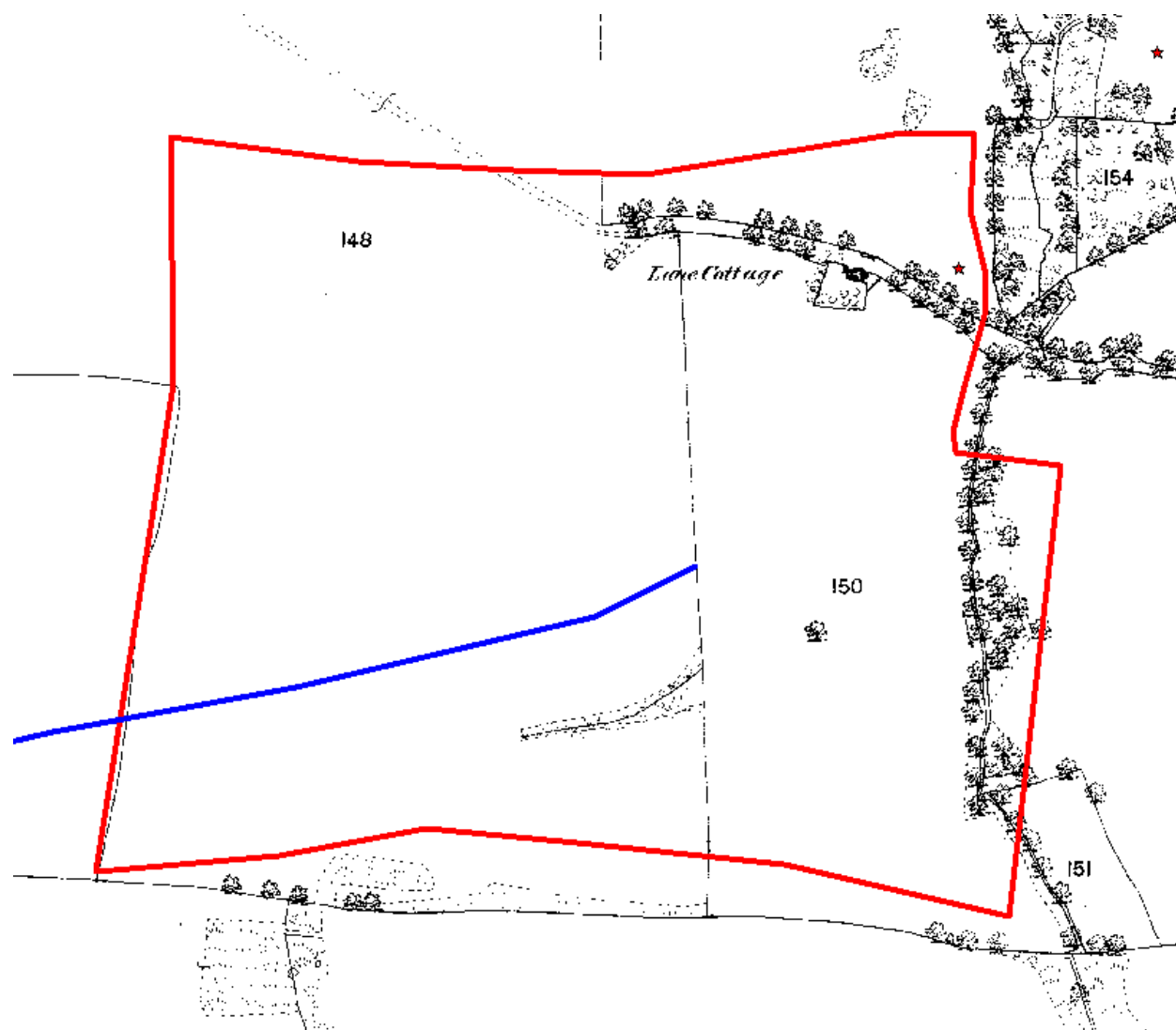


Figure 11: Extract of the 1st Edition Ordnance Survey map of 1890 with approximate location of Converter Station Site in red. Note Lane Cottage and lane in the northeast corner of the development, and the stream inside its eastern boundary

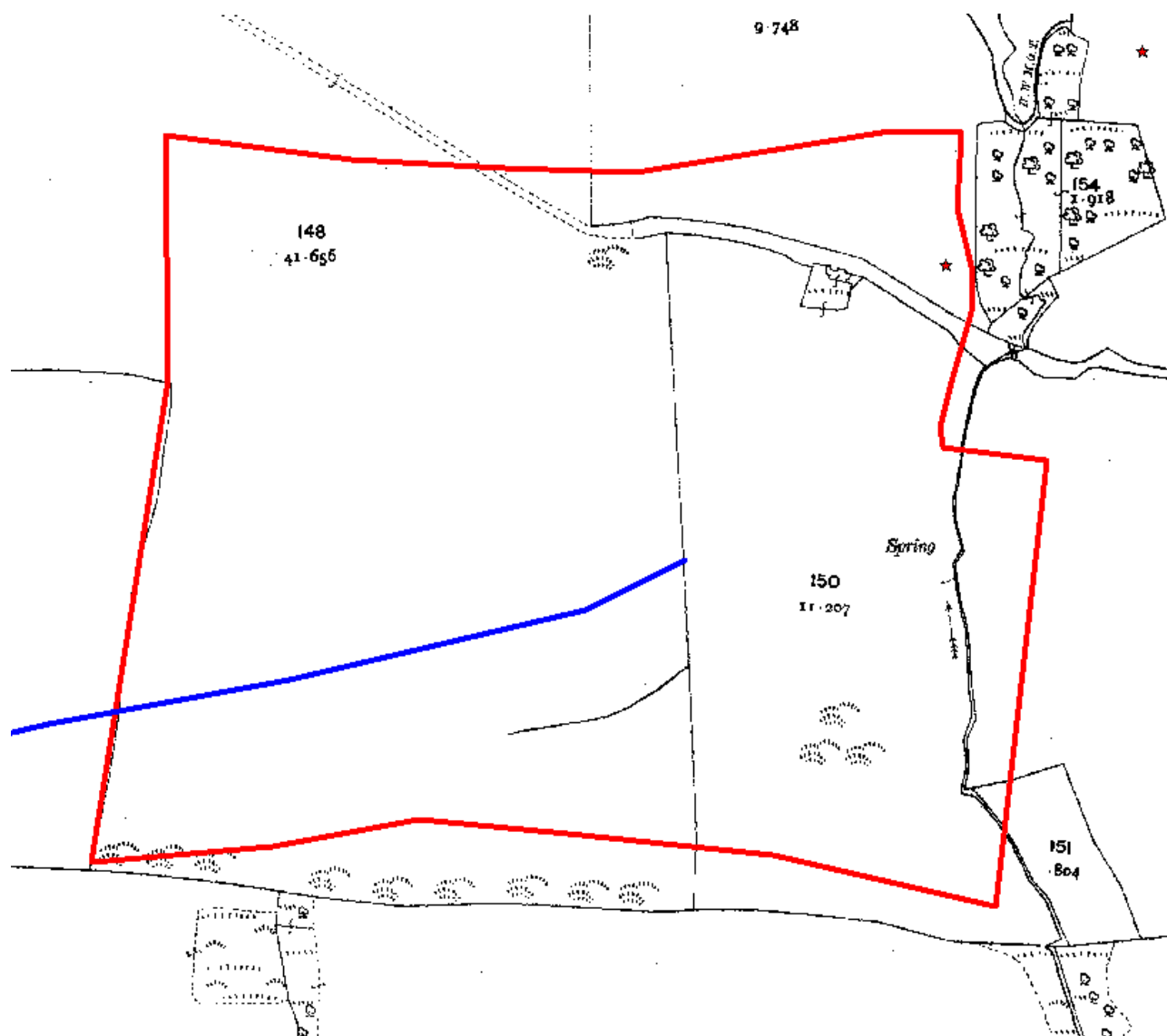


Figure 12: Extract from the 2nd Edition Ordnance Survey map of 1907 with approximate location of Converter Station Site in red.

