

LLANSTADWELL SEA WALL, PEMBROKESHIRE: ARCHAEOLOGICAL WATCHING BRIEF 2011



Prepared by Dyfed Archaeological Trust
For: Pembrokeshire County Council



ymddiriedolaeth archaeolegol

DYFED
archaeological trust

DYFED ARCHAEOLOGICAL TRUST

RHIF YR ADRODDIAD / REPORT NO. 2011/34
RHIF Y PROSIECT / PROJECT RECORD NO. 102239

Gorffennaf 2011
July 2011

LLANSTADWELL SEA WALL, PEMBROKESHIRE: ARCHAEOLOGICAL WATCHING BRIEF

Gan / By

Philip Poucher

Paratowyd yr adroddiad yma at ddefnydd y cwsmer yn unig. Ni dderbynnir cyfrifoldeb gan Ymddiriedolaeth Archaeolegol Dyfed Cyf am ei ddefnyddio gan unrhyw berson na phersonau eraill a fydd yn ei ddarllen neu ddibynnu ar y gwybodaeth y mae'n ei gynnwys

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



INVESTOR IN PEOPLE
BUDDSODDWR MEWN POBL

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

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

Cwmni cyfyngedig (1198990) ynghyd ag elusen gofrestredig (504616) yw'r Ymddiriedolaeth. The Trust is both a Limited Company (No. 1198990) and a Registered Charity (No. 504616)

CADEIRYDD CHAIRMAN: C R MUSSON MBE B Arch FSA MIFA.
CYFARWYDDWR DIRECTOR: K MURPHY BA MIFA

LLANSTADWELL SEA WALL, PEMBROKESHIRE: ARCHAEOLOGICAL WATCHING BRIEF

CONTENTS

SUMMARY	1
1. INTRODUCTION	2
1.1 Project Commission	2
1.2 Scope of the Project	2
1.3 Report Outline	3
1.4 Abbreviations	3
1.5 Illustrations	3
1.6 Timeline	3
2. THE SITE	5
2.1 Location and Topography	5
2.2 Archaeological Background	8
2.3 Historical Development	9
3. ARCHAEOLOGICAL WATCHING BRIEF	14
3.1 Methodology	14
3.2 Results	15
4. CONCLUSIONS	17
5. SOURCES	18

ILLUSTRATIONS

Figure 1:	Location map of watching brief site based on the Ordnance Survey	4
Figure 2:	Detailed location plan of existing seafront (as supplied by Pembrokeshire County Council)	6
Figure 3:	Detailed plan of proposed seawall (as supplied by Pembrokeshire County Council)	7
Figure 4:	Extract from the 1 st edition 1;2500 Ordnance Survey map of 1895	12
Figure 5:	Extract from the 2 nd edition 1;2500 Ordnance Survey map of 1908	13

TABLES

Table 1:	Archaeological and Historical Timeline for Wales	3
Table 2:	Historic Environment Record entries within a 200m radius of the development area	9
Table 3:	Context and soil descriptions	25

PHOTOGRAPHS

Photo 1:	St Tudwal's church.	19
Photo 2:	Looking northwest at the development site	19
Photo 3:	The exposed face of the western section, after vegetation removal	20
Photo 4:	Excavated face of the western section, looking WNW	20
Photo 5:	Excavated face of the western section, looking west	21
Photo 6:	Internal upstanding face of the former stables	21
Photo 7:	Exterior face of former stable wall	22
Photo 8:	Exposed face of the eastern section during vegetation removal	22
Photo 9:	Eastern section under excavation	23
Photo 10:	Excavated face of the eastern section, taken facing west	23
Photo 11:	Excavated face of the eastern section, showing sandier deposit	24
Photo 12:	Remnants of the layer of lime mortar fragments	24
APPENDIX 1:	Context and soil descriptions	25

LLANSTADWELL SEA WALL, PEMROKESHIRE ARCHAEOLOGICAL WATCHING BRIEF

SUMMARY

Pembrokeshire County Council submitted a planning application for the construction of two stretches of sea wall at Llanstadwell, Pembrokeshire (SM 97848 99770; Planning Application No. 10/0242/PA). The site lies close to the medieval church of St Tudwal's and its associated graveyard, with the potential for unrecorded medieval settlement around it. There is also a record of a small post-medieval building standing within and adjacent to the development area. The waterfront also provides the potential for previously unrecorded remains of boat wrecks, fish traps and quayside structure amongst others. Due to the archaeological potential of the site a condition was placed upon planning permission requiring the attendance of an archaeologist during groundworks to undertake an archaeological watching brief.

Emyr Williams of Pembrokeshire County Council commissioned Dyfed Archaeological Trust Field Services to undertake the archaeological watching brief during the course of the groundworks associated with the development. This watching brief was undertaken in June/July 2011.

The upper deposits removed from the site comprised 20th century waste deposits presumably derived from the houses on the north side of Church Road.

The remains of a late 19th/early 20th century stone-built building and retaining seawall were recorded bounding the western limit of the development area. The construction cut for the wall lay within the development area but the interior of the building and its associated yard lay beyond the development area. This building appears to be the remains of a stable and yard associated with nearby St Tudwal's church.

