

# PEMBROKE CASTLE CAFÉ PEMBROKESHIRE

## ARCHAEOLOGICAL WATCHING BRIEF

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**PEMBROKE CASTLE CAFÉ,  
PEMBROKESHIRE:  
ARCHAEOLOGICAL WATCHING BRIEF**

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# **PEMBROKE CASTLE CAFÉ: ARCHAEOLOGICAL WATCHING BRIEF**

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## **PEMBROKE CASTLE CAFÉ, PEMBROKESHIRE ARCHAEOLOGICAL WATCHING BRIEF**

### **SUMMARY**

*Dyfed Archaeological Trust were commissioned to carry out an archaeological watching brief and archaeological recording in the outer ward of Pembroke Castle (PRN 4518; NGR SM 982 016), adjacent to St Anne's Bastion, during the foundation groundworks for a new café extension. Scheduled Monument Consent for the project required that an archaeological brief be carried out during the groundwork excavations.*

*St Anne's Bastion is a medieval structure thought to have been constructed in the early 14<sup>th</sup> century, possibly as private apartments or a 'Gloriette'. This part of the castle underwent extensive restoration in the 1930s but appears to have retained much of its original medieval form despite being converted at that time into cottage accommodation and, latterly, into a café and toilet block. During the restoration, and later in the 1950s, two parallel retaining walls were constructed at the front of the bastion as part of a general landscaping programme within the outer ward of the castle.*

*During the groundworks for the new café extension's footings all the deposits excavated from between the two retaining walls to the southwest of the bastion appeared to represent levelling-up layers that had been deposited during the landscaping work undertaken in the 1930s and 1950s. The new footings were excavated down to deeply fissured natural limestone bedrock and no rock-cut, or other, archaeological features were encountered there. However, during removal of a section of the more westerly retaining wall, and during groundworks for access to the new café at its northwest end, three mortar-bonded stone wall footings and the remnants of an internally circular stone structure, possibly an oven, were revealed. Although no absolute dates could be established for these features the evidence suggests that one of the wall footings is medieval and the other two post-medieval. The 'oven' structure was shown to abut the probable medieval wall but its fabric had been severely compromised by the intrusion of modern services making full characterisation of it difficult. Finds retrieved from the structure make-up material/corework of the 'oven' included medieval tile fragments and a mixed assemblage of medieval and post-medieval pottery.*

*With slight modifications to the original construction plans for the new café it was possible to fully preserve the revealed structures in situ after a programme of consolidation had been undertaken with agreement between the Cadw: Welsh Historic Monuments inspector and Pembroke Design Ltd.*

## **INTRODUCTION**

### **Project Background**

Dyfed Archaeological Trust (DAT) were commissioned by Pembroke Castle Trust, *via* their architects Pembroke Design Ltd., to undertake an archaeological watching brief during the groundworks for the construction of a new café extension on a paved area immediately to the southwest of the existing café and toilet block in the outer ward of Pembroke Castle (PRN<sup>1</sup> 4518 at NGR<sup>2</sup> SM 982 016).

The new construction is located immediately adjacent to St. Anne's Bastion (Photo 1) which projects outwards from the northeast curtain wall of the castle. Pembroke Castle is a Scheduled Ancient Monument (SAM No. PE005) and therefore any building works undertaken within the scheduled area required the granting of Scheduled Monument Consent (SMC). Cadw granted SMC, by a letter dated 8<sup>th</sup> July 2008, which required that an archaeological watching brief and archaeological recording be carried out during the groundworks for the new building.

The SMC was informed by a previous archaeological evaluation that had been carried out at the behest of Cadw by DAT (then Cambria Archaeology) in April 2006. The results of the evaluation showed that most of the deposits exposed were derived from landscaping activity carried out during the 1930s when St. Anne's Bastion had been restored and a cottage constructed within it, later becoming the original café and toilet block. The landscaping and restoration appear to have truncated all earlier deposits down to the natural limestone bedrock although a small remnant of mortar-bonded walling was revealed in one of the evaluation trenches at the northern edge of the site (Ludlow 2006).

### **Watching brief methodology and scope of the report**

The watching brief consisted of the attendance on the site of two archaeologists during the groundwork excavations for the new building. One archaeologist was engaged in watching the machine excavation while the second hand-cleaned and recorded, excavating where necessary, any revealed archaeological features and deposits.

The groundworks comprised the demolition of two modern retaining walls and the removal of a paved and gravelled area to the immediate southwest of the existing café and toilet block, followed by the removal of deposits down to the natural bedrock and the excavation of the footings.

All archaeologically significant features and deposits revealed during the groundworks were recorded using an open-ended context numbering system, and photographed (scaled) in digital format. Where possible, or relevant, measured plans or sections of revealed features and deposits were drawn at scales of 1:20 or 1:10 on plastic drafting film and related to the Ordnance Datum.

The watching brief was carried out between October 2008 and February 2009, with the majority of the work being undertaken continuously over three weeks between October and November 2008. General photographs of the 'work in progress' and 'before and after' shots were also taken as part of the recording process and archive.