5. IMPACT ASSESSMENT

5.1 Previous Impacts

5.1.1 The development of the Pembroke Power Station and the Cheveralton Oil Refinery have had a significant visual and physical impact on the surrounding landscape and so any further development in this area needs to consider carefully its impact on the remaining historical landscape.

5.1.2 The Converter Station Site has historically been utilised as farmland, but has more recently become rough pasture and moor. The Drilling Site has only recently been turned over to pasture, having historically been an area of rough pasture and sand dunes.

5.1.3 The cable trench route crosses a landscape which is thought to have been utilised for agricultural practices since prehistory, with only some, more recent field enclosures altering its appearance.

5.2 Potential Physical Impacts from Development

5.2.1 In terms of physical impacts upon the archaeological resource, the following elements are those which could impact upon either buried or upstanding archaeological remains:

- Construction of Converter Station;
- Construction of Drilling Site;
- Excavation of cable trench;
- Drilling operations; and
- Infrastructure, including access track, working easements, construction compounds, storage areas etc.

5.2.3 The cable trench route will cross a landscape which is known to contain a range of prehistoric and historic archaeology. The physical impact to this archaeology will depend on the depth of soil needed to be excavated.

5.2.4 The proposed Drilling Site will impact physically on the remains of PRN 55454, the remains of concrete bases associated with World War II defensive structures. Nearby HER entries show a high incidence of prehistoric activity in the immediate vicinity and therefore groundworks may encounter remains relating to these.

5.2.5 The proposed Converter Station Site will impact physically on known archaeology relating to a former cottage and field systems from the Post-Medieval period (PRN 33154). Nearby HER entries show some incidence of prehistoric activity in the immediate vicinity and therefore groundworks may encounter archaeology relating to these.

5.3 Setting and Visual Impacts from the Development

5.3.1 As well as physical impacts to archaeology, the visual/setting impacts of the scheme on the various designated historic environment features in the vicinity may need to be considered. This includes impacts to SAMs, Registered Parks and Gardens, LBs and HLCAs.

5.3.2 The western half of the proposed development will lie within the Pembrokeshire Coast National Park, while the Drilling Site lies partially within the SSSI site 'Broomhill Burrows', the SPA site 'Castlemartin coast', and also the SAC Limestone Coast of South West Wales. The Park Authority will have to be consulted during the planning process, as will Natural Resources Wales over

consent and approval for the elements of the proposed development that lie within the SSSI, SPA and SAC designated areas.

5.3.2 The proposed Converter Station is unlikely to have a significant effect on the HLC for Rhoscrowther, given the total area of the HLC area, although given its proximity to the HLC area of Pembroke Power Station, the boundaries could be re-drawn to incorporate the new Converter Station into it. There will be limited visual impact from development in this area as it is distant from present day settlement, and roads, and is adjacent to similar infrastructure.

5.3.3 The Drilling Site location is visible or partially visible from all of the Listed Buildings and Scheduled Ancient Monuments found within the 1.5km search radius of that area (see above). In particular there are clear views from the Grade II Listed War Memorial at Broomhill Burrows (PRN 59465, LB 17162) and Broomhill Burrows Anti-aircraft battery (PRN 14355, PE494) across the Drilling Site area (see photos 4 & 5), and depending on its final construction height it may be visible from The Devil's Quoit Chambered Tomb (PRN 3071, SAM PE020). These should be made account of during the planning process to ensure the final development does not detrimentally affect the settings of these surrounding sites.

6. MITIGATION AND CONCLUSIONS

Without full details of the development, it is not possible to provide a conclusive list of suggested mitigation works, but an initial assessment is given below. Any mitigation works will need to be approved by the Local Authority Planning Advisor and any other relevant bodies whose permission or consent is required, such as Natural Resources Wales and the Pembrokeshire Coast National Park Authority. Each area of the development will be discussed in turn below.

6.1 Breakdown by Area: Drilling site

6.1.1 Groundworks at the proposed Drilling Site are likely to encounter archaeological material relating to the modern period in the form of WWII ancillary structures (PRN 55454).

6.1.2 There is a moderate to high potential for prehistoric archaeology to be present as demonstrated by the nearby HER entries. These could include flint scatters within the topsoil as well as buried features relating to settlement. There is also considered to be a moderate potential for Bronze Age burials to be present, due to the high incidence of similar remains in the wider area.

6.1.3 The nature of the known archaeology within this area is such that preservation in situ will not be required, and a record produced through archaeological investigation would be suitable.

6.1.4 A scheme of geophysical investigation is recommended to assess the presence of hitherto unknown archaeology on the site prior to archaeological excavation to assist in the development of a suitable archaeological programme of works, which could include further evaluation. Appropriate mitigation could be designed following the results of evaluation works, if significant archaeological remains are identified.

6.1.5 The nature of the drilling operations are not fully known, but it is possible that such operations could disturb unknown archaeological resources relating to the Palaeolithic and early Mesolithic periods, as they have previously been found in south Pembrokeshire. The drilling operations may also disturb shipwreck sites off the coast of Pembrokeshire.

6.1.6 Mitigation works for the deep level archaeology is unlikely to be possible, but an archaeological assessment of geological borehole data once available would help ascertain the likelihood of its presence.

6.1.7 Disturbance of offshore archaeological sites should be avoided as mitigation works on such sites would be expensive. It is recommended that the RCAHMS be consulted to ensure no shipwreck sites off the Welsh coast are disturbed by the undersea cabling.

6.2 Breakdown by Area: Converter Station Site

6.2.1 Groundworks at the proposed Converter Station Site are likely to encounter archaeological material relating to 'Lane Cottage' and the enclosure of the land around it (see section 4 above).

6.2.2 There is the potential for some prehistoric archaeology to be present as demonstrated by the nearby HER entries.

6.2.3 The nature of the known archaeology is such that preservation in situ will not be required, and a record produced through archaeological investigation would be suitable.

6.2.4 A scheme of geophysical investigation is recommended to assess the presence of archaeology on the site prior to archaeological excavation to assist in the development of a suitable archaeological programme of works, which could include further evaluation. Appropriate mitigation could be designed following the results of evaluation works, if significant archaeological remains are identified.

6.3 Breakdown by Area: Cable trench route

6.3.1 The cable route will cross a landscape that is known to contain prehistoric and historic archaeological evidence, including one field which contains a Scheduled Ancient Monument, the Devil's Quoit.

6.3.2 The level of archaeological investigation for the cable trench route will need to reflect the amount of disturbance it will cause to the buried archaeology. For example, a narrow and shallow trench will disturb less of the archaeology than a deep or wide excavation and so affect the required archaeological works. The width of any working easement would also need to be considered.

6.3.3 A geophysical survey of the proposed cable route and working easement would help give an indication of the existing archaeological resource, and could then be used to inform a proposed scheme of targeted archaeological works.

6.3.4 A geophysical survey of the proposed cable trench route through the field containing SAM PE020, the Devil's Quoit should be undertaken as a matter of course, to establish if any associated features would be disturbed by the development. Further evaluative trial trench evaluation within the route in this field would also be considered necessary prior to any development commencing.

6.3.5 The field containing the HER reference PRN4508 refers to a possible standing stone based on field name evidence. There is no standing stone present in the field nor has the presence of one ever been confirmed. Initial geophysical survey in this area would assist in determining the presence or absence of archaeology within this area.