Below this, a thick layer of darker, siltier material containing fragments of charcoal or coal was recorded. This layer could potentially be an archaeological deposit, being of some antiquity, but no significant finds or deposits were revealed within it.

The upper layers overlay a series of naturally occurring fluvio-glacial deposits, which in turn overlay the Old Red Sandstone bedrock. No waterlogged deposits or significant palaeo-environmental material were visible within these deposits.

No features or deposits of significant archaeological interest were noted within the development area during the course of these groundworks. The sea wall construction has therefore had a minimal impact on the archaeological resource within the area.

1. INTRODUCTION

1.1 Project Commission

1.1.1 Pembrokeshire County Council submitted a planning application for the construction of two stretches of sea wall at Llanstadwell, Pembrokeshire (SM 97848 99770; Planning Application No. 10/0242/PA). The stretches of sea wall were required due to subsidence of the adjacent roadway. Previously constructed areas of sea wall exist between the two new stretches.

1.1.2 Due to the potential for archaeological remains to be present within the proposed areas of sea wall, that could thus be exposed, damaged or destroyed by the development, a condition requiring archaeological work was placed on the planning permission as follows:

"The developer shall ensure that a suitably qualified archaeologist is present during the undertaking of any ground works in the development area, so that an archaeological watching brief can be conducted. The archaeological watching brief will be undertaken to the standards laid down by the Institute of Field Archaeologists. The Local Planning Authority shall be informed in writing, at least two weeks prior to the commencement of the development, of the name of the said archaeologist. Reason: To ensure the recording of any items of archaeological interest to accord with Policy 84 of the Joint Unitary Development Plan for Pembrokeshire (adopted 13 July 2006)."

1.1.3 Emyr Williams of Pembrokeshire County Council commissioned Dyfed Archaeological Trust Field Services (DAT-FS) to undertake the archaeological watching brief during groundworks at the site.

1.1.4 DAT-FS prepared a Written Scheme of Investigation prior to works starting on site detailing the proposed archaeological works, which was approved by the planning authority, this stated;

The application area lies adjacent to the church of St Tudwal's (PRNs 3186 & 46820) and its associated graveyard (PRN 34534). This church has known medieval origins and it is strongly suspected that it may have its earliest origins during the early medieval period. The area also lies close to the remnants of a post-medieval building of uncertain origin and function (PRN 34838). The waterfront itself provides the potential for the previously unrecorded remains of boat wrecks, fish traps and quayside structures amongst others. The potential for other remains associated with early medieval and later activity, some of which may even be preserved as waterlogged deposits, may therefore be present.

1.2 Scope of the Project

1.2.1 The project objectives as stated in the Written Scheme of Investigation were:

- *To monitor groundworks in order to identify the presence/absence of any archaeological deposits.*
- *To establish the character, extent and date range for any archaeological deposits to be affected by the proposed groundworks.*
- *To appropriately investigate and record any archaeological deposits to be affected by the groundworks.*
- *To produce an archive and report of any results.*

- 1.2.2 Three site visits were undertaken to the development area during groundworks that had the potential to expose, damage or destroy archaeological remains (29th June to the 1st July 2011).

1.3 Report Outline

- 1.3.1 This report describes the location of the site along with its archaeological background before summarising the watching brief results and the conclusions based on those results.

1.4 Abbreviations

- 1.4.1 Sites recorded on the Regional Historic Environment Record¹ (HER) are identified by their Primary Record Number (PRN) and located by their National Grid Reference (NGR). Dyfed Archaeological Trust Field Services – DAT-FS; Written Scheme of Investigation – WSI

1.5 Illustrations

- 1.5.1 Record photographs are included at back of the report. Printed map extracts are not necessarily reproduced to their original scale and are illustrative only.

1.6 Timeline

- 1.6.1 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 1066	
Medieval Period –	1066 – 1536	
Post-Medieval Period –	1536 – 1899	
Modern –	20th century onwards	

Table 1: Archaeological and Historical Timeline for Wales

¹ Held and managed by Dyfed Archaeological Trust, Shire Hall, Llandeilo, Carmarthenshire, SA19 6AF.



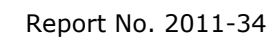
Figure 1: Location map of watching brief site from the Ordnance Survey.

