

Archaeology Wales

Land North of Pennard Road and East of Pennard Drive, Pennard, Swansea

Archaeological Watching Brief



By

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Report No. 1963

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Appendix I. Context Register

Appendix II. Written Scheme of Investigation

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Non-Technical Summary

This report results from work undertaken by Archaeology Wales Ltd (AW) between 24th November 2019 and 18th March 2020 at the request of Jehu Group. The work consisted of an archaeological watching brief conducted during groundworks associated with the construction of 70 dwelling units and associated detached garages, access, highway works, open space, and landscaping on land north of Pennard Road and East of Pennard Drive, Pennard, Swansea. The site is centred on NGR SS 55580 88497, and the associated Planning Application No. is 2018/2580/FUL.

No significant archaeological remains were uncovered during the archaeological watching brief. A single archaeological feature was encountered, pit [1008] and its associated fills (1009) and (1011), but this has been identified as a possible modern rubbish/waste pit. The pit appeared to have been lined with tin sheets and some of the finds within it appeared to have been heat affected, it is likely the pit was used to incinerate waste. All finds appeared to date to the early 20th century.

A sherd of prehistoric pottery and a sherd of medieval pottery were recovered from the plough soil or colluvial layer (1006), but these sherds were not in their original context and are unlikely to provide further information on the historical and archaeological background of the site.

No other finds or features of archaeological significance were recorded. All work was undertaken in accordance with the standards and guidelines of the Chartered Institute for Archaeologists (2014). AW is a Registered Organisation with the Chartered Institute for Archaeologists.

Crynodeb Annhechnegol

Mae'r adroddiad hwn yn deillio o waith a wnaed gan Archaeology Wales Ltd (AW) rhwng 24 Tachwedd 2019 a 18 Mawrth 2020 ar gais Jehu Group. Roedd y gwaith yn cynnwys briff gwylio archeolegol a gynhaliwyd yn ystod gwaith tir sy'n gysylltiedig ag adeiladu 70 o unedau annedd a garejys ar wahân cysylltiedig, mynediad, gwaith priffyrdd, manau agored, a thirlunio ar dir i'r gogledd o Pennard Road ac i'r dwyrain o Pennard Drive, Pennard, Abertawe. Mae'r safle wedi'i ganolbwyntio ar NGR SS 55580 88497, a'r Cais Cynllunio cysylltiedig Rhif yw 2018/2580/FUL.

Ni ddatgelwyd unrhyw olion archeolegol arwyddocaol yn ystod y briff gwylio archeolegol. Daethwyd ar draws un nodwedd archeolegol, pwll [1008] a'i llenwadau cysylltiedig (1009) a (1011), ond nodwyd hyn fel pwll sbwriel/gwastraff modern posibl. Roedd yn ymddangos bod y pwll wedi'i leinio â thafleuni tun ac roedd yn ymddangos bod rhai o'r darganfyddiadau ynddo wedi'u heffeithio gan wres, mae'n debygol y defnyddiwyd y pwll i losgi gwastraff. Ymddangosodd yr holl ddarganfyddiadau hyd yn hyn hyd at ddechrau'r 20fed ganrif.

Cafodd sied o grochenwaith cynhanesyddol a sied o grochenwaith canoloesol eu hadennill o'r pridd aredig neu'r haen gooluvial (1006), ond nid oedd y siediau hyn yn eu cyd-destun gwreiddiol ac maent yn annhebygol o ddarparu rhagor o wybodaeth am gefndir hanesyddol ac archeolegol y safle.

Ni chofnodwyd unrhyw ddarganfyddiadau na nodweddion eraill o arwyddocâd archeolegol. Cafodd yr holl waith ei wneud yn unol â safonau a chanllawiau'r Sefydliad Siartredig Archaeolegwyr (2014). Mae AW yn Sefydliad Cofrestredig gyda'r Sefydliad Siartredig Archaeolegwyr.

1 Introduction

- 1.1.1 Archaeology Wales (henceforth – AW) were commissioned by Jehu Group (henceforth – ‘the client’) to undertake an archaeological watching brief during ground works associated with the construction of 70 domestic units and associated detached garages, access, highway works, open space and landscaping on land north of Pennard Road and East of Pennard Drive, Pennard, Swansea, centred on NGR SS 55580 88497. The associated Planning Application No. is 2018/2580/FUL.
- 1.1.2 The methodology for the watching brief was agreed with Glamorgan-Gwent Archaeological Trust - Archaeological Planning Management (henceforth – GGAT-APM) who are advisors to the local planning authority, Swansea Council (henceforth – SC). The watching brief methodology was set out in a Written Scheme of Investigation (Appendix IV) which was approved in advance by GGAT-APM.
- 1.1.3 The purpose of the archaeological mitigation was to provide the local planning authority with sufficient information regarding the nature of archaeological remains on the development site, the requirements for which are set out in Technical Advice Note (TAN) 24: The Historic Environment (2017). The work was to ensure that all archaeological and historical components of the site be fully investigated and recorded if revealed as a result of activities associated with the development. All work was undertaken in accordance with the standards and guidelines of the Chartered Institute for Archaeologists (2020).
- 1.1.4 The watching brief took place between 24th November 2019 and 18th March 2020. The project was managed by Phil Poucher, Project Manager (MCIfA) and Charley James-Martin, Project Manager (MCIfA). The site work was undertaken by Jerry Bond (ACIfA), Steven Cole, and James Evans (PCIfA). All work conformed to the standards and guidance set by the Chartered Institute for Archaeologists (2020). AW is a Registered Organisation with the CfA.

2 Site Description

- 2.1.1 The site is located on the north-eastern edge of the village of Pennard, on the south coast of The Gower Peninsula, centred on NGR SS 55580 88497 (Figure 1). To the north and west the site is bounded by modern residential development, comprising of single- to double-storey detached dwellings along Pennard Drive. Pennard Drive itself forms the western boundary, and the rear gardens of properties forms the northern boundary. The site is bounded to the east by further pasture fields, the southern boundary is formed by Pennard Road, lined on its southern side by further farmland and dispersed farmsteads and dwellings, with the Pennard Primary School to the southwest (Plates 1-3).
- 2.1.2 The site lies on the eastern edge of sub-urban development associated with the villages of Pennard/Southgate, surrounded by farmland with wooded valley slopes in a coastal setting. The site is located approximately 5km to the east of the coastal town of Mumbles, with Swansea city centre lying approximately 11km to the northeast (Poucher 2018, p. 2).

- 2.1.3 The underlying geology of the site comprises limestone belonging to the High Tor Limestone Formation. This sedimentary bedrock formed approximately 343 to 345 million years ago in the Carboniferous Period, where the local environment was previously dominated by shallow carbonate seas. No superficial soils are recorded for this area (BGS 2020).