6.4 Breakdown by Area: Other Infrastructure

6.4.1 At present there is no information available on the potential areas to be set aside for contractor's compounds, materials storage areas, access roads etc. It may be that these will be located within the areas defined for the Drilling and Converter Station sites. If they will be located in different areas, then an initial programme of geophysical survey would be advised to determine if archaeological remains are present.

6.5 General Mitigation

6.5.1 Geophysical surveying would be recommended across all areas of the proposed development to provide an initial and rapid archaeological evaluation. The results of the survey could identify clear archaeological features such as ditches associated with former field boundaries or enclosures, burnt mounds or other areas of burning such as hearths, structures such as cairns or stone lined graves. Geophysical survey would not determine the presence of flint scatters within the topsoil.

6.5.2 The majority of fields in the area are laid to pasture and not suitable for field-walking (which needs recently ploughed fields) and so flint scatters could not be found using this technique. It is possible that test pitting for finds recovery may be required, which could be undertaken in areas close to known flint scatters.

6.5.3 Further evaluation in the form of trial trenching may be needed following the geophysical survey to provide more information on any anomalies recorded. This would also be most likely required at an early stage within the field of the Devil's Quoit. The trenches would provide further information on the date, character, extent, significance and state of preservation of any buried remains. As well as testing anomalies on the geophysical survey, further trenching may be required to test blank areas on the survey to confirm that the survey methodology has worked and that no remains are present.

6.5.4 Where areas of significant archaeological remains are identified, the first option for mitigation would be to avoid the remains and leave them persevered *in-situ*. This may be able to be done by altering designs to avoid archaeological remains or protecting them. Where it is not possible open area excavations may be necessary to preserve the archaeological remains through record.

6.5.5 If less significant archaeological remains are revealed or where evaluation has been inconclusive it may be necessary to implement an archaeological watching brief during the development to enable any hitherto unidentified remains to be recorded during construction works.

6.6 Overall Conclusions

6.6.1 From the records of known archaeology within the areas of the proposed development, there are no significant constraints to the development. Further archaeological works will be required, but there is considered nothing that would preclude the development.

6.6.2 In terms of setting issues for surrounding listed buildings and Scheduled Ancient Monuments, there are again unlikely to be any constraints that would preclude development. It is not known what permanent structures would be visible at the Drilling Site, but it is assumed that the majority of works in this area would be temporary during construction. Mitigation could be implemented to reduce the long term impact on the setting of the war memorial. The area of the cabling will run through the field within which lies the devil's Quoit SAM. These works will be temporary and have no long term impact on the setting of the monument. Further archaeological investigation in this area may provide more information on the monument and its setting.

6.6.3 The development proposals lie almost entirely within the Rhoscrowther Historic Landscape Character Area. The boundary of the HLC circuits around the existing Power Station and oil refinery, two very visible landmarks, the overall impact of the development proposals are considered to cause a minor impact on the HLC area.

6.6.4 Although it is not possible to determine if any hitherto unknown archaeological remains of national significance are present within the development area, from the available information it is considered unlikely that anything would be present that could not be dealt with appropriately through slight redesign or preservation through record.

6.6.5 Impacts to the SSSI and SAC should be covered by any specific Landscape and Visual assessments being undertaken for the development proposals, and are not covered within this archaeological study. Discussions with Natural Resources Wales would be needed to determine if their presence would provide any significant constraints to the development proposals.

7. SOURCES

Database

Dyfed Archaeological Trust Historic Environment Record

National Monument Records for Wales, housed with the Royal Commission on the Ancient and Historical Monuments of Wales, Aberystwyth. Online database
<http://www.coflein.gov.uk/>

Unpublished Reports

Murphy, k., 1995, *Pembroke Power Station: Archaeological Study: The Materials Handling Plant*, Cambria Archaeology Report

Sambrooke, R. P., 1996, *Pembroke Power Station: Archaeological Study: Archaeological implications of Land Based dredging Disposal at the Pembroke Power Station*, Cambria Archaeology Report

APPENDIX 1: HISTORIC LANDSCAPE CHARACTERISATION: Rhoscrowther

GRID REFERENCE: SM 901014

AREA IN HECTARES: 2017

Historic Background

This large character area lies on the south side of the Milford Haven waterway. It lies within the parishes of Angle, Hundleton, Pwllcrochan and Rhoscrowther. The landscape features a large number of prehistoric elements. The present B4320 is traditionally thought to follow the line of a prehistoric trackway, known as 'The Ridgeway', that runs along the main east-west ridge across south Pembrokeshire. The amount of prehistoric archaeology surviving within the immediate environs lends credence to the tradition of this being an ancient trackway. Neighbouring this area Kilpaison Burrows dune slacks overlies a well-known complex of bronze age round barrows, and a neolithic burial chamber, the 'Devil's Quoit'. Further groups of prominent barrows lie just south of Wallaston Farm, and at the Dry Burrows near Hundleton, while Corston Beacon round barrow is still a prominent landmark. Straight, north-south field boundaries that characterise much of south Pembrokeshire are co-axial upon the east-west Ridgeway and are possibly prehistoric in origin. The Ridgeway remains a prominent landscape feature and appears to have formed the boundary between the early medieval commotes, of Manorbier – within which this area lay – and Coedrath, both in Cantref Penfro. An ecclesiastical centre lay at Rhoscrowther itself, which was the site of a 'Bishop house', a quasi-collegiate foundation of St Davids. Much of the area lay within the later medieval Manor of Castlemartin which was the demesne manor of the Lordship of Pembroke, and a castle-guard fee. Rhoscrowther and Pwllcrochan appear to have been more loosely tied to the manor and by the later medieval period a separate gentry-house had been established in Rhoscrowther parish at Eastington. Hundleton parish was created out of part of Monkton parish in the 1840s and lay within the borough liberty of Pembroke. Angle, comprising 2 knight's fees, was held as a mesne lordship of Pembroke. Many of the farms in the area began as villas mentioned in accounts of the 13th century to the 15th century. Orielson and Kilpaison represented one knight's fee held of Pembroke by Richard Wryot in 1353, Moreston represented ½ knight's fee held of Pembroke, Rhoscrowther, with the parish church and glebe were also held of Pembroke, and Corston, Neath and Wallaston, were members of the Manor of Castlemartin from the 13th century onwards. Pwllcrochan parish church was a possession of the Benedictines of Monkton Priory, Pembroke. However, there is little evidence for open-field farming within the area, but strips were still held collectively within the fields of Newton Farm in 1824, and are shown on a map of that year. Windmills appear to have formed a prominent feature of the landscape and at least three appear to have occupied the area during the medieval or early post-medieval period. The Herbert Earls of Pembroke held Castlemartin manor from 1551 until 1598 when it was sold to the Lords of Stackpole. In 1698, Alexander Campbell acquired it through marriage. Many of the farms, and major houses such as Bangeston – possibly the site of a moated medieval manor – were in direct Campbell ownership. Rhoscrowther and Pwllcrochan had become a holding distinct from the Castlemartin estate, the 'Rosecrowther and Pulcrogan Estate' which comprises most of the central part of this area. In 1824 the estate was sold to Sir John Owen of Orielson, an estate that included the easternmost part of this area, and the Mirehouses of Angle eventually acquired much of it. The present system of large, irregular fields and dispersed settlement, is apparent by 1787, when it is shown on an estate map of that year, as are the villages of Rhoscrowther and the hamlet of Pwllcrochan. Both these settlements were abandoned as a result of the construction of an oil refinery and power station in neighbouring areas in the 1960s. There are also limestone quarries in this area.