Reproduced from the 2003 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

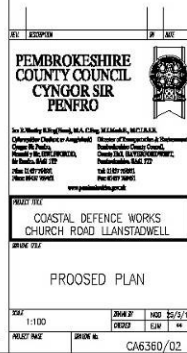
2. THE SITE

2.1 Location and Topography

- 2.1.1 The development is located along two sections of the sea front at Llanstadwell, on the north banks of the tidal Afon Daugleddau in Milford Haven, Pembrokeshire (NGR SM 97848 99770).
- 2.1.2 The seafront is marked by a small cliff c.4m high, topped by a narrow bank of waste ground and Church Road, a narrow seafront tarmac road. Houses line the northern side of the road. The cliff is fronted by a rocky foreshore of broken bedrock shingles, covered by thick river sediment up to the mean high water mark, rising slightly with solid bedrock (Old Red Sandstone) beginning to show through as it rises inland.
- 2.1.3 The western section of proposed seawall is bounded to the west by a lime-mortared rubble-stone wall forming the corner of a former early 20th century stable, which now stands as a roofless and partially collapsed ruin. Directly in front of this stands a similarly built retaining wall that rests partially on solid bedrock, but largely on the compacted broken bedrock and clay mixture immediately above. A section of existing concrete seawall between 1.7 and 2.3m high fronts the small cliff between the two proposed sections. The eastern proposed section of seawall is bounded to the east by a modern part concrete and part cement-mortared stone wall that forms the seafront boundary to properties that begin to line the southern side of Church Road to the east.
- 2.1.4 The exposed faces of the seafront are comprised of bedrock, shattered bedrock and clay, and soil deposits, part covered in mixed vegetation. The mean high water mark currently lies between 4m and 7m in front of the sections but the exposed face is washed by spring tides and storms.



173



2.2 Archaeological Background

- 2.2.1 In 2007-08 Dyfed Archaeological Trust undertook a study of the archaeological potential of the Milford Haven Waterway (Poucher 2008). This study identified specific areas of archaeological potential throughout the Haven. The area of coastline below the high water mark in front of the development was identified as an area of high maritime archaeological potential (Area No.32) and was described as:

A stretch of coastline that contains sand and gravel beaches and small valleys that may have seen archaeological activity, and has been used as beaching points etc in the post med period. Areas off Milford Haven and Llanstadwell are also described by Owen as 'good rodes'. Beach structures survive, such as quays and jetties, and maritime activity continues along this stretch of coastline. Some known and suspected wreck sites lie in this area. Borehole data suggests a good survival of alluvial sediment, and 'Milford Shelf' is described as fouled with old chains and moorings, and other possible archaeological features.

- 2.2.2 Similarly an inland area that also encompasses the development area was considered to be an area of high archaeological potential (Area No.35) and was described as:

A settlement along the edge of the coastal plateau and also extending slightly up a small valley. Low hard rock cliffs with a shingle foreshore are fronted by more extensive intertidal mud flats. At Castle Lake a shingle spit encloses a small area of saltmarsh.

Llanstadwell developed around a medieval church, with possible early medieval origins, although it is not clear when settlement started to develop. By the early post medieval period the deep water in front of the mud flats was a popular anchorage, and boats could have drawn up on the beach and in the sheltered area at Castle Lake. By the 17th century, through to the 19th century, the area was apparently busy with small ships transferring cargo and beach structures are likely. Slipways and a stone quay now exist, the quay may formerly have been a pier. Small lighthouses are also recorded on the foreshore and beach in the 19th/ealy 20th century. Boats still moor at Castle Lake, and maritime activity continues in the village. The lack of foreshore develop may preserve archaeological sites.

2.2.3 A search of the Regional Historic Environment Record² (HER) records 9 known archaeological sites within 200m of the development area (Table 2).

PRN	Site Name	Grid Reference	Description
3186	Llanstadwell Parish Church; St Tudwal's	SM 9552 0502	Medieval parish church
34532	Llanstadwell Vicarage	SM 9547 0503	Eighteenth century vicarage building
34534	St Tudwal's Churchyard	SM 9554 0506	Churchyard surrounding the parish church
34826	Hazelbeach	SM 9547 0499	Stone built sea wall defending the vicarage, church and churchyard
34827	Llanstadwell	SM 9555 0501	Wooden groynes in front of St Tudwal's church
34828	Llanstadwell	SM 9561 0502	Remains of a post-medieval stone building
34829	Llanstadwell	SM 9579 0507	Two MOD stone marker stones
46820	Llanstadwell Parish Church; St Tudwal's	SM 9552 0502	Probable early medieval church
60551	Llanstadwell Parish Church; St Tudwal's	SM 9552 0502	Post-medieval church building, grade II listed

Table 2: Historic Environment Record entries within a 200m radius of the site centre

2.3 Historical Development

- 2.3.1 The village of Llanstadwell developed on the seafront around the medieval church of St Tudwal, although it is not clear when and precisely where settlement started to develop.
- 2.3.2 The church of St Tudwal's (photo 1) is first recorded in the 11th or 12th century, but it is likely it may have even older origins as a religious site, developing during the early medieval period. As a site that later became a parish church it is also clearly a religious site of some importance, attracting a great deal of activity to it. Visitors are likely to have travelled the easiest access route along the sea front, what is now Church Road, and may also have arrived on the shingle foreshore stretched out in front of the church. The scale of activity in this area, and whether any of this was of a permanent nature, is difficult to quantify and other than elements of the fabric of the church itself there are no known recorded archaeological sites predating the post-medieval period.
- 2.3.3 Llanstadwell is mentioned during the 16th century (Charles 1992) and is shown on Bowen's map of 1729, but it is not clear if this is referring merely to a church or to a settlement as well. Nearby Hazelbeach is also mentioned from the late 16th century onwards which presumably suggests some development along this stretch of seafront.
- 2.3.4 The Milford Haven area in general is blessed with a good range of maps from the 16th century onwards, however it is not until the Ordnance Survey original surveyors drawings of the early 19th century that detail

² Held and managed by Dyfed Archaeological Trust, Shire Hall, Llandeilo, Carmarthenshire, SA19 6AF.

begins to emerge about the permanent settlement in the Llanstadwell area.