3 Archaeological and Historical Background

- 3.1.1 The Gower is notable for containing evidence of early human activity from the Upper Palaeolithic period (c.40,000 – 10,000 BC) onward, preserved within many of its limestone caves. However, finds and features relating to the prehistoric period within the vicinity of the site are rare. Approximately 600m to the south of the site a Mesolithic flint tool was discovered (PRN 02089w), and in the 19th century, during quarrying work near Kilvrough, to the north-east of the site, a hoard of late Bronze Age metalwork was discovered (PRN 00308w). An Iron Age defended enclosure overlooks Parkmill to the northwest (PRN 00303w).
- 3.1.2 A large number of Roman coins have been recovered from Pennard and the surrounding area. In 1968 a hoard of coins and silver was unearthed during the construction of a new housing estate in Pennard. A total of 2,583 pieces were recovered, contained within a bronze bowl (PRN 01353w). All the coins dated from the second half of the 3rd century AD. Other coins, although in smaller numbers, have also been found in the area (PRNs 00321w & 02194w).
- 3.1.3 The presence of a well (PRN 02195w) on the west side of the current settlement of Pennard/Southgate may indicate an earlier focus for medieval settlement. The area around the castle was abandoned by the 16th century due to encroaching sand dunes. St Mary's Church to the east (PRN 00327w) may represent another medieval focus of settlement, and also includes reference to a medieval churchyard cross (PRN 00323w) (Poucher 2018, pp. 10-11).
- 3.1.4 There are several recorded archaeological sites dating from the post-medieval period, consisting mainly of dwellings, agricultural and industrial sites. A park associated with Kilvrough Manor was established a short distance to the northeast, with well-defined boundaries by Highway Wood, beyond the development site to the northeast. The house was in existence by the 18th century, rebuilt and extended in the mid to late 18th century with its surrounding parkland, which was extended in the 19th century.

4 Methodology

- 4.1.1 The groundworks consisted of topsoil removal, hedgerow clearance, and excavation for drainage installation and foundations. All excavations were conducted using a mechanical excavator equipped with a toothless bucket.
- 4.1.2 All deposits were recorded by means of a continuous context numbering system and recorded on pro-forma context sheets. Sections and plans were drawn to a scale of 1:50, 1:20 or 1:10 as required and related to Ordnance Survey datum and published boundaries where appropriate. photographs were taken using a 12MP digital camera.

All works were undertaken in accordance with the ClfA's *Standards and Guidance for an archaeological watching brief (2020)* and current Health and Safety legislation.

5 Watching Brief Results (Figure 2; Plates 4-15)

- 5.1.1 The first ground works to be undertaken on site was the removal of a 7m long section of the field hedge and earth bank located centrally on the west of the site to facilitate entrance into the site area from the road that runs north- south along the west side of the development area (plate 4). This work created a small area for a first phase site compound, an access road and limited vehicle parking (Plate 5). Prior to the construction of the site road, which was to be aligned east-west across the site, the machine excavation of a small number of sewer mains (5 in this first stage) was undertaken along with the laying of associated sewer pipes, backfilled with crushed aggregate. The laying of further sewer mains to the north and south of the site road was undertaken at a later stage. This initial central strip covered an area measuring approximately 75m long (E-W) x 35m wide (N-S) (Figure 3).
- 5.1.2 The basal layer within this central strip comprised the local limestone bedrock (1003) appearing as discrete outcrops across the site, which in some locations appeared very close to the surface, lying only 0.1 to 0.2m below the turf line (plate 13). This bedrock was interspersed with deeper deposits of a natural subsoil (1002). This subsoil deposit was initially interpreted as a colluvium, but this interpretation was later discounted due to its intermittent and uneven nature, seeming to lie in hollows within the stone bedrock rather than on the lower slopes of the gently sloping site. Subsoil (1002) was variable in colour and firmness, ranging from a pale brown to a darker red brown with occasional patches of dark brown and was soft and loose in some places but firmer in others. It is characterised as a clay silt containing patches of clay. It varied in thickness from 0.05m up to 0.5m and contained variable quantities of small bedrock fragments.
- 5.1.3 Subsoil (1002) was overlain by layer (1001); a moderately firm mid red brown silty clay -similar to and derived from (1002). It contained variable quantities of bedrock and coal fragments, both considered to be derived from the natural (plate 6). It had an average thickness of 0.1m and no finds were recovered from it, though from a similar layer (1006), located to the north, a sherd of probable prehistoric pot was recovered as was a single sherd of medieval pot.
- 5.1.4 Overlying all was the extant topsoil layer, (1000), a moderately compact, dark red brown silty loam, with variable quantities of small and medium sized rounded and sub angular stones and a thickness of between 0.1m to 0.15m (Plates 6 & 14). A small number of modern finds were recovered from it.
- 5.1.5 An area at the northern end of the site was stripped for the insertion of the first of the building plots, three of them being for twin plots and a fourth for a triple plot. This area measured approximately 70m (E-W) x 30m (N-S).
- 5.1.6 5.1.6 This northern area contained the same sequence of deposits and layers encountered in the central area discussed above, with a geological natural comprising a mix of bedrock and natural silty clay subsoil (1007/1002) above which was the

subsoil/plough soil layer (1006/1001) and overlying them was the extant topsoil layer (1005/1000). Single sherds of both prehistoric and medieval pottery were recovered from (1006).

- 5.1.7 Near to the northern site boundary a discrete area of soft yellow sand (1010) was encountered. This was thought to potentially be related to the large sand dune system of Pennard Burrows to the west of the site. This deposit was characterised as a pale-yellow sand, mottled with lenses of reddish yellow, pale grey and red brown clay, it was soft and loose and free of stones. It was not fully excavated, and its thickness was therefore not established, and it covered an area of at least 34m E-W x 4m N-S.
- 5.1.8 small sub rectangular pit [1008] was cut into this sand layer, lined with tin sheeting. The pit had been used as a repository for domestic rubbish and apparently as a waste incinerator. It measured 1.8m long, 0.9m wide with a depth of at least 0.6m and was orientated E-W (Plates 7-8).
- 5.1.9 The pit, [1008] was filled with two fills, the lower fill (1009) was characterised as a firm/compact deposit with a rusty red and brown colour mostly derived from the material it contained. It comprised a silty clay matrix containing a high percentage of cultural material within it. This included rusted ferrous cans, melted glass, dried paint and pottery sherds. (1009) measured 0.1 to 0.2m thick and clearly showed signs that it had slumped from the collapse of its contents as they decayed over time. This was overlain by upper fill (1011), a soft mottled pale yellow, grey and red brown sand containing patches of clay. This layer was clearly derived from the material into which the pit had been cut, penetrating into the pit as the sides of the feature collapsed over time (plates 9-10). It measured 0.1 to 0.3m thick.
- 5.1.10 The footings trenches for a small number of the building plots were monitored when they were excavated, across the site area as a sample to confirm the presence or absence of archaeological remains hidden under possible colluvium or plough soil (Plates 11-12). All the areas had been previously stripped of their topsoil (1000) which directly overlay either the bedrock or natural subsoil (1002/3) or the plough soil/colluvium (1001/1006). No significant archaeological finds or features were recorded.
- 5.1.11 An area to the SW of the main site entrance was monitored by Steven Cole on the 13th to 15th of January 2020 and again on the 27th of January 2020. No archaeological features were encountered within this area which measured approximately 35m (N-S) x 40m (E-W).
- 5.1.12 A length (c.55m) of the field hedge bounding the west of the site, between the central and northern site entrances, was also removed at this time and relocated along the eastern side of the site. The hedge was excavated, with roots largely intact, and redeposited within a specially excavated shallow trench. No archaeological remains or features were noted during this work.
- 5.1.13 Also during this period, an area adjacent to the removed hedge bank was stripped, it measured c.20m wide by 55m in length, aligned approximately N-S. The same sequence of subsoil/natural, subsoil and topsoil were encountered as that recorded in

the central and northern areas. No archaeological finds or features were encountered during these works.