Description and essential historic landscape components

Rhoscrowther is a large historic landscape area that stretches along the southern banks of the Milford Haven waterway from Hundleton in the east to the far west of the Castlemartin Peninsula. Although it includes the mud, marsh and rocks along the foreshore of the waterway, the main bulk of this area comprises an agricultural landscape lying across gently undulating hills that rise to 60m to 70m above sea level. Apart from the loosely clustered and now abandoned hamlet of Rhoscrowther and the former cluster of dwellings at Pwllcrochan there are no villages, and the settlement pattern comprises dispersed farms and other dwellings. Rhoscrowther and Pwllcrochan were abandoned during or after the construction of the Texaco oil refinery and Pembroke Power Station. There are a large number of listed buildings most of them farm buildings. Farms tend towards the large size. Stone is the main building material, with houses usually cement rendered and outbuildings left bare, and slate the roofing material. Farmhouses date in the main to the 19th century, but there is great variety in this area, with more examples in the polite Georgian style than in the vernacular tradition. Although the latter tradition is apparent in some of the smaller examples, such as the 17th century or 18th century house at Hilton with its massive chimney, and the remains of 18th century Bangeston House. Other older examples include the late medieval tower house at Eastington with its neighbouring 18th century house, and an old 16th or 17th century mansion at Henllan now used as a barn. Modern housing is not a strong component of the landscape, but new single dwellings constructed close to farms are present. Most farms have substantial ranges of 19th century outbuildings, often set in a formal arrangement around a yard, and large collections of modern steel, concrete and asbestos agricultural structures. Included in this area are two medieval churches, each with a substantial tower, St Decumanus at Rhoscrowther and St Mary's at Pwllcrochan. Land-use is a mixture of improved pasture and arable. There is very little rough pasture or under-used farmland apart from pockets of marsh close to the coast. Deciduous woodland is common on the steeper valley sides and on the coastal slopes – indeed in the latter location it is very prominent – but across the more gently sloping farmland it does not constitute a major landscape component. Fields are large. Hedges on banks are by far the most common type of boundary, but towards the western part of the area mortared walls form a small but significant element. Hedges are generally well maintained. Mortared stone cylindrical gateposts are a feature of the landscape, particularly towards the area's western end. Non-agricultural landscape components are not numerous, but included small reservoirs, sites of dismantled oil storage tanks and telecommunication masts. There are numerous archaeological sites within this area, but they are not prominent landscape features and therefore do not form major components of the historic landscape. Nevertheless they include: several bronze age burial mounds, bronze age standing stones, bronze age burnt mounds, many prehistoric flintworking sites, sites of medieval settlements, old cottages and sites of houses at Pwllcrochan, limekilns and quarries, and 20th century defensive structures.

Definition of this area to the north where it borders the waterway or an oil refinery and power station is very good. To the east and west definition is less clear, and to the south where the character area has yet to be delineated boundary definition is poor, with no hard-edged border but rather a wide zone of change.

Sources: Angle parish tithe map 1842; Hundleton Parish tithe map 1841; Jones 1987; Kissock 1993; Lockley 1977; Ludlow 1993; Ludlow 1998; Nash 1986; NLW VOL. 1; NMR Cawdor Map Book, 1787; Owen 1918; PRO D/EE/7/338; PRO D/LLC/674; PRO D/ANGLE/5; PRO D/ANGLE/92; PRO HDX/198/2; PRO D/BUSH/6142 & 144; Pwllcrochan Parish tithe map 1840; Ramsey 1999; Rhoscrowther Parish tithe map; Walker 1950

APPENDIX 2: DYFED ARCHAEOLOGICAL TRUST HISTORIC ENVIRONMENT RECORD INFORMATION

PRN	Site Name	Description	Period	NGR
501	Freshwater West	A massive collection of flint implements, including 247 scrapers, 47 blades, 15 awls, 24 burins. 2 arrowheads, 1 microlith and 7 utilised flakes. The collection also includes over 7,000 by-products of tool and implement manufacture. The site also yielded	Mesolithic	SR88699927
502	Freshwater West		Bronze Age	SR88689929
503	Freshwater West	A flint tranche axe, flint flakes and a flint implement recovered from a site eroding from below a peat exposure of Freshwater West beach. The peat above the site was sampled and a calibrated C14 date of 5250-4550 BC (Green 1998, 41) was obtained. Chalc	Mesolithic	SR881997
504	Freshwater West	This record is confused and appears to combine two separate finds, a tanged and barbed arrowhead and a chert pebble - split for conversion into a core - from the Castlemartin Burrows area into a single record even though neither of them have an accurate	Bronze Age	SR881997
505	Gupton Burrows	Two 'flint chipping floors' were shown in approximately this location on a distribution map published in 1963 (Wainwright 1963, 104). No flints were found by the Ordnance Survey during a visit to the area in 1965 and the OS card records that 'Dr Wainwright	Mesolithic	SR892995
510	Freshwater West	A flint working site containing 25 flints. The assemblage was recorded as consisting of 'cores and core trimmings, primary flakes, a thumb scraper, calcined flint and workshop waste'. Even though the material clearly represents flint working activity, it	Neolithic, Mesolithic	SR88529940
1248	Gupton Burrows	A site recorded as a 'flintworking floor' was shown roughly in this location on a 1963 distribution map (Wainwright 1963, Plate x, opp.p104). The material may include a hammer stone, flint flakes and flint spalls (Green 1998, 38). Marine shells were also	Neolithic, Mesolithic	SR892995
3070	Bangeston		Post-medieval	SM87450165
3071	Devils Quoit; Newton Cromlech	A fine burial chamber, standing in the centre of a field of wind-blown sand burrows. The monument comprises of a large capstone, 2.75m x 2m, resting on a slab, 1m x 1.5m, with two further uprights measuring 1.5m x 1.5m, and 1m x 1.8m. NC 2003.	Neolithic	SM88650084
3072	Gravel Bay	This record covers five flint scatters recorded by Wainwright as 'flint chipping floors' (Wainwright 1960-62, 50 Fig.1; 1963, plate x facing page 104) on the cliffs west of Freshwater West. Cores and over 20 struck flakes were recorded at each site. A L	Neolithic, Mesolithic	SM87450075
3073	Broomhill Burrows	The butt end of a broken Neolithic axe of probable Group VIII type. The axe fragment may have been from a flint scatter 40m to the south (PRN 3103). NAP 2004.	Neolithic	SM88350060
3074	Middlehill		Prehistoric	SM88230156
3075	Broomhill Burrows	A collection of flints recovered during different collection episodes from a possible shell midden (PRN 7592). The flints included a whitened leaf-shaped arrowhead, a scraper combined with a pointed tool of unusual design recovered by A L Leach (Leach 19	Neolithic	SM88630036
3076	Kilpaison Burrows	Sherds of pottery and an awl of Bronze Age date recovered from an area of 'shell strewn ground' (OS Card SM80 SE8), close to a flint working site containing Mesolithic and Neolithic material (PRN 3077). The pottery may be part of a cinerary urn and the s	Bronze Age	SM893004
3077	Kilpaison Burrows	A probable flint working site containing 2 cores, 4 scrapers, 2 choppers and a number of flint flakes. The exact findspot is uncertain, although A G O Mathias reported that there were 'two or three fine floors, where a considerable quantity of flint chip	Neolithic, Mesolithic	SM893004