- 2.3.5 These original surveyors drawings of 1809-10 show Church Road, already by this point seemingly tight against the shoreline, leading to and around St Tudwalls church but with no noticeable settlement other than a cluster of buildings at Hazelbeach where Waterston Road meets Church Road, and another cluster at the other end of Church Road in Church Lake.
- 2.3.6 The more detailed tithe map of c.1849 clearly shows that houses and cottages had established themselves all along the seafront from Hazelbeach up to the church. The churchyard boundary was clearly well-established by this time and a building is shown at the churchyard entrance to the east (the building still stands), described as a school house, with its own gardens extending up to what is presumably the mortared stone wall that marks the western limit of the development area. This was most likely a schoolhouse built by the church, and the land is still owned by the church today. Interestingly the boundary line on which the mortared stone wall stands extended northwards, beyond Church Road, and curved back round to encompass the grounds of the Vicarage on the western side of the church. The continuous curving boundary may be an indication of the former full extent of the churchyard around a centrally placed church. East of the schoolhouse and gardens no development is shown until it gets to a cottage at Church Lake. The road is dotted along its southern edge, suggesting it was unbounded along the waterfront. The later development on the north side of the road appears to sit within the ground of a rectangular field named as 'church park', clearly formerly church land, and presumably part of what must have been relatively extensive church holdings in this area.
- 2.3.7 The 1:2500 1st edition Ordnance Survey of 1895 (figure 4) gives an accurate picture of the layout at the end of the 19th century. There has been some development along Church Road between the church and Church Lake. What is now No.71 opposite the development area had been built in one corner of what was formerly Church Park, and No.99 was built in the opposite corner. Some enclosures had been established on the south side of the road, on the northern edge of the shingle spit enclosing the small muddy bay in front of Church Lake. This area is now occupied by Nos. 88, 96 and 98, but formerly by two buildings, one perhaps little more than an outbuilding. Clearly there has been some erosion of material along this southern edge of the shingle bank since the late 19th century, but this is now consolidated by masonry retaining walls to the existing properties here. To the west, along the current development area, there has perhaps been a slight shift northwards of Church Road as the coastline has gradually eroded. In 1895 the road appears to have been at its widest at this point, and a small building and enclosure was built opposite No.71, close to the boundary of the schoolhouse lands to the west (within the current development area). The size of the building would suggest it was little more than a room, and may have functioned as an outbuilding for No.71, or may have been a precursor for the stable block established a few years later on the other side of the wall. The undulating and tree-lined nature of the shoreline as it continues westwards from this point, past the church, may indicate it was not at that time artificially protected from the tides.
- 2.3.8 By the time of the 2nd edition Ordnance Survey map of 1908 (figure 5) construction work had clearly started on the row of semi-detached buildings that front the northern side of Church Road, and the buildings on the south side were demolished and replaced by Nos. 98 and 96. The

small building opposite No.71 was still standing, but further buildings had been added at the eastern end of what had formerly been the schoolhouse gardens. These are presumably the building remains that can still be seen today, in a roofless and ruined state. They apparently functioned as a stable block for the church. The coastline from this point westwards begins to take on a more regular linear appearance, which suggests that the mortared stone walls that front this section of the sea front had been constructed by this time, dating them to between 1895 and 1908.

- 2.3.9 Activity below the seafront and along the waters edge is also suggested throughout this period. By the early post-medieval period the deep water in front of the mud flats from Llanstadwell Church to Wear Point was a popular anchorage, and boats could have drawn up on the beach and in the sheltered area at Castle Lake. By the 17th century, through to the 19th century, the area was apparently busy with small ships transferring cargoes of grain, coal, culm and limestone and associated beach structures are likely. A stone quay and pier was built on the beach in front of Hazelbeach by the 19th century, allowing ships to transfer their cargo and also used as a local ferry point. A small quayside was also built in Llanstadwell and a shingle spit at Castle Lake provided sheltered mooring. Boats still occasionally moor at Castle Lake, and the remains of wooden posts can still be seen on the beach below the church.
- 2.3.10 No specific wreck sites are recorded on this section of the shoreline. The closest wrecks being that of the Sunderland Flying Boat, still largely intact on the riverbed some 500m away, and the remains of a metal hulk on the shoreline 560m to the west.