5.1.14 A second area to the SW of the main site entrance was subsequently monitored, parallel with the western site boundary and measuring c. 50m x 30m. No finds or archaeological features were encountered.

5.1.15 Between 17th and 18th March 2020, the groundworks were supervised by James Evans. During this time, the groundworks were focussed on the stripping of the south-east corner of the site. This area measured approximately 50m x 45m (plate 15).

5.1.16 The basal deposit encountered was the natural subsoil (1002). This was characterised in this area as mid-brown silty clay with frequent inclusions of rocks. The depth at which this deposit was encountered varied considerably; in the western area of the strip, it was encountered at a depth of approximately 0.58m below current ground level. But this continued to rise towards the east where it was encountered directly underlying the topsoil (1000), at a depth of approximately 0.10m.

5.1.17 Overlying (1002) in the western and central part of the SE strip was the ploughsoil/colluvium (1001). This was characterised as a mid-reddish-brown silty clay, containing occasional inclusions of sub angular stones. It was encountered at a depth of between 0.10m to 0.58m below current ground level.

5.1.18 Overlying (1001) was the topsoil (1000), a dark reddish-brown silty loam measuring up to 0.10m thick.

5.1.19 No finds or features of archaeological significance were recovered or recorded.

6 The Finds

6.1.1 A sherd of prehistoric pottery and a sherd of medieval pottery were recovered from layer (1006). However, this layer was identified as a plough soil or colluvial layer indicating that the finds were residual in this context. The only other finds were recovered from (1009), the lower fill of pit [1008], and these finds consisted of 1920's domestic artefacts.

Table 1: Finds Quantification Table

Context Number	Object Type	Quantity	Weight (g)	Description
1000	Pottery	1	31	Earthen ware Jar
1005	Glass	2	15	2xBottle Green Glass
1005	Oyster	1	11	Shell Fragments
1005	Pottery	3	20	2 x whiteware 1x brown glaze
1005	Coal	1	84	very carbonised coal
1005	Plastic	1	0.5	Orange Plastic
1005	composite	1	46	golf ball, marked 3 top flight xl
1005	composite	1	9	plastic and metal shot gun cartridge
1005	glass	1	5	glass bottle shard
1005	Pottery	4	7	3 x china, 1 x earthenware
1006	Pottery	2	128	1x Med Pot Rim

Context Number	Object Type	Quantity	Weight (g)	Description
1006	Pottery	2	5	1 sherd of prehistoric pottery
1009	Glass	12	313	Vessel and some decorated fragments.
1009	Glass	15	2385	including 6 whole bottles, 2 bottle necks with lids
1009	Glass	15	2385	6 bottle fragments
1009	Pottery	1	139	1 with made in england mould
1009	Pottery	4	619	SRD Jar
1009	Pottery	5	117	China/White ware including residues
1009	FE	14	718	14 Fe fragments

7 Discussions and Conclusions

- 7.1.1 No significant archaeological remains were uncovered during the archaeological watching brief. A single archaeological feature was encountered, pit [1008] and its associated fills (1009) and (1011), but this has been identified as a modern rubbish/waste pit. The pit appeared to have been lined with tin sheets and some of the finds within it appeared to be heat affected. It is likely the pit was used to incinerate waste. All finds appeared to date to the early 20th century.
- 7.1.2 A sherd of prehistoric pottery and a sherd of medieval pottery were recovered from the plough soil or colluvial layer (1006), but these sherds were not in their original context and are unlikely to provide further information on the historical and archaeological background of the site.
- 7.1.3 No other finds or features of archaeological significance were recorded.

8 Bibliography

General

Chartered Institute for Archaeologists, 2020. *Standards and guidance for an archaeological watching brief*

Poucher, P. 2018. *Archaeological Desk-Based Assessment: Land at Pennard, Gower, Swansea* (Archaeology Wales: Report 1710)

Poucher, P. 2019. *Written Scheme of Investigation for an Archaeological Watching Brief Land North of Pennard Road and East of Pennard Drive, Southgate, Swansea*, (Archaeology Wales)

Websites

British Geological Survey: Geology of Britain viewer:

www.bgs.ac.uk/discoveringGeology/geologyOfBritain/viewer.html (accessed 27/07/20)



Figure 1: Location plan, 1:50,000 @ A4

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Figure 2: Location outline plan, and schematic
1:5000 @ A4