3078	Cross Park		Medieval	SM905017
3079	Kilpaison Burrows	A hollowed-out round barrow, 13m in diameter, with a standing stone 0.6m high near its centre. The site was excavated in 1925, when a primary cremation and five secondary cremations, all Bronze Age, were recovered. An extended inhumation of Dark Age date	Bronze Age	SM8899900643
3080	Kilpaison Burrows	Early medieval B site, ie. medium-probability early medieval origins. Bronze age round barrow, excavated by Cyril Fox in 1926 when a single secondary, but undated long-cist was revealed. The barrow still survives as an above-ground feature, with an in si	Early Medieval	SM8899900643
3081	Kilpaison Burrows	Two shale beads recovered from Kilpaison Burrows, which are identical to the shale beads that were apparently being manufactured at Nab Head. The exact findspot and the circumstances of recovery of these two beads are unknown, although their presence doe	Mesolithic	SM8900
3082	Broomhill	A flintworking site identified by Wainwright (1963, plate x facing p104). There are no details regarding any finds from this site. NAP 2004.	Neolithic, Mesolithic	SM88810165
3083	Kilpaison Burrows	A flint microlith, crescent type D24 (Horsham type). NAP 2004.	Mesolithic	SM8900
3084	Kilpaison Burrows	A collection of flint scrapers, mostly thumb scrapers and convex scraper, and a broken sandstone disc recovered by A G Mathias at various times from Kilpaison Burrows. NAP 2004.	Mesolithic	SM8900
3085	Kilpaison Burrows	Fragment of a cinerary urn of Bronze Age date recovered from an area containing flint material of the Mesolithic and Neolithic periods. NAP 2004.	Bronze Age	SM8900
3086	Kilpaison Burrows	A 'third brass' of the late third century, together with Samian ware and Roman glass, were found on Kilpaison Burrows, Rhoscrowther. (Ordnance Survey 1964).	Roman	SM8900
3103	Little Furzenip	Twenty one flints, including cores, primary flakes, flakes, a thumb scraper and a retouched blade, representing a flintworking site revealed in a wind-eroded hollow in blown sand dunes. NAP 2004.	Neolithic, Mesolithic	SM88360057
3218	West Pennar	Earthwork of unknown significance. RPS August 2001	Unknown	SM931029
3223	Pwllcrochan Parish Church; St Mary's	Medieval parish church comprising chancel, nave, N transept with skew-passage, S transept with tower and spire, and N and S porches. The earliest fabric is possibly dateable, from an inscription, to the 14th century (RCAHM 1925, 301). Little 19th century	Post-medieval, Medieval	SM92050266
3226	Martin's Haven	This is a small, sub-circular promontory fort with an annexe attached to its north side. It occupies a blunt promontory at 30m above sea level. A craggy slope above the tidal section of the Milford Haven waterway naturally protects the eastern side of th	Iron Age	SM92130308
3227	West Pennar Rath	Two lengths of banks define the west and east sides of a defended enclosure. The south and north sides have now gone - these, with the surviving banks, originally defined an oval enclosure c.70m-75m diameter. The surviving banks are c.45m long and stand	Iron Age	SM93370304
3230	Upper Hentland		Prehistoric	SM92000229
3232	Hoplass		Prehistoric	SM91910152
3232	Hoplass		Prehistoric	SM91910152
3233	Cheveralton		Prehistoric	SM91250152
3234	Cheveralton		Prehistoric	SM91210156
3235	Hilton	This is one of several flintworking sites (see also PRNs 3229, 3236, 3237, 3238, 3243 and 3250) shown in the Rhoscrowther area on a distribution map of sites (Wainwright 1963, plate X opp p104). There are no details regarding any finds from this site. NA	Neolithic, Mesolithic	SM905019
3236	Cheveralton	This is one of several flintworking sites (see also PRNs 3229, 3235, 3237, 3238, 3243 and 3250) shown in the Rhoscrowther area on a distribution map of sites (Wainwright 1963, plate X opp p104). There are no details regarding any finds from this site. NA	Neolithic, Mesolithic	SM911018

3237	Tilley Cottage	This is one of several flintworking sites (see also PRNs 3229, 3235, 3236, 3238, 3243 and 3250) shown in the Rhoscrowther area on a distribution map of sites (Wainwright 1963, plate X opp p104). The only artefact recorded from the vicinity of this site i	Neolithic, Mesolithic	SM917016
3237	Tilley Cottage	This is one of several flintworking sites (see also PRNs 3229, 3235, 3236, 3238, 3243 and 3250) shown in the Rhoscrowther area on a distribution map of sites (Wainwright 1963, plate X opp p104). The only artefact recorded from the vicinity of this site i	Neolithic, Mesolithic	SM917016
3238	Tilley Cottage	This is one of several flintworking sites (see also PRNs 3229, 3235, 3236, 3237, 3243 and 3250) shown in the Rhoscrowther area on a distribution map of sites (Wainwright 1963, plate X opp p104). There are no details regarding any finds from this site.	Neolithic, Mesolithic	SM919020
3238	Tilley Cottage	This is one of several flintworking sites (see also PRNs 3229, 3235, 3236, 3237, 3243 and 3250) shown in the Rhoscrowther area on a distribution map of sites (Wainwright 1963, plate X opp p104). There are no details regarding any finds from this site.	Neolithic, Mesolithic	SM919020
3239	Neath Bridge		Prehistoric	SM90500128
3243	Hoplass	This is one of several flintworking sites (see also PRNs 3229, 3235, 3236, 3237, 3238 and 3250) shown in the Rhoscrowther area on a distribution map of sites (Wainwright 1963, plate X opp p104). There are no details regarding any finds from this site.NA	Neolithic, Mesolithic	SM914011
3244	Lambeeth	Lambeeth is a small, semi-circular scarp-edge fort naturally well protected along its eastern side by a steep slope which falls away to a stream 25m below. The eastern side is defended by a curving bank and ditch. The bank was machine spread and soil dum	Iron Age	SM93720140
3250	Hoplass Cottage	This is one of several flintworking sites (see also PRNs 3229, 3235, 3236, 3237, 3238 and 3243) shown in the Rhoscrowther area on a distribution map of sites (Wainwright 1963, plate X opp p104). There are no details regarding any finds from this site. NA	Neolithic, Mesolithic	SM922013
3255	Lambeeth	A flintworking site was shown in roughly in this location by Wainwright (1963, plate x opp p104), based on A L Leach's records. NAP 2004.	Neolithic, Mesolithic	SM933012
3373	Cross Park		Medieval	SM934007
4508	Horse Stone Park; Horse Stone Mount	A "Horse stone" field name taken from the parish tithe map, which may show that a standing stone formerly stood in the vicinity. RPS Trysor, August 2004	Bronze Age	SM913017
4675	Gupton Burrows Bridge	A single arched stone bridge. 30m downstream, a stone-built arched culvert directs the stream beneath the sandy storm beach/dunes. Km 1996	Post-medieval	SR88559974
4676	Freshwater West		Post-medieval	SR885998
4677	Freshwater West	About 20 seaweed drying sheds used to stand on the headland in the late 19th century/early 20th century. One remains and has been restored. It is a timber shed with a thatched roof - originally marram grass - sloping down to the ground. The building	Post-medieval	SR8854799424
7591	Broomhill Cottages	No standing stone apparent at the given grid reference. NC 2003.	Bronze Age	SM88610084
7592	Broomhill Burrows		Neolithic	SM88680031
7594	Kilpaison Burrows	A pounder stone, pottery sherds and sea shells, thought to be food debris, suggesting occupation activity. This site may be associated with flint working site (PRN 3077). NAP 2004. NAP 2004.	Neolithic, Bronze Age	SM893004
7610	Pwllcrochan	Findspot for sherds of post-medieval pottery found at Martin's Haven hillfort (PRN 3226). MM 2004.	Post-medieval	SM92130308
7733	Greenhill	Nothing was noted of archaeological value for PFRS at this location during fieldwork in February 2003. NC 2003.	Post-medieval	SM92000233
7745	Lower Henllan		Post-medieval	SM916025