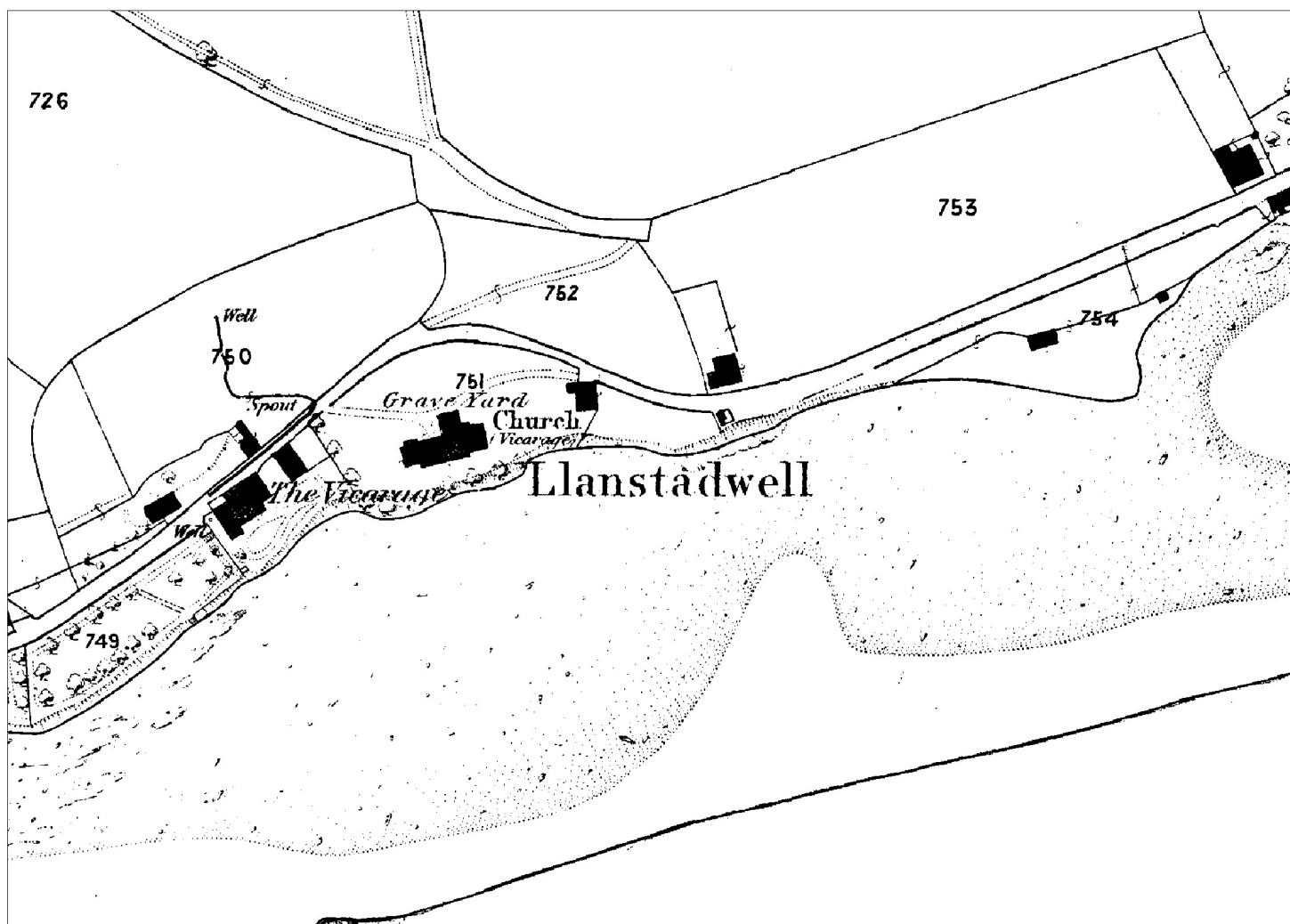


Figure 4: Extract from the 1st edition 1;2500 Ordnance Survey map of 1895.