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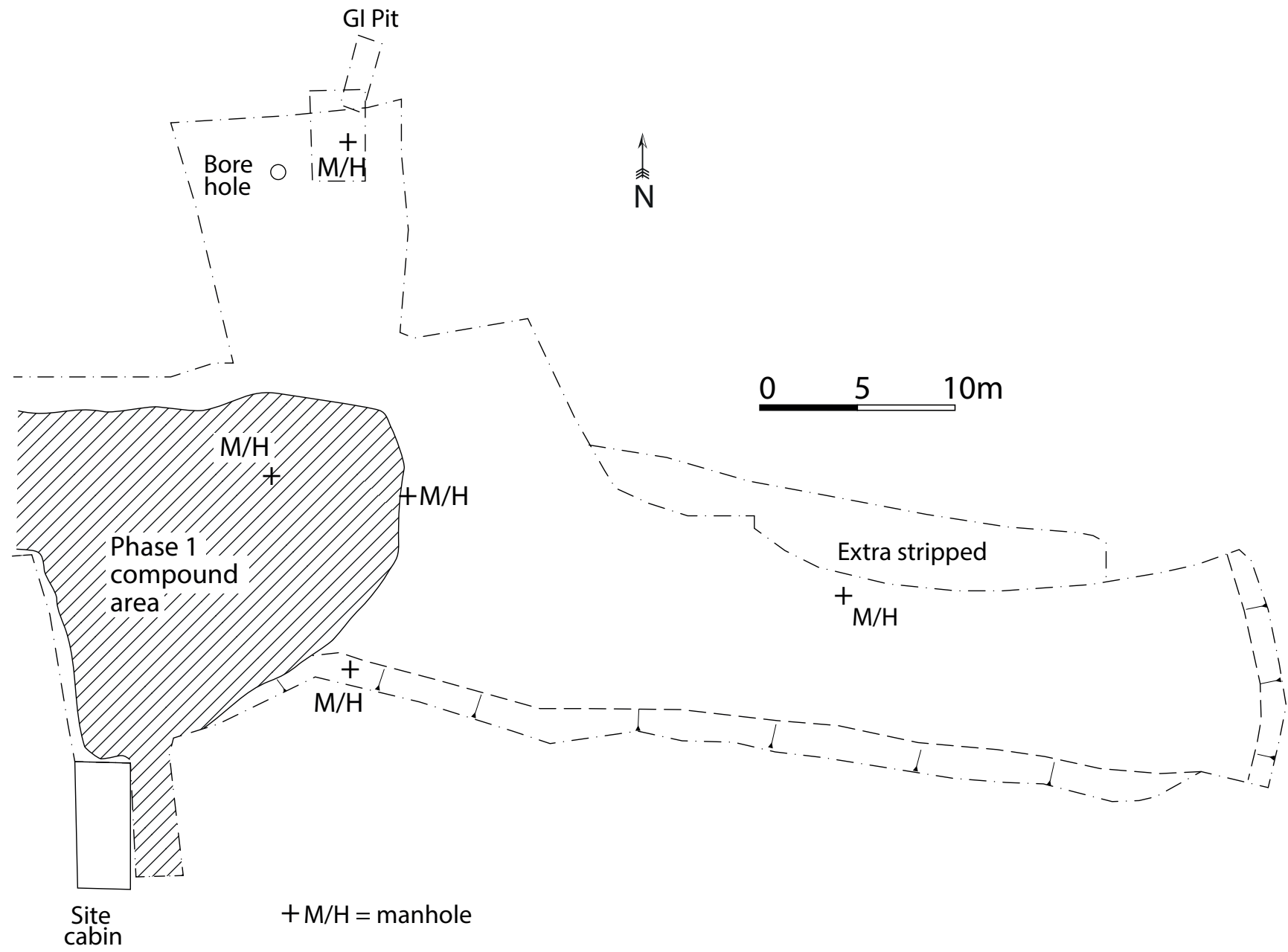


Figure 3. Phase 1, Plan of central strip area

Plates



Plate 1. Site prior to groundworks beginning, facing north-east, 1m & 2m scale.



Plate 2. Site prior to groundworks beginning, facing north, 1m & 2m scale.



Plate 3. Site prior to groundworks beginning, facing west, 1m & 2m scale.



Plate 4. Removal of existing hedgerow, facing north, 1m & 2m scale.



Plate 5. Topsoil (1000) removal, facing north-east, 1m & 2m scale.



Plate 6. West facing representative section, scale 1m. (1000) & (1001).



Plate 7. Pit [1008] prior to excavation, facing north, 0.3m & 1m scale.

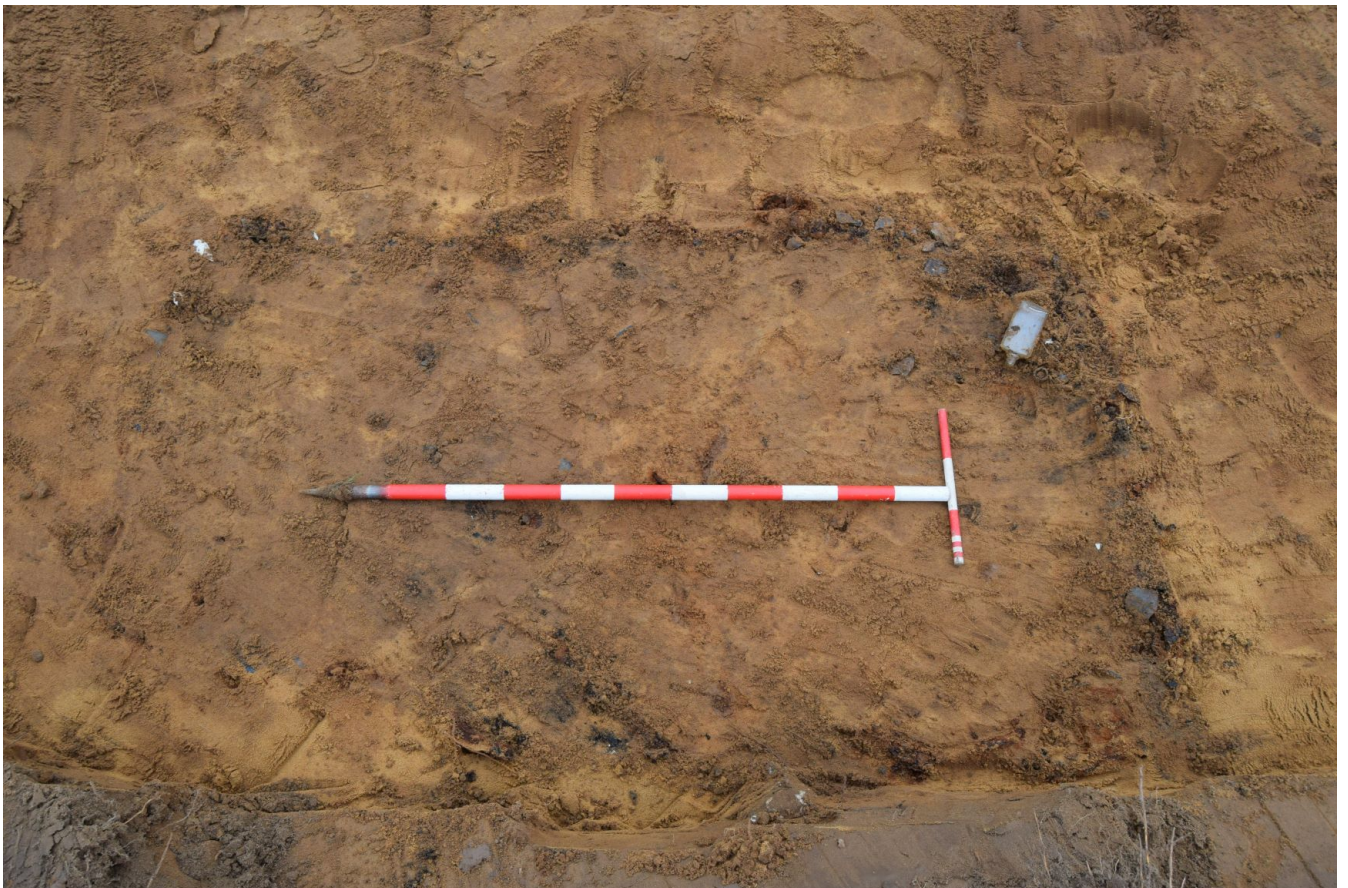


Plate 8. Pit [1008] prior to excavation, facing south, 0.3m & 1m scale.



Plate 9. Excavated pit [1008], facing north, 1m scale.



Plate 10. Excavated pit [1008], facing south, 0.3m scale. An example of heat affected modern finds included in fill (1009).



Plate 11. Topsoil (1000) removed from northern area of site, facing north-east, 1m & 2m scale.



Plate 12. Excavation for foundations in northern area of site, facing north.