7746	Lower Henllan		Post-medieval	SM916025
7753	Kilpaison Burrows	Unclassified flint scrapers and a flint flake thought to have been recovered from close to flint scatter PRN 3077 and possibly associated with occupation site PRN 7594). NAP 2004.	Prehistoric	SM893004
7932	Wallaston Cross		Post-medieval, Medieval	SM925012
8466	West Pennar Rath	A collection of food debris, including cattle bones and oyster shells and sherd of possibly prehistoric pottery indicating a probable occupation site. NAP 2004.	Prehistoric	SM93350302
8500	West Pennar	A retouched flint flake. NAP 2004.	Prehistoric	SM935030
10092	Wallaston Methodist Chapel		Post-medieval	SM92390066
10094	Freshwater West	A flint working site identified by A L Leach (Leach's site A11) consisting of 2 cores, 14 flakes and a flint implement. NAP 2004.	Mesolithic	SR885995
10095	Weed Hut; Gupton Burrows	A collection of flints including a core, 4 flakes and 3 scrapers recovered from Gupton Burrows. The make up of the collection indicates small-scale flint working, although not enough is known about the circumstances of recovery to suggest a level of asso	Mesolithic	SR890993
10514	Pwll Crochan; St Mahoney	Doubtful chapel site, referred to only in a passage by Richard Fenton, of 1811 'there is a tradition of a chapel at the eastern extremity of (Pwllcrochan) parish, called St Mahoney, the Irish for St Matthew' (Fenton 1903, 218). There are no other referen	Medieval	SM930030
10521	Newton Burrows	Stone foundations of unknown significance. RPS August 2001	Unknown	SM883008
10790	Goldborough		Medieval	SM93980087
10791	Moryston; Moreston		Medieval	SM93620080
10793	West Pennar		Medieval	SM93170298
11383	Kilpaison Burrows	Five flint flakes recovered from Kilpaison Burrows. The findspot is uncertain. NAP 2004.	Neolithic, Mesolithic	SM888007
11459	Kilpaston; Kilpaison	Settlement identified by Saxton on his Pembrokeshire Map of 1578. RPS July 2001	Medieval	SM89250168
11472	Pwllcrochan; Peterachon		Medieval	SM9202
11640	Kilpaison Burrows, Round Barrow	A round barrow, 15m in diameter and 1.3m high. erosion on the west and south sides has exposed old red sandstone and carboniferous limestone boulders which make up the mound.	Bronze Age	SM8951200611
11641	Kilpaison Burrows, Round Barrow	A possible round barrow, represented by a semi-oval circular mound 12m by 7m, identifiable as a stonier area within a spread of small old red sandstone chips. at a field visit in 2005 the mound was difficult to identify due to the encroachment of the san	Bronze Age	SM8951500594
11642	Kilpaison Burrows, Round Barrow	A possible round barrow located in sand dunes and described as a slight swell in the ground surface with corresponding concentration of stone. The mound is now hidden due to the encroachment of the sand	Bronze Age	SM89500059
11694	Lambeeth Farm	A possible burial mound recorded in the early 20th century. Its location is unknown.	Bronze Age	SM9301
11976	Freshwater West	Not seen. KM 1996	Prehistoric	SR882993
12223	Broomhill Burrows	A flint core, 7 scrapers, a microlith, several implements and flakes collected from in Broomhill Burrows. This group appears to be part of a much larger collection donated to the Ashmolean	Mesolithic	SM885005

		Museum by P Grey. NAP 2004.		
13056	Hardingshill		Unknown	SM877018
13059	Broomhill	Cropmark of unknown significance. RPS August 2001	Unknown	SM885011
14355	Broomhill Burrows	Four circular casemates with ancillary underground chambers and one rectangular building of 20th century (?WWI) date. TAJ 13-12-89.	Modern	SM88260077
14393	Freshwater West	A hoard of 28 bronze objects found on Freshwater West beach in 1991. As well as 23 lumps of bronze the hoard contained fragments of 3 socketed axes of the South Welsh type, one broken tip of a Carp's tongue type sword (the first of this type to be found	Bronze Age	SR882999
15916	Starmans Hall		Post-medieval	SR89139972
15923		Situated against a north-facing slope on the south-east edge of angle bay. Constructed with red sandstone blocks and bonded with lime mortar. The kiln almost totally destroyed, only portion crucible remains. RJ 2001	Post-medieval	SM8944601881
15979			Post-medieval	SM894017
15979			Post-medieval	SM894017
17876		A limestone built single room school with a datestone of 1861. KM 1995	Post-medieval	SM92160262
17877			Post-medieval	SM92590225
17878	Neath Bridge	A post medieval footbridge. It is shown on the 1964 Ordnance Survey map and the First (1891) and Second (1908) Edition Ordnance Survey maps. PR February 2003	Post-medieval	SM90480126
17879			Post-medieval	SM92350126
17947		Shown on the tithe map of 1839 now demolished apart from a few outbuildings in poor condition. KM 1995	Post-medieval	SM9213802739
24120	Greenhill	Record of a post-mediaeval dwelling. RPS August 2001	Post-medieval	SM9202
25439	Hundleton		Post-medieval	SM93610064
26242	Pwllcrochan	1940-45, Air Defence, Searchlight Battery, now demolished. Two nissen huts, a single concrete hardstanding and a circular emplacement. RJC.Thomas, 23.01.93.	Modern	SM92090262
26243	Pennar Cants	1940-45, Air Defence, Searchlight Battery, now demolished. Two huts bases, a concrete hardstanding, and a circular earthen emplacement. The two hut bases are located in the ditch of an iron age fort. RJC.Thomas, 23.01.93.	Modern	SM93300305
26244	West Pennar	1940-44, Air Defence, Ack-Ack/Heavy Anti-Aircraft Battery, now demolished. Four gun pits, a command post, fourteen hut bases. When the guns were withdrawn circa 1944, dummy guns were installed, to give the appearance of a fully armed battery.	Modern	SM93100309
26348	Gupton Burrows		Post-medieval	SR88809916
28005	Pwllcrochan		Post-medieval	SM9202
28007	Rhoscrowther		Post-medieval	SM9002
29575	Pwllcrochan	No trace of this cottage recorded in 1824 now survives. Site presumably destroyed by the world war two installations 26242. The cottage is not recorded on the tithe map of 1839. K.Murphy 10.1.95.	Post-medieval	SM9211602646
29576	Pwllcrochan	Possibly a cottage here in 1824 alongside a road. Both the road and the cottage no longer exist and are noth shown on the tithe map of 1839. K. Murphy 10.1.95.	Post-medieval	SM92050257
29577	School Cottage	A building is recorded here on the tithe map of 1839. There are presently two cottages here - semi detached. Both are now extensively modernised the window openings changed and completely	Post-medieval	SM92130264