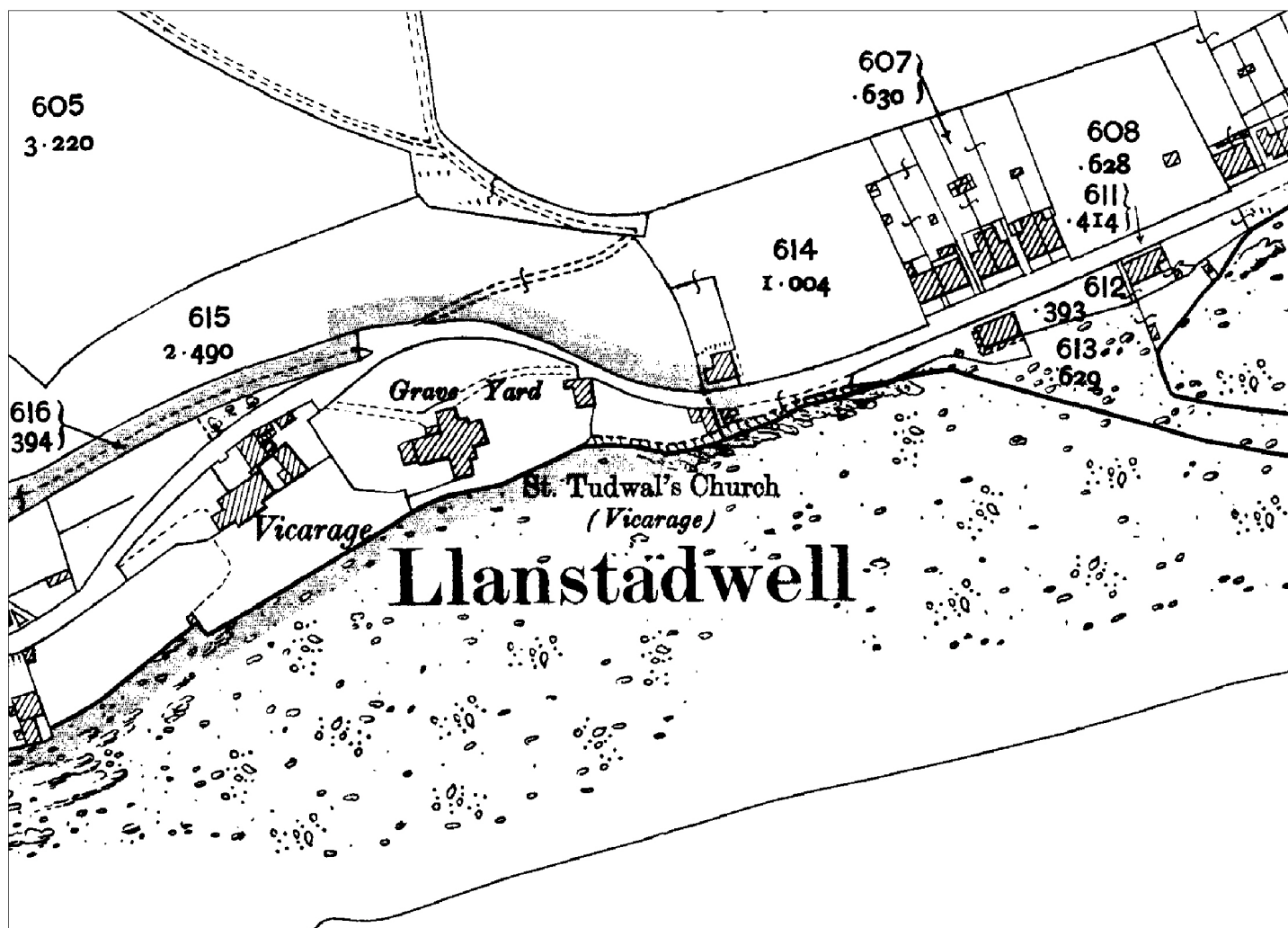


Figure 5: Extract from the 2nd edition 1;2500 Ordnance Survey map of 1908.

3. ARCHAEOLOGICAL WATCHING BRIEF

3.1 Methodology

3.1.1 The detailed methodology for the watching brief was laid out within the WSI. The relevant methodology can be summarised as follows:

- A 'watching brief' was undertaken at the commencement of groundworks at the site that had the potential to expose, damage or destroy underlying archaeological remains.
- All archaeological deposits revealed during the groundworks were examined and recorded to an appropriate level.
- Recording of all archaeological features or deposits conformed to best current professional practice and was carried out in accordance with the Recording Manual³ used by Dyfed Archaeological Trust Field Services.

3.1.2 The proposed works involved the construction of two sections of concrete sea wall, between c.3.7 and 4.4m high, in total 29.15m in length (see figures 2 & 3). The works involved the removal of vegetation cover and the excavation of the face of the sea front from a solid bedrock base, back c.2.5m, but with a batter towards the top to allow sufficient room for the construction of a new concrete sea wall. The groundworks were undertaken using a tracked excavator fitted with a toothed bucket.

3.1.3 The archaeological watching brief consisted of a total of three site visits over three consecutive days to observe these groundworks. The work was carried out on the 29th June to the 1st July 2011.

³ Dyfed Archaeological Trust Field Services have adopted the Recording Manual developed by English Heritage Centre for Archaeology.

3.2 Results

- 3.2.1 The excavations of the westernmost section (photos 3 – 5) revealed a sequence of naturally occurring deposits that consisted of a base of Old Red Sandstone bedrock (layer 100), running in ridges aligned roughly southeast – northwest, and rising to the northwest. The exposed face of this bedrock was fracturing and was topped by a compact layer of shattered and folded bedrock embedded in a mid orange-brown clay, c.0.3m thick (layer 101). On top of this lay a thicker deposit of broken up, medium to large, sub-angular fragments of bedrock (c.50%) mixed in a light brown sandy-clay, up to 1m thick on the exposed face, but rising to the north becoming c.1.8m thick at the rear of the excavated area (layer 102). This was in turn topped by c.0.2m of finer friable sandy clay, mid orange-brown, with fewer stone inclusions (layer 103). These deposits appeared to represent a series of naturally occurring fluvio-glacial deposits, containing no archaeological material. All deposits were remarkably dry, and no palaeo-environmental material was noted.
- 3.2.2 The upper c.2m of the deposits consisted of a mix of disturbed ground and later soils. To the rear of the excavated area a thick deposit of friable, mid brown, clayey silt was noted, with the occasional medium to large sub-angular stone and the occasional fragment of charcoal or possibly coal (layer 104). This deposit was up to 1.5m thick and may have consisted of several individual layers, but the dry dusty conditions and location of the deposit meant it could not be examined in greater detail. No archaeological material was noted from this deposit. The face of this layer appears to have been cut away (cut 105) and infilled with later material. The base of the cut is highlighted by a deposit of oyster and limpet shells, up to 0.1m thick and presumably represents a waste deposit (fill 106). This was overlaid by a rather loose deposit of light-brown clayey-silt that contained fragments of late 19th or early 20th century pottery (fill 107). This cut is presumably associated with construction of the adjacent ruined stable, which map evidence suggests was constructed at some point between 1895 and 1908.
- 3.2.3 A loose deposit of sandy-silts mixed with a layer of broken lime mortar (layer 108) extends across the top and spills down the face of the seafront, topped by the road tarmac. Noticeable quantities of mid to later 20th century finds were contained within this deposit.
- 3.2.4 The excavation also revealed the construction of the walls of the adjacent ruined stable building (photos 6 & 7). A retaining wall of lime-mortared uncoursed, random rubble had been built on top of the deposit of compact shattered and folded bedrock mixed with clay. This wall was 0.35m wide, and roughly 1.5m high before becoming lost in vegetation. The wall of the building itself, built in the same style, stood 0.4m behind this, but the base of the wall being a metre higher having been cut into the overlying deposit of broken bedrock in sandy-clay. The remaining dimensions of the building were not recorded as part of the archaeological works. Enough of the building was visible amongst the vegetation to determine it was a rectangular structure, aligned roughly north-south, with featureless northern and eastern walls. A collapsed section of the southern gable wall, off-centre to the east, appears to have been a former window high in the wall. A doorway opening is visible midway along the western wall, flanked by two low window openings with slate sills. Material within the building suggests it may have been roofed with corrugated iron in its latter stages.