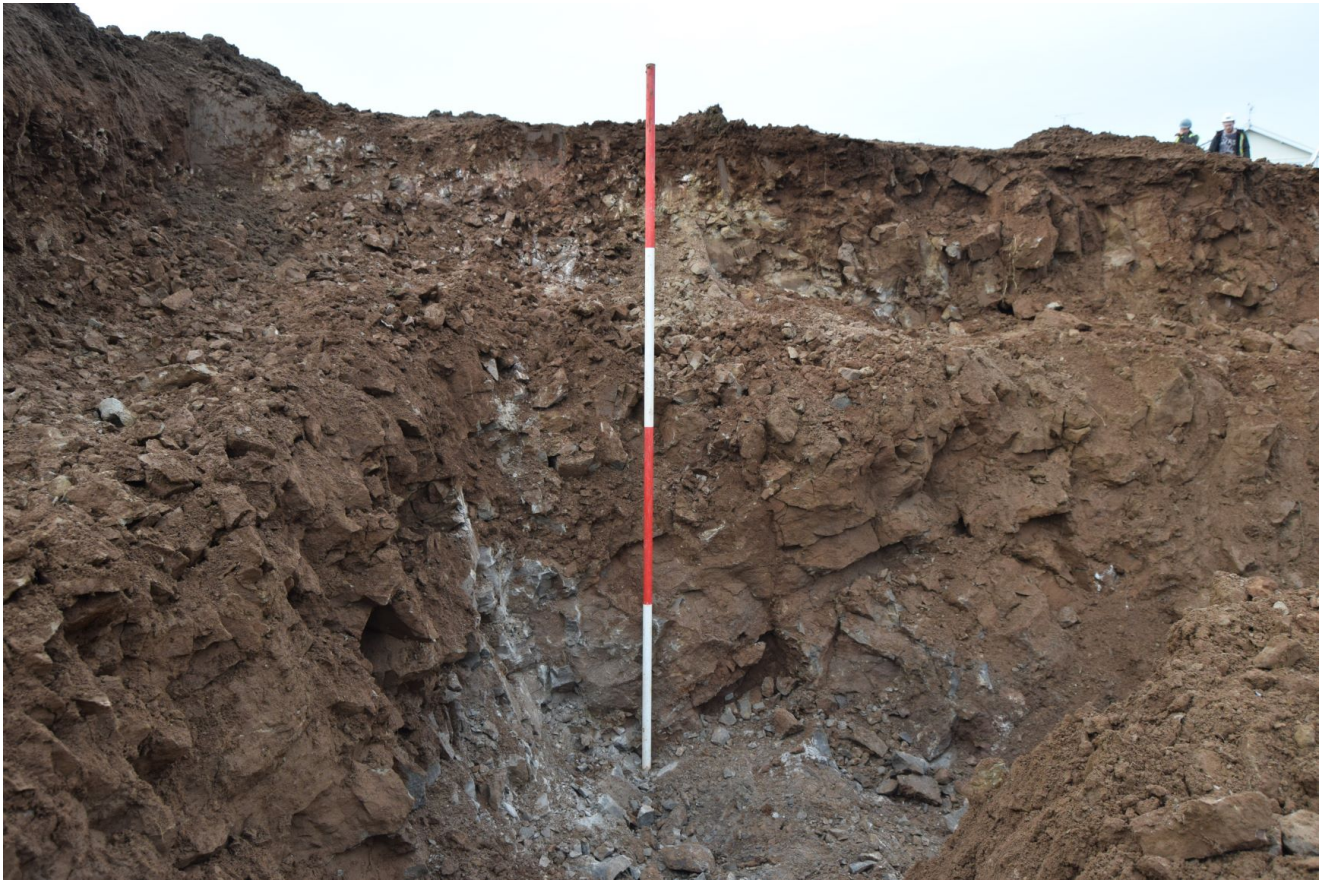


Plate 13. Bedrock (1003) encountered in central area of the site, north-west facing, 2m scale.



Plate 14. Topsoil (1000) removal in central area of site, facing north.



Plate 15. Topsoil (1000) removal in south-eastern area of site, facing north-east.

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APPENDIX I: Context Inventory

Context No.	Area	Type	Description	Dimensions	Relationship
1000	All	Deposit	Turf and topsoil. Moderately compact, dark red brown silty loam, with variable quantities of small and medium sized rounded and sub angular stones.	0.1-0.15m thick	Above (1001); Same as (1005)
1001	All	Deposit	Subsoil/ ploughsoil layer. moderately firm mid red brown silty clay. contained variable quantities of bedrock and coal fragments.	0.1m thick	Below (1000); Above (1002); same as (1006)
1002	All	Deposit	Natural Subsoil. Variable in colour and firmness, ranging from a pale brown to a darker red brown with occasional patches of dark brown clay silt containing patches of clay. contained variable quantities of small bedrock fragments.	0.05-0.5m thick	Below (1001); Above (1003); Same as (1007)
1003	All	Deposit	Natural limestone bedrock		Below (1002)
1004			VOID		
1005	N	Deposit	Turf and topsoil. Moderately compact, dark red brown silty loam, with variable quantities of small and medium sized rounded and sub angular stones.	0.1-0.15m thick	Above (1006), (1010); Same as (1000)
1006	N	Deposit	Subsoil/ ploughsoil layer. moderately firm mid red brown silty clay. contained variable quantities of bedrock and coal fragments.	0.1m thick	Below (1005), (1010); Above (1007); same as (1001)
1007	N	Deposit	Natural Subsoil. Variable in colour and firmness, ranging from a pale brown to a darker red brown with occasional patches of dark brown clay silt containing patches of clay. contained variable quantities of small bedrock fragments.	0.05-0.5m thick	Below (1006); Above (1003); Same as (1002)
1008	N	Cut	small sub rectangular pit lined with tin sheeting. Used as a repository for domestic rubbish and incinerator. orientated E-W.	1.8m long, 0.9m wide >0.5m deep	Cuts (1010); Filled by (1009), (1011)
1009	N	Fill	Lower fill of pit [1008]. Firm/compact silty clay matrix with a rusty red and brown colour, containing rusted ferrous cans, melted glass, dried paint and pottery sherds.	1.8m long, 0.9m wide 0.1-0.2m thick	Fills [1008]; below (1011)
1010	N	Deposit	Soft and loose pale-yellow sand, mottled with lenses of reddish	>34m long >4m wide	Below (1005); Cut by [1008]

			yellow, pale grey and red brown clay, free of stones.	unexcavated	
1011	N	Fill	Upper fill of Pit [1008]. Soft mottled pale yellow, grey and red brown sand containing patches of clay.	1.8m long, 0.9m wide 0.1-0.3m thick	Below (1005); above [1009]; Fill of [1008]

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APPENDIX II: Written Scheme of Investigation

WRITTEN SCHEME OF INVESTIGATION

FOR AN ARCHAEOLOGICAL WATCHING BRIEF

**LAND NORTH OF PENNARD ROAD AND EAST OF PENNARD DRIVE,
SOUTHGATE, SWANSEA**

Prepared for:

Jehu Group

Planning Application Number: 2018/2580/FUL

Project No: 2740

June 2019



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Figure 1. Site location

Figure 2. Site location detail

Figure 3. Development proposals

Summary

This Written Scheme of Investigation details a programme of historic environment mitigation to be undertaken by Archaeology Wales at the request of Jehu Group.