		rendered. The cottage nearest the school is disused and the wi		
29578	Lanicle Field	Site of cottage not examined on ground. In existence in 1839 and still lived in in 1908. K. Murphy 10.1.95.	Post-medieval	SM92340309
29579	Martin's Haven	Two cottages are recorded here in the 1839 tithe map. By 1908 just one is marked. The remains of the cottage still stand with the gable end to full height. K. Murphy 10.1.95.	Post-medieval	SM9236803145
29580	Martin's Haven	Coastal erosion has destroyed the site of this kiln.	Post-medieval	SM92330314
29581	Clerk's House	This dwelling is now a ruin though the walls still stand to their full height. A dwelling was first recorded here in 1839 and was still lived in 1908. K. Murphy 10.1.95.	Post-medieval	SM9233702807
29582	Venny-Lake	The site of this house first recorded on a map in 1777 is now a modern bungalow with modern out buildings. The site of the house recorded in 1777 seems to have been disused by 1908 Venny-Lake is first recorded in 1461 - BG Charles. K. Murphy 10.1.95.	Post-medieval, Medieval	SM92380286
29583	Venny-Lake	Site first recorded in 1461. In 1777 a house is marked by Thomas Lewis. The house is recorded on the 1908 OS map. Today no trace of walls survive but a substantial earthwork mound in woodland marks the site of this dwelling. K. Murphy 10.1.95.	Post-medieval, Medieval	SM92410285
29584	Venny-Lake	A cottage is first marked here in 1839 it is not recorded in the 1777 map. It is still present in 1908. No trace of the cottage now survives. K. Murphy 10.01.95.	Post-medieval	SM92360279
29592	Martin's Haven	This low stone built bridge spans a stream at the high water mark at Martin's Haven. It consists of a low round-headed arched "Culvert" and stone parapet walls. The whole has been poorly repaired. On a 1777 map "Bridges" the word only, is marked.	Post-medieval	SM92110289
29593	Pipers Park	Vertical aerial photographs seem to show a crop-marked enclosure at this location. However, a geophysical survey failed to detect anything of interest. This site is therefore not an antiquity. K. Murphy 23 January 2007	Iron Age,	SM9252003008
29594	Martin's Haven	An area marked by reeds to the west of Martin's Haven bridge seem to be a small valley-bottom peat bog. K. Murphy 10.01.95.		SM920028
29596	Martin's Haven	A harbour is marked on the OS map fo 1887 (survey 1874) this consists of two breakwaters one either side of the haven with an entrance between them. The limekiln 29580 stood on the east end of the east breakwater. By the OS map of 1908 the breakwater	Post-medieval	SM922031
30131	Pwllcrochan Parish Church; St Mary's	Early medieval D site, ie. possible early medieval origins. Churchyard occupied by the medieval Pwllcrochan parish church (PRN 3223). The polygonal churchyard appears to have been derived from a subcircular shape. It contains a well and lies within 350m	Early Medieval	SM92070267
30147	Venny Lake	Site of ruined cottage. RPS August 2001	Post-medieval	SM92380283
30148	Martin's Haven		Post-medieval	SM92390313
30149	Martin's Haven		Post-medieval	SM92410319
30150	Pembroke Power Station	Find spot for a scatter of pottery and glass. The pottery consists of North Devon tempered wares sgraffiti wares Staffordshire slipwares and other coarse wares. No building material was found. Finds were not retained. K. Murphy 1995.	Post-medieval	SM92940294
30151	Pembroke Power Station		Unknown	SM929026
30153	Martin's Haven	A cottage is marked on the tithe map (1839) but not on the 1st edition OS map (1864). A series of low banks may mark the site of this cottage but this is uncertain. The site may be destroyed by coastal erosion. K. Murphy 1995.	Post-medieval	SM92360317
33150	Eastern Middle Park		Iron Age	SM936031

33151	West Pennar Farmstead	Partial remains of some ivy covered buildings are visible on the site of this old farmstead, but the woodland and undergrowth was dense at the time of the visit making access impossible. The farmyard complex may be on the site of a mediaeval settlement	Post-medieval, Medieval	SM9317402930
33153	Pennar Gut	A deeply cut and narrow feature which seems to be a branch off the old Martin's Haven - Pembroke road. Seems to have lost its context as it now runs northwards for 100m and peters out in a field. Shown on 1839 parish tithe map. Its unusually deep cutti	Post-medieval	SM933022
33154	Pennar Mouth	A series of small fields identified as gardens on an 1824 sales prospectus. They were located at the head of a small inlet off the main Pennar Gut, close to holloway PRn33153. They may be paddocks associated with an early farmstead, but no evidence of s	Post-medieval	SM932021
33440	Angle	R Thomas has identified this site as Defence Post, number 138. No trace of this site was identified during the coastal survey. B Allen 1996	Modern	SM88040063
34610	Angle Bay	Water powered saw pits identified from 1st Edition OS. Site destroyed. BA & KM 1997	Post-medieval	SM8941001856
34614	Cocheston Pill	Lambeeth Mill was identified from 1st Edition OS. This mill building is in dense woodland and it is not possible to identify any features associated with the mill. The mill is stone built as one and a half storeys with chimney gables. Now roofless but wi	Post-medieval	SM9384801432
34615	Cocheston Pill	Lime kiln was identified from 1st Edition OS. Not seen the site is within dense scrub. BA & KM 1997	Post-medieval	SM9412001886
34616	Cocheston Pill	'Old Quarry' was identified from 1st Edition OS. Very overgrown quarry on the coast, approximately 30m in diameter and 3m deep. BA & KM 1997	Unknown	SM94130190
34617	Cocheston Pill	'Old Quarry' was identified from 1st Edition OS. Not seen within the dense scrub. BA & KM 1997	Unknown	SM94050200
34618	Pwllcrochan	Lime kiln was identified from 1st Edition OS. Completely destroyed by the installation of the oil refinery. BA & KM 1997	Post-medieval	SM93150233
34619	Pwllcrochan	'Old Quarry' was identified from 1st Edition OS. Completely destroyed by the installation of the oil refinery. BA & KM 1997	Unknown	SM931023
34629	Angle Bay	Corn mill identified from 1st Edition OS. There was no sign of this mill, the area has been redeveloped with oil storage tanks. BA & KM 1997	Post-medieval, Medieval	SM89380176
34629	Angle Bay	Corn mill identified from 1st Edition OS. There was no sign of this mill, the area has been redeveloped with oil storage tanks. BA & KM 1997	Post-medieval, Medieval	SM89380176
34630	Kilpaison Mill	Kilpaison mill identified from 1st Edition OS. There was no sign of this mill, the area has been redeveloped with oil storage tanks. BA & KM 1997	Post-medieval, Medieval	SM8985401746
35006	Angle Bay	A layer of rounded stones and some brick and eighteenth and nineteenth century pottery eroding out of a low cliff. Field clearance from the arable/pasture fields above. BA & KM 1997	Post-medieval	SM88560209
35007	Angle Bay	Modern concrete sea wall, showing signs of some erosion. BA & KM 1997	Modern	SM89150188
35008	Angle Bay	Eight substantial timbers leaning slightly towards the shore, set in a curve, parallel to the shore, approximately 15m out from the sea wall PRN 35007. BA & KM 1997	Post-medieval, Modern	SM89510195
35041	Pwllcrochan	The cold water outfall from Pembroke Power Station. A gully has been cut into the bedrock coastal cliff. At its head is a massive concrete wall with the outflow pipe below low water mark. Steel uprights to the east of the outflow indicate that a jetty may have been present.	Modern	SM93100323
35056	Cocheston Pill	Small single arched stone bridge. The bridge is used for the coastal path. The bridge is probably associated with the nearby mill, PRN 34614. BA & KM 1997	Post-medieval	SM93860140
35057	Cocheston Pill	Several small quarry pits, approximately 5m in diameter, now in dense woodland. BA & KM 1997	Unknown	SM93950144
35059	Cocheston Pill	Within the tidal muds, scattered over a wide area are steel hawsers, iron and steel fittings, scraps, softwood timber uprights. These finds are most likely to be associated with the WWII warships that were beached here, PRN 34572.	Modern	SM942021