- 3.2.5 There was no evidence within the excavated area of the remains of the small building depicted to the east of the stables on the 1895 and 1908 Ordnance Survey map. The size of the structure suggests any foundations may have been shallow, and these were presumably removed by more recent roadworks along Church Road.
- 3.2.6 The excavations along the eastern section (photos 8 – 12) revealed a very similar series of naturally occurring fluvio-glacial deposits overlying the Old Red Sandstone bedrock. The lowest levels directly overlying the bedrock were not revealed during the watching brief, but a thick deposit consistent with the layer of broken-up bedrock in a light brown sandy-clay (layer 102) was recorded, up to 1.8m thick on the exposed face and rising as it was excavated inland. The existing concrete seawall that ran between the western and eastern section was built of shuttered concrete on top of solid bedrock, and fronted this deposit. As with the western section, this was also topped by a deposit of mid orange-brown sandy-clay, with the occasional medium to large sub-angular stone, up to 1m thick and rising as it heads inland (layer 103). As the face was exposed during the works a deposit was recorded lying between these two layers, consisting of a mix of broken sub-angular bedrock (c.30%) within a orangey-yellow clayey-sand (layer 109). A similar deposit to the underlying layer, but clearly with a greater sand content. This deposit was 0.5m thick and increased in thickness to the east.
- 3.2.7 The layer of mid brown clayey-silt (layer 104) recorded to the west was not as apparent within this exposed section. This may indicate this deposit diminishes to the east, however it could also be a result of the inability to examine the upper deposits along this section in close detail, combined with the dry crumbly nature of overlying deposits spreading down the exposed face.
- 3.2.8 The upper 0.3m of this section consisted of a loose mid grey-brown topsoil deposit with large quantities of mid to late 20th century material, and appeared to represent a dump of general refuse and soil (layer 110), presumably deriving from the houses on the north side of Church Road. At the top of the slope, a 0.1m thick deposit of broken lime mortar was recorded (layer 111). Although containing some very large fragments of mortar, no other building material was present and it was noted that it overlay the tarmac in places, clearly indicating this was either a modern deposit or had been redeposited in more recent years.

4. CONCLUSIONS

- 4.1.1 An archaeological watching brief was undertaken during groundworks associated with the construction of two sections of sea wall at Llanstadwell, Milford Haven, Pembrokeshire (SM 97848 99770). The wall was to be constructed along a stretch of exposed low cliff face totalling 29.15m in length. The seafront is likely to have seen continual erosion until sections were protected by walling in the 19th and 20th century, but these two sections have remained unprotected, continuing to suffer erosion during spring tides and stormy weather.
- 4.1.2 A series of naturally occurring fluvio-glacial deposits (layers 101 – 103 & 109) were recorded overlying the Old Red Sandstone bedrock (layer 100) within the exposed cliff face. These deposits comprised a mix of broken bedrock, clays and sands up to 2.8m thick and were visible in both the two exposed sections. No waterlogged deposits or significant palaeo-environmental material was visible within these deposits.
- 4.1.3 Overlying these naturally occurring deposits was a thick deposit (up to 1.5m deep) of darker siltier material (layer 104), containing fragments of charcoal or coal. This deposit was recorded within the western exposed face of the seafront, but was not visible to the east, possibly due to it thinning out to the east, or it may have been obscured during the course of the excavations. The nature of the work being undertaken meant this deposit could not be examined in greater detail, but the siltier content and inclusions suggests this is potentially an archaeological layer, possibly an earlier plough soil or garden soil underlying the current roadway. No finds or material of archaeological interest were noted within this deposit, although the coal fragments could suggest a general post-medieval date for its accumulation.
- 4.1.4 At the western end of the exposed cliff face were the remains of a ruinous building, the mortared stone walls effectively formed the western limit of the area being developed. The building, now roofless, but with partially upstanding walls, fronts a small yard to the west with access off Church Road. The rear wall of the building is cut down through layer 104 and into the fluvio-glacial deposits below. The construction cut (105) was recorded containing loose backfill including late 19th or early 20th century pottery and glass fragments along with a waste deposit of shells. This was fronted along the seafront by the remains of a retaining seawall. This building appears to represent the remains of a small stable presumably for use by visitors to the nearby St Tudwal's Church. Map evidence, backed up by the finds visible within the construction cut, suggests this was built towards the end of the 19th or beginning of the 20th century. During the same period it also appears that a seawall was built along much of the seafront from this point westwards beyond the church, presumably represented by the mortared stone-built seawall that is still visible.
- 4.1.5 Map evidence also indicated that during the 19th and early 20th century a small building stood on the seafront adjacent to this stable, but within the area being developed. No evidence of this structure was revealed during the works, the size of the structure suggesting it was unlikely to have had substantial foundations and therefore appears to have been completely removed during previous 20th century developments.
- 4.1.6 Overlying all of these deposits was a build-up of mid to later 20th century and modern waste material that had become covered in scrub vegetation. This presumably derived from the construction and subsequent occupation of the houses along the north side of Church Road.