The historic environment mitigation will consist of a watching brief that will be undertaken during ground works associated with the construction of 70 dwelling units and associated detached garages, access, highway works, open space and landscaping on land north of Pennard Road and East of Pennard Drive, Southgate, Swansea. The development site is centred on SS 55580 88497. The associated Planning Application No. is 2018/2580/FUL.

A general potential for Romano-British activity and medieval agricultural activity has been identified in the general area of the planned development, and a post-medieval limestone quarry and animal pound have also been identified in close proximity to the site. Glamorgan-Gwent Archaeological Trust – Curatorial Division has recommended that an archaeological watching brief is undertaken during ground works to mitigate the impact of the development on any surviving buried archaeological resource within the bounds of the site.

All work will be undertaken in accordance with the standards and guidelines of the Chartered Institute for Archaeologists (2014).

1. Introduction and planning background

This Written Scheme of Investigation (WSI) details the methodology for a programme of historic environment mitigation (watching brief) to be undertaken in association with the construction of 70 dwelling units and associated detached garages, access, highway works, open space and landscaping on land north of Pennard Road and East of Pennard Drive, Southgate, Swansea. The development site is centred on SS 55580 88497. The associated Planning Application No. is 2018/2580/FUL. The local planning authority is Swansea Council (SC). This WSI has been prepared by Philip Poucher MCifA, Archaeology Wales Ltd (henceforth - AW).

A general potential for Romano-British activity and medieval agricultural activity has been identified in the general area of the planned development, and a post-medieval limestone quarry and animal pound have also been identified in close proximity to the site (Poucher 2018). As a result of which, historic environment mitigation has been recommended associated with the development work.

The methodology set out in this WSI has been agreed with the Glamorgan-Gwent Archaeological Trust – Curatorial Division (GGAT-CD) in their capacity as archaeological advisors to the local planning authority. GGAT-CD recommended that an archaeological watching brief be undertaken during ground works to mitigate the impact of the proposed development on any surviving buried archaeological resource within the bounds of the site. These recommendations are laid out in a letter from the GGAT-CD to the local planning authority dated 17/01/2019.

As a result Condition 14 of the Planning Decision Notice states:

No development or site clearance shall take place until the applicant, or their agents or successors in title, has secured agreement for a written scheme of historic environment mitigation which has been submitted by the applicant and approved by the Local Planning Authority. Thereafter, the programme of work will be fully carried out in accordance with the requirements and standards of the written scheme. A detailed report on the archaeological work, as required by the condition, shall be submitted to and approved in writing by the Local Planning Authority within six months of the completion of the archaeological fieldwork.

Reason: To identify and record any features of archaeological interest discovered during the works, in order to mitigate the impact of the works on the archaeological resource.

The purpose of the historic environment mitigation (watching brief) is to provide the local planning authority with sufficient information regarding the nature of archaeological remains on the site of the development, the requirements for which are set out in Planning Policy (revised edition 10, 2018), Section 6.1 and Technical Advice Note (TAN) 24: The Historic Environment (2017). The work is to ensure that all buried artefacts and deposits are fully investigated and recorded if they are disturbed or revealed as a result of activities associated with the development.

All work will be undertaken to the standards and guidance set by the Chartered Institute for Archaeologists (2014). AW is a Registered Organisation with the CIfA.

2. Site Description

The site is located on the northeast edge of the village on Pennard, on the south coast of Gower, centred on SS 55580 88497.

The site currently comprises an area of green field measuring *circa* 2.15 hectares, bounded by hedgerows with a fenceline along the east boundary. The ground oscillates but generally slopes gradually down to the north from approximately 68m to 56mOD.

To the north and west the site is bounded by modern residential development, comprising single- to double-storey detached dwellings along Pennard Drive. Pennard Drive itself forms the western boundary, and the rear gardens of properties forms the northern boundary. To the east further pasture fields extend, the southern boundary is formed by Pennard Road, lined on its southern side by further farmland and dispersed farmsteads and dwellings, with the Pennard Primary School to the southwest.

The site lies on the edge of the urban spread of the villages of Pennard/Southgate, surrounded by farmland with wooded valley slopes in a coastal setting. Approximately 5km to the east lies the coastal town of Mumbles, with Swansea city centre lying approximately 11km to the northeast.

The underlying geology is characterised by the High Tor Limestone Formation, comprised by limestone formed during the Carboniferous Period. No superficial soils are recorded for this area (BGS 2018).

3. Archaeological background

An archaeological desk-based assessment has been undertaken in association with the planned development (Poucher 2018). Research indicated that there was some potential for activity in the area during the Roman, or Romano-British period, with a significant hoard of Roman coins from within Pennard, and a number of more sporadic finds in the surrounding landscape. Although early Roman-British settlements are known in the wider area, in the continued use of Iron Age promontory forts, the coins belong to the later Roman period and the nature of any associated activity has not been ascertained. The quantity of finds from this period suggest a higher level of activity in the area.

It would seem likely that by the medieval period the development site lay alongside a road that connected potential centres of activity focussed on Pennard Castle to the west, and St Mary's Church to the east. Although away from the settlement centres, mapping evidence suggests this may have been an area of strip field agriculture extending out from the road. Mapping and aerial photography indicates however the site was on the edge of the enclosed land and sand dunes to the west, and therefore may have been poor ground for farming, and no surface traces of strip fields are visible within the site.

During the post-medieval period the area appears to have been largely agricultural and remained undeveloped. A parkland was established associated with Kilvrough Manor a short distance to the northeast, but the boundaries of this parkland appear well defined by Highway Wood, beyond the development site to the northeast. The house was in existence by the 18th century, rebuilt and extended in the mid to late 18th century with its surrounding parkland, which was extended in the 19th century.

The nearest specific features of archaeological interest comprise the remains of a post-medieval limestone quarry to the northeast, and a post-medieval pound on the roadside to the southeast. Limestone quarrying is mentioned in the area from the 17th century onward, reaching a peak of activity in the 19th century. The quarry to the northeast is marked on the Ordnance Survey map of 1878, although already out of use by that date. The pound to the southeast is also first marked on this map, and remains as an extant feature, albeit also no longer in use.

Pennard remained a small settlement to the west into the 20th century. By the 1930s however this area had become a tourist destination, and a number of temporary holiday bungalows were built greatly increasing the size of the settlement. During the 1960s and 1970s new estates were built on the edge of Pennard, replacing the holiday bungalows with residential areas, now forming the western and northern boundaries of the proposed development site.

4. Objectives

This WSI sets out a program of works to ensure that the mitigation (watching brief) will meet the standard required by The Chartered Institute for Archaeologist's *Standard and Guidance for Archaeological Watching Briefs (2014)*.