35093	Pennar Mouth	P.Sambrook identified this hillfort from aerial photographs. BA & KM 1997	Iron Age	SM93800305
39354	Goldborough Farm	Stone-built and whitewashed pigsty with a gabled roof. The building has been altered recently by the addition of a roof over the yard area. It is now used as a chicken coop. This building may have been two separate buildings. A building is shown in th	Post-medieval	SM93980087
39356	Goldborough Farm	Rectangular range of buildings forming the west side of the yard. The range consists of two buildings, a cow house forms the southern end and a stable with first floor storage occupies the north end. Both buildings are stone-built with slate gable roofs	Post-medieval	SM93970087
44604	RAF Angle	The following description is taken from Roger Thomass survey, 1994. High Frequency/Direction Finding; Single storey, rectangular plan, cement rendered brick, flat timber roof. Internally divided into 4 rooms. Double doorway and single door to latrine t	Modern	SM87300096
44751	Middle Hill	Identified from OS 1st ed mapping	Post-medieval	SM8849701649
46850	Pwllcrochan	Deserted settlement site, possibly a DMV, represented by earthworks south of Pwllcrochan parish church. A trackway/hollow-way, with a triangle or green, and between one and 5 buidings are visible. Two buildings (PRNs 27575 & 27576) were still standing i	Post-medieval, Medieval	SM92020255
47441	Kilpaison Burrows	Group PRN for the three round barrows (PRNs 11640-42) in Kilpaison burrows. NC 2003.	Bronze Age	SM8951300605
48371	Lambeeth Farm	Two round barrows were reportedly part-excavated here by WF Grimes in 1929, but no trace of them is now known.	Bronze Age	SM93500180
55453	Whetsone Hill	Rectangular plan,concrete hut floor with raised concrete generator set and engine bed.'Nissen' hut structure has been removed. C1941-44 (Thomas 1993).Part of 55454 group of support structures for AA Battery	Modern	SM88360076
55454	Whetstone Hill	It includes a series of concrete bases and hard standings for ancillary and support structures associated with the Scheduled Whetstone Hill WWII Anti-Aircraft battery (SAM Pe 494; PRN 14355), identifiable on recent aerial photographs (Next Perspectives 2	Modern	SM88400073
59465	War Memorial	Grade II listed war memorial	Post-medieval	SM8836000734
59469	Rocket Cart House	Grade II listed rescue team cart house	Post-medieval	SM8791701315
59470	Lookout Tower	Grade II listed lookout tower	Post-medieval	SM8792001310
59755	Former National School Building, Pwllcrochan	Grade II listed school	Post-medieval	SM9215202616
60022	Corse Bridge And Attached Walled Channel	Grade II listed bridge	Post-medieval	SR8855199736
60427	Former Church Of Saint Mary, Pwllcrochan	Grade II* listed church	Post-medieval	SM9205102657
60428	Former National School Building, Pwllcrochan	Grade II listed schoolroom	Post-medieval	SM9215602621
60429	Stone Building (Now Used As A Barn) At Old Henllan,	Grade II listed house	Post-medieval	SM9165302455

	Pwllcrochan			
60430	Garden Arch At Old Henllan, Pwllcrochan	Grade II listed garden arch	Post-medieval	SM9166102517
101391	RAF Angle	Ablutions block. Single storey, 9.5 bay rectangular plan, cement rendered temporary brick, corrugated asbestos cement sheeting gable roof. Twelve light standard steel windows. Combined water tower and chimney has been demolished. Built per A.M.W.D. drawing 14	Modern	SM87550148
101393	RAF Angle	Games room at RAF Angle site no 2. Temporary brick construction, single storey, 6 bay with a corrugated plastic roof. Windows in each bay, lengthened to ground floor, now covered with corrugated plastic. Latterly used as a potato store, however not in	Modern	SM87610152
101394	RAF Angle	Linked parallel pair of temporary brick construction buildings 8.5 bays long x 3. Corrugated asbestos roof. Sixth bay of eastern range has a projecting porch on east side. West range has a brick built chimney in centre, otherwise interior has been cle	Modern	SM87580153
101395	RAF Angle	A single storey 6 bay temporary brick building, with corrugated asbestos roof. Very overgrown with ivy and ash saplings when visited in 2013. A. Pyper 2013.	Modern	SM87570155
101396	RAF Angle	Brick built blast shelter. Very overgrown and inaccessible when visited in 2013. A Pyper.	Modern	SM87600154
101397	RAF Angle	The remains of a stand-by set house have been incorporated into a farm building, and roofed over with corrugated tin sheeting. A Pyper 2013	Modern	SM87510150
101398	RAF Angle	Single storey, rectangular plan, fair-faced brick, corrugated asbestos sheeting gable roof. Small brick stack in ridge of E gable. Mono-pitch roofed annex to SW corner and porch to SE corner of S elevation. Fenestration removed.	Modern	SM87540155
101399	RAF Angle	Sunken concrete and brick settlement tank.	Modern	SM87540155
102546	RAF Angle	A Stanton Air Raid shelter, nine sections long, very overgrown but blast wall visible and chimney escape hatch. A Pyper 2013.	Modern	SM87530153
102547	RAF Angle Site No 2	RAF ANGLE site no 2 Communal Site. Consisted of Sick Quarters, Institute, YMCA, institute, gymnasium, squash court etc as drawn on the Angle site plan of 1943. When visited in 2013 only few buildings remain including Airmen's ablutions, Games room, ins	Modern	SM87650151
102549	RAF Angle Site No 2	RAF Angle Site No 2, communal site, drawn on RAF Angle site plan (194?). Consists of surviving structures PRN 101391 ablutions block, 101393 games room, 101394 Institute, 101395 store, 101396 blast shelter, 101397 standby set house, 101398 YMCA, 101399	Modern	SM87650151
102551	RAF Angle Site No 4	RAF Angle Site No 4, drawn on RAF Angle site plan (194?) showing a complex of Nissen huts providing quarters to officers, sergeants, etc. Appears to have been completely cleared and reinstated to agricultural land. A Pyper 2013	Modern	SM88140126
103163	Jeffersonwalls	Well recorded on the 1875 1st edition and 1908 2nd edition Ordnance Survey maps. Not shown on modern mapping (M.Ings, 2012)	Post-Medieval	SM87480143
103265	Margery Bottom	Well recorded on the 1875 1st edition Ordnance Survey map, associated with Margery Bottom cottage (PRN 103266) . Not shown on subsequent maps (M.Ings, 2012)	Post-Medieval	SM93160082
103266	Margery Bottom	Cottage, named Margery Bottom, recorded on the 1875 1st edition Ordnance Survey map. Appears ruinous on the 1908 2nd ed. O.S. and is not shown on mastermap (M.Ings, 2012)	Post-Medieval	SM93120080
105259	Vickers Wellington XII MP638	This Wellington was one of 250 Xs, XIs, XIIs, XIIs and XIVs delivered to the RAF by Vickers-Amstrong, Weybridge, between December 1942 and April 1943. Its service life include assignments to 612/Coastal Command Development Unit. The aircraft's engine c	Modern	SR882997

PROJECT GREENWIRE, PEMBROKESHIRE: ARCHAEOLOGICAL DESK-BASED ASSESSMENT 2013

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Paratowyd yr adroddiad hwn gan / This report has been prepared by

EDWARD DAVIES

Swydd / Position: Archaeologist

Llofnod / Signature Date

Mae'r adroddiad hwn wedi ei gael yn gywir a derbyn sêl bendith

This report has been checked and approved by

ar ran Ymddiriedolaeth Archaeolegol Dyfed Cyf.

on behalf of Dyfed Archaeological Trust Ltd.

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Llofnod / Signature Date

*Yn unol â'n nôd i roddi gwasanaeth o ansawdd uchel, croesawn unrhyw sylwadau
sydd gennych ar gynnwys neu strwythur yr adroddiad hwn*

*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*