5. SOURCES

5.1 Maps

Anon c.1849 Llanstadwell Parish tithe map (western portion)
Bowen, E 1729 Map of South Wales
Ordnance Survey 1809-10 Original Surveyors Drawings, Sheet 182
Ordnance Survey 1895 1:2500 1st edition Pembrokeshire XXXIX.4
Ordnance Survey 1908 1:2500 2nd edition Pembrokeshire XXXIX.4

5.2 Published

Charles, BG 1992 *The Place-names of Pembrokeshire, Vol.II*
National Library of Wales, Aberystwyth

5.3 Unpublished

Poucher, P 2008 *Milford Haven Waterway Ports & Harbours Project*,
Dyfed Archaeological Trust Report No.2008/38

PHOTOGRAPHS



Photo 1: St Tudwal's Church



Photo 2: Looking northwest at the development site – the two exposed sections of seafront. The tower of St Tudwal's Church is visible to the left



Photo 3: The exposed face of the western section, after vegetation removal but prior to excavation, 1m scale



Photo 4: Excavated face of the western section, looking WNW



Photo 5: Excavated face of the western section, looking west, 1m scale



Photo 6: Internal upstanding face of building wall, the former stables, that forms the boundary to the development area



Photo 7: Exterior face of former stable wall forming western boundary to the development area. The stable wall foundation is visible to the top right, fronted by a retaining wall visible at the bottom left



Photo 8: Exposed face of the eastern section during vegetation removal



Photo 9: Eastern section under excavation



Photo 10: Excavated face of the eastern section, taken facing west, 1m scale



Photo 11: Excavated face of the eastern section, showing sandier deposit adjacent to the 1m scale



Photo 12: Remnants of the layer of lime mortar fragments recorded in the eastern section, lying above the level of the road.

APPENDIX I: CONTEXT AND SOIL DESCRIPTIONS

Context Number	Description	Depth of Deposit
Layer 100	Bedrock Old Red Sandstone	
Layer 101	Natural Hard, mid orange-brown clay, containing c.70% shattered and folded bedrock.	c.0.3m
Layer 102	Natural subsoil Compact light brown sandy-clay, containing c.50% medium to large sub-angular fragments of bedrock	c.1.8m
Layer 103	Natural subsoil. Friable, mid orange-brown, sandy-clay, containing moderate medium to large sub-angular stone inclusions	c.0.2m
Layer 104	Layer Friable, mid brown, clayey-silt, containing occasional large sub-angular stone and occasional small charcoal/coal inclusions	1.5m
Cut 105	Construction cut Smooth concave slope, gradual break of slope at base, sloping base.	
Fill 106	Waste deposit Loose, mid brown, clayey-silt, containing c.30% shells (mainly oyster and limpet)	0.1m
Fill 107	Fill Loose, light brown, clayey-silt, containing occasional medium sub-angular stone. Finds: late 19 th /early 20 th century? pottery and glassware	
Layer 108	Topsoil Loose, mid grey-brown, sandy-silt, containing abundant medium to large angular stone rubble and abundant medium to large lime-mortar fragments. Finds: Mid to late 20 th century pottery and glassware	
Layer 109	Natural subsoil Compact, mid orange-yellow, clayey-sand, containing c.30% medium to large sub-angular bedrock fragments	0.7m
Layer 110	Topsoil Loose, mid grey-brown, clayey-silt, containing moderate medium to large sub-angular stone. Finds: Mid to late 20 th century pottery, glassware, metal items.	0.3m
Layer 111	Demolition waste? Loose, light grey-white, lime mortar fragments.	0.1m

Table 3: Context and Soil Descriptions

LLANSTADWELL SEA WALL, PEMBROKESHIRE: ARCHAEOLOGICAL WATCHING BRIEF

RHIF YR ADRODDIAD / REPORT NUMBER 2011/34

**Gorffennaf 2011
July 2011**

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

Philip Poucher

Swydd / Position: Archaeologist

Llofnod / Signature



..... Dyddiad / Date 13/7/11

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.

Swydd / Position:

Llofnod / Signature Dyddiad / 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