The objective of the watching brief will be:

- to allow a rapid investigation and recording of any archaeological features that are uncovered during the proposed groundworks within the application area.
- to provide the opportunity, if needed, for the watching archaeologist to signal to all interested parties, before the destruction of the material in question, that an archaeological find has been made for which the resources allocated to the watching brief are not sufficient to support the treatment to a satisfactory or proper standard.

A written report will be compiled following the fieldwork. Sufficient desk-top research will be undertaken to ensure that the results of this work are properly understood, interpreted and reported.

The report will include a comprehensive assessment of the historic context within which the archaeological evidence rests and will aim to highlight any relevant research issues within regional, national and, if relevant, international research frameworks.

5. Timetable of works

5.1. Fieldwork

The programme of mitigation will be undertaken during ground works associated with the proposed development. A start date for the ground works has not yet been finalised. Archaeology Wales will update GGAT-CD with the exact date when known.

5.2. Report delivery

The report will be submitted to the client and to GGAT within three months of the completion of the fieldwork. A copy of the report will also be submitted to SC. A copy of the report will also be sent to the regional Historic Environment Record (GGAT).

6. Fieldwork

6.1. Detail

The work will be undertaken to meet the standard required by The Chartered Institute for Archaeologist's *Standard and Guidance for Watching Briefs (2014)*.

The Watching Brief will be carried out by a suitably qualified archaeologist on all groundworks associated with the development (clearance and levelling works, foundation excavations, service excavations and other associated work that could disturb sub-surface deposits). The mechanical excavation will be undertaken by a tracked 360 degree excavator(s) using a toothless ditching bucket wherever possible.

The site archaeologist undertaking the watching brief will be afforded the required access by the main contractor in order to observe and where necessary to record any archaeological remains revealed. Groundwork will not be undertaken without the presence of the site archaeologist. The site archaeologist will record finds and less significant archaeological deposits and features without significant delay to the work program. The site archaeologist will be present until it can be established that further groundworks will not disturb any potential archaeological deposits (i.e. undisturbed natural deposits have been revealed or only well-defined modern deposits will be disturbed in the area of planned works etc). GGAT-CD will be notified if it is considered groundworks can continue without the presence of the site archaeologist.

Where significant or complex archaeological deposits or features are encountered there will be a requirement for those areas to be fenced off and highlighted to all contractors employed on the site. Machines or contractors shall not enter this area until archaeological recording has been completed. If significant archaeological features are revealed during the work a meeting between the client, GGAT-CD and AW will be called at the earliest convenience.

To comply with professional guidelines, a contingency for a further limited period of uninterrupted access to each such areas and for a suitably-sized team of further archaeologists to be employed should be provided. Contingency costs will be agreed in advance before any extension to the programme commences and will follow a site meeting between AW, the client and GGAT-CD.

6.2. Recording

Recording will be carried out using AW recording systems (pro-forma context sheets, etc.) using a continuous number sequence for all contexts.

Plans and sections will be drawn to a scale of 1:50, 1:20 or 1:10 as required and related to Ordnance Survey datum and published boundaries where appropriate.

All features identified will be tied in to the OS survey grid and fixed to local topographical boundaries.

Photographs will be taken in digital format with an appropriate scale, using a 12MP camera with photographs stored in Tiff format.

The archaeologist undertaking the watching brief will have access to the AW metal detector and be trained in its use.

6.3. Finds

The professional standards set in the Chartered Institute for Archaeologists' *Standard and guidance for the collection, documentation, conservation and research of archaeological (2014)* will form the basis of finds collection, processing and recording.

All manner of finds regardless of category and date will be retained.

Finds recovered that are regarded as Treasure under *The Treasure Act 1996* will be reported to HM Coroner for the local area.

Any finds which are considered to be in need of immediate conservation will be referred to a UKIC qualified conservator (normally Phil Parkes at Cardiff University).

6.4. Environmental sampling strategy

Deposits with a significant potential for the preservation of palaeoenvironmental material will be sampled, by means of the most appropriate method (bulk, column etc). Where sampling will provide a significant contribution to the understanding of the site AW will draw up a site-specific sampling strategy alongside a specialist environmental archaeologist. All environmental sampling and recording and will follow English Heritage's *Guidelines for Environmental Archaeology* (2011).

6.5. Human remains

In the event that human remains are encountered, their nature and extent will be established and the coroner informed. All human remains will be left *in situ* and protected during backfilling. Where preservation *in situ* is not possible the human remains will be fully recorded and removed under conditions that comply with all current legislation and include acquisition of licenses and provision for reburial following all analytical work. Human remains will be excavated in accordance with the Chartered Institute for Archaeologists' *Updated Guidelines to the Standards for Recording Human Remains* (2017).

A meeting with GGAT-CD, the client and AW will be called if the human remains uncovered are of such complexity or significance that the contingency arrangement (6.1 above) would not be of sufficient scope.

6.6. Specialist advisers

In the event of certain finds, features or sites being discovered, AW will seek specialist opinion and advice. A list of specialists is given in the table below although this list is not exhaustive.

Artefact type	Specialist
Flint	Kate Pitt (Archaeology Wales)

Animal bone	Richard Madgwick (Cardiff University)
CBM, heat affected clay, Daub etc.	Rachael Hall (APS)
Clay pipe	Hilary Major (Freelance)
Glass	Rowena Hart (Archaeology Wales)
Cremated and non-cremated human bone	Malin Holst (University of York)/Richard Madgwick (Cardiff University)
Metalwork	Kevin Leahy (University of Leicester)/ Quita Mold (Freelance)
Metal work and metallurgical residues	Dr Tim Young (GeoArch)
Neo/BA pottery	Dr Alex Gibson (Bradford University)
IA/Roman pottery	Jane Timby (Freelance)
Roman Pottery	Rowena Hart (Archaeology Wales)/ Peter Webster (Freelance)
Post Roman pottery	Stephen Clarke (Monmouthshire Archaeology)
Charcoal (wood ID)	John Carrot (Freelance)
Waterlogged wood	Nigel Nayling (University of Wales – Lampeter)
Molluscs and pollen	Dr James Rackham
Charred and waterlogged plant remains	Wendy Carruthers (Freelance)

6.6.1. Specialist reports

Specialist finds and palaeoenvironmental reports will be written by AW specialists, or sub-contracted to external specialists when required.

7. Monitoring

GGAT-CD will be contacted approximately two weeks prior to the commencement of archaeological site works, and subsequently once the work is underway.

Any changes to the WSI that AW may wish to make after approval will be communicated to GGAT-CD for approval on behalf of Planning Authority.

GGAT-CD will be given access to the site so that they may monitor the progress of the field evaluation. No area containing archaeological features will be back-filled until GGAT-CD has

had the opportunity to inspect it, unless permission has been given in advance. GGAT-CD will be kept regularly informed about developments, both during the site works and subsequently during post-excavation.

8. Post-fieldwork programme

8.1. Archive assessment

8.1.1. Site archive

An ordered and integrated site archive will be prepared in accordance with *The National Standard and Guidance to Best Practice for Collecting and Depositing Archaeological Archives in Wales 2017* (National Panel for Archaeological Archives in Wales) and the guidelines of the Chartered Institute for Archaeologists upon completion of the project.

The site archive (including artefacts and samples) will be prepared in accordance with the National Monuments Record (Wales) agreed structure and deposited with an appropriate receiving organisation, in compliance with ClfA Guidelines (*Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives*, 2014). The legal landowners' consent will be gained for deposition of finds.

8.1.2. Analysis

Following a rapid review of the potential of the site archive, a programme of analysis and reporting will be undertaken. This will result in the following inclusions in the final report:

- Non-technical summary
- Location plan showing the area/s covered by the watching brief, all artefacts, structures and features found
- Plan and section drawings (if features are encountered) with ground level, ordnance datum and vertical and horizontal scales.
- Written description and interpretation of all deposits identified, including their character, function, potential dating and relationship to adjacent features. Specialist descriptions and illustrations of all artefacts and soil samples will be included as appropriate.
- An indication of the potential of archaeological deposits which have not been disturbed by the development
- A discussion of the local, regional and national context of the remains by means of reviewing published reports, unpublished reports, historical maps, documents from local archives and the regional HER as appropriate.

- A detailed archive list at the rear listing all contexts recorded, all samples finds and find types, drawings and photographs taken. This will include a statement of the intent to deposit, and location of deposition, of the archive.

8.2. Reports and archive deposition

8.2.1. Report to client

Copies of all reports associated with the mitigation (watching brief), together with inclusion of supporting evidence in appendices as appropriate, including photographs and illustrations, will be submitted upon completion to the client, and for formal submission to SC.

8.2.2. Additional reports

After an appropriate period has elapsed, copies of all reports will be deposited with the relevant county Historic Environment Record (GGAT), the National Monuments Record and, if appropriate, Cadw. The report and all relevant information will be submitted to the Historic Environment Record following the guidelines and procedures laid out in the *Guidance for the Submission of Data to the Welsh Historic Environment Records* (WAT 2018).

8.2.3. Summary reports for publication

Short archaeological reports will be submitted for publication in relevant journals; as a minimum, a report will be submitted to the annual publication of the regional CBA group or equivalent journal.

8.2.4. Notification of important remains

Where it is considered that remains have been revealed that may satisfy the criteria for statutory protection, AW will submit preliminary notification of the remains to Cadw.

8.2.5. Archive deposition

The final archive (site and research) will, whenever appropriate, be deposited with a suitable receiving institution. If artefacts are recovered, and dependent on the size of the final archive, the preferred receiving institution would be a suitable local institution (Swansea Museum). If the archive is not acceptable the archive will be deposited with Amgueddfa Cymru – National Museum Wales, Cardiff. If no artefacts are recovered then the archive will be deposited with the *National Monuments Record*, RCAHMW, Aberystwyth. Arrangements will be made with the receiving institution before work starts.

Although there may be a period during which client confidentiality will need to be maintained, copies of all reports and the final archive will be deposited no later than six months after completion of the work.

Copies of all reports, the digital archive and an archive index will be deposited with the *National Monuments Record*, RCAHMW, Aberystwyth.

Wherever the archive is deposited, this information will be relayed to the HER. A summary of the contents of the archive will be supplied to GGAT-CD.

8.2.6. Finds deposition

The finds, including artefacts and ecofacts, excepting those which may be subject to the Treasure Act, will be deposited with the same institution, subject to the agreement of the legal land owners.

9. Staff

The project will be managed by Phil Poucher MCIfA and the fieldwork undertaken by suitable qualified and experienced AW archaeologists. Any alteration to staffing before or during the work will be brought to the attention of GGAT-CD and the client.

Additional Considerations

10. Health and Safety

10.1. Risk assessment

Prior to the commencement of work AW will carry out and produce a formal Health and Safety Risk Assessment in accordance with *The Management of Health and Safety Regulations* 1992. A copy of the risk assessment will be kept on site and be available for inspection on request. A copy will be sent to the client (or their agent as necessary) for their information. All members of AW staff will adhere to the content of this document.

10.2. Other guidelines

AW will adhere to best practice with regard to Health and Safety in Archaeology as set out in the FAME (Federation of Archaeological Managers and Employers) health and safety manual *Health and Safety in Field Archaeology* (2002).

11. Community Engagement and Outreach

Wherever possible, AW will ensure suitable measures are in place to inform the local community and any interested parties of the results of the site investigation work. This may occur during the site investigation work or following completion of the work. The form of any potential outreach activities may include lectures and talks to local groups, interested parties and persons, information boards, flyers and other forms of communication (social media and websites), and press releases to local and national media.

The form of any outreach will respect client confidentiality or contractual agreements. As a rule, outreach will be proportional to the size of the project.

Where outreach activities have a cost implication these will need to be negotiated in advance and in accordance with the nature of the desired response and learning outcomes.

12. Insurance

AW is fully insured for this type of work and holds Insurance with Aviva Insurance Ltd and Hiscox Insurance Company Limited through Towergate Insurance. Full details of these and other relevant policies can be supplied on request.

13. Quality Control

13.1. Professional standards

AW works to the standards and guidance provided by the *Chartered Institute for Archaeologists*. AW fully recognise and endorse the Chartered Institute for Archaeologists' *Code of Conduct*, *Code of Approved Practice for the Regulation of Contractual Arrangements in Field Archaeology* and the *Standard and Guidance for archaeological watching briefs* currently in force. All employees of AW, whether corporate members of the Chartered Institute for Archaeologists or not, are expected to adhere to these Codes and Standards during their employment.

13.2. Project tracking

The designated AW manager will monitor all projects in order to ensure that agreed targets are met without reduction in quality of service.

14. Arbitration

Disputes or differences arising in relation to this work shall be referred for a decision in accordance with the Rules of the Chartered Institute of Arbitrators' *Arbitration Scheme for the Institute for Archaeologists* applying at the date of the agreement.

15. References

Chartered Institute for Archaeologists. 2014. *Standards and guidance for the collection, compilation, transfer and deposition of archaeological archives*.

Chartered Institute for Archaeologists. 2014. *Standards and guidance for the collection, documentation, conservation and research of archaeological materials*.

Chartered Institute for Archaeologists. 2014. *Standards and Guidance for Archaeological Watching Briefs*.

English Heritage, 2011. *Guidelines for Environmental Archaeology*.

Historic England, 2015. *Management of Research Projects in the Historic Environment (MORPHE)*.

Mitchell, P.D. and Brickley, M. eds. 2017. *Updated Guidelines to the Standards for Recording Human Remains*. Chartered Institute for Archaeologists.

Poucher, P, 2018. *Land at Pennard, Gower, Swansea: Archaeological Desk Based Assessment*. AW Report No.1710

The Welsh Archaeological Trusts (WAT). July 2018. *Guidance for the Submission of Data to the Welsh Historic Environment Records*

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