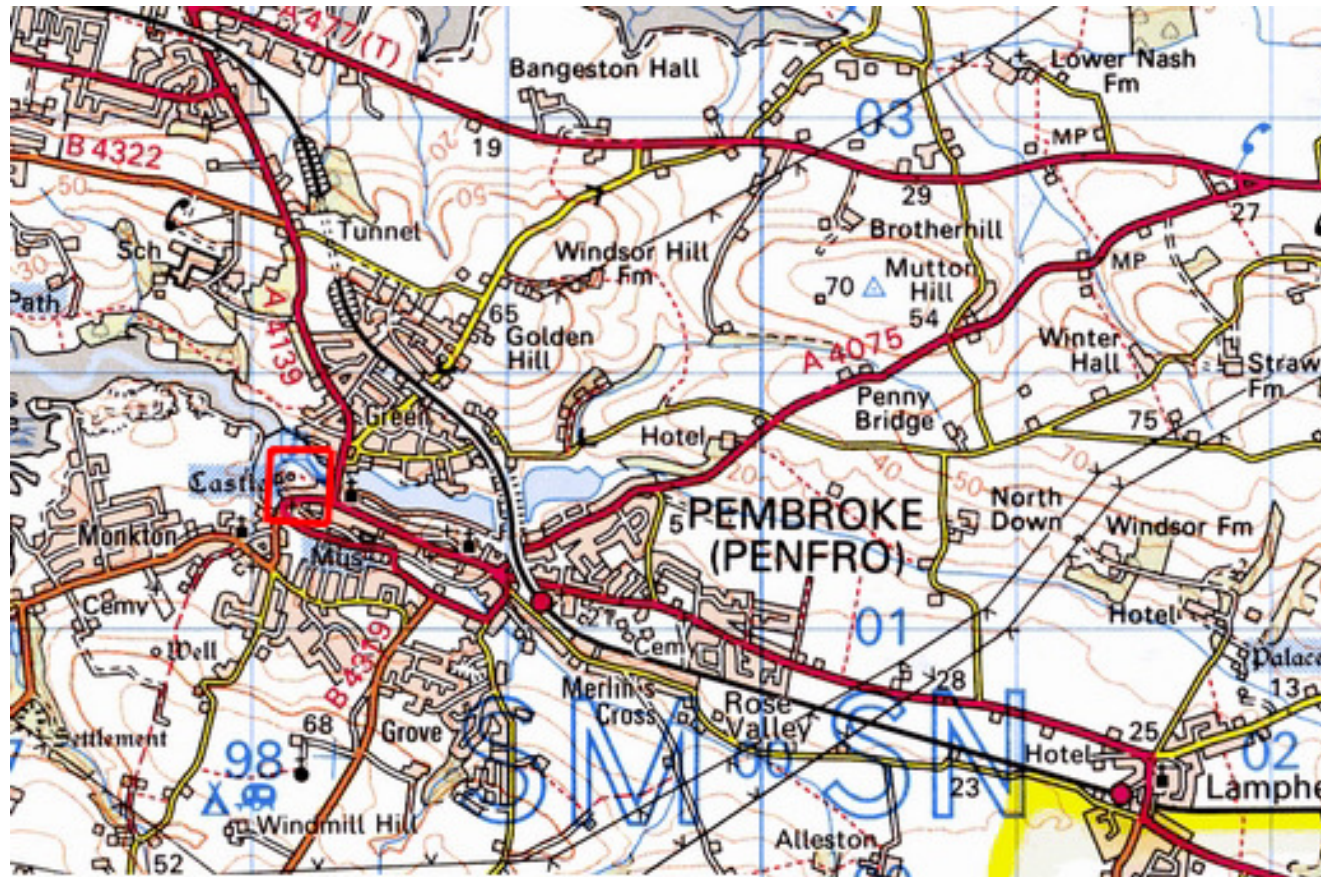
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<sup>1</sup> Primary Record Number as used by the Regional Historic Environment Record (HER) in Llandeilo

<sup>2</sup> National Grid Reference

In addition to the watching brief an archaeologist was present during the consolidation *in situ* and backfilling of some of the revealed archaeological features.

This report summarises the historical background to the site and discusses the results of the watching brief. A table containing a list of all contexts and their descriptions can be found at the end of the report (Appendix III). Note that printed map extracts are not necessarily reproduced to their original scale.



**Figure 1:** Map of Pembroke showing location of the castle.

Reproduced from the 1995 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 Ltd., The Shire Hall, Carmarthen Street, Llandeilo, Carmarthenshire SA19 6AF. Licence No AL51842A



## SITE LOCATION AND HISTORICAL BACKGROUND

Pembroke Castle is situated at the west end of a precipitous (c.20m above Ordnance Datum) Carboniferous Limestone ridge flanked by two, formerly tidal, creeks of the Milford Haven waterway (Figure 1). The castle occupies the most westerly part of the historic town of Pembroke (Figure 2) whose medieval town walls projected from two of its southeastern towers. A full description and discussion of the history and phasing of the castle by D. J. Cathcart King has been undertaken elsewhere (King 1978), and a brief outline is included below.

The castle originated as an 'earth-and-timber' structure founded in 1093 by Roger of Montgomery during the Norman penetration into west Wales after the death of Rhys ap Tewdwr. In the late 12<sup>th</sup> century it came into the ownership of William Marshal who from 1204 commenced the rebuilding of the fortification in stone and over the next thirty years or so the great round keep, the inner ward curtain wall, chapel, inner gate and turrets were constructed. Throughout the Middle Ages, and later, the castle continued to be enlarged with the addition of a stone curtain wall for the outer ward and numerous other buildings including, probably in the early 14<sup>th</sup> century by Aymer de Valence, St. Anne's Bastion. Sporadic periods of neglect followed but additional defensive works were constructed during the Civil War years of the 17<sup>th</sup> century. In 1648 Oliver Cromwell slighted the castle by blowing up four towers of the outer ward and after the Civil War it was abandoned and allowed to fall into ruin. At the time of the publication of the Tithe Map and Apportionment of the Parish of St. Mary in 1842 the outer ward of the castle was described as being under pasture and rented to one Joshua Paynter by its owner Edward Price Lovedon, but there is no indication that any of the buildings were inhabited at this time.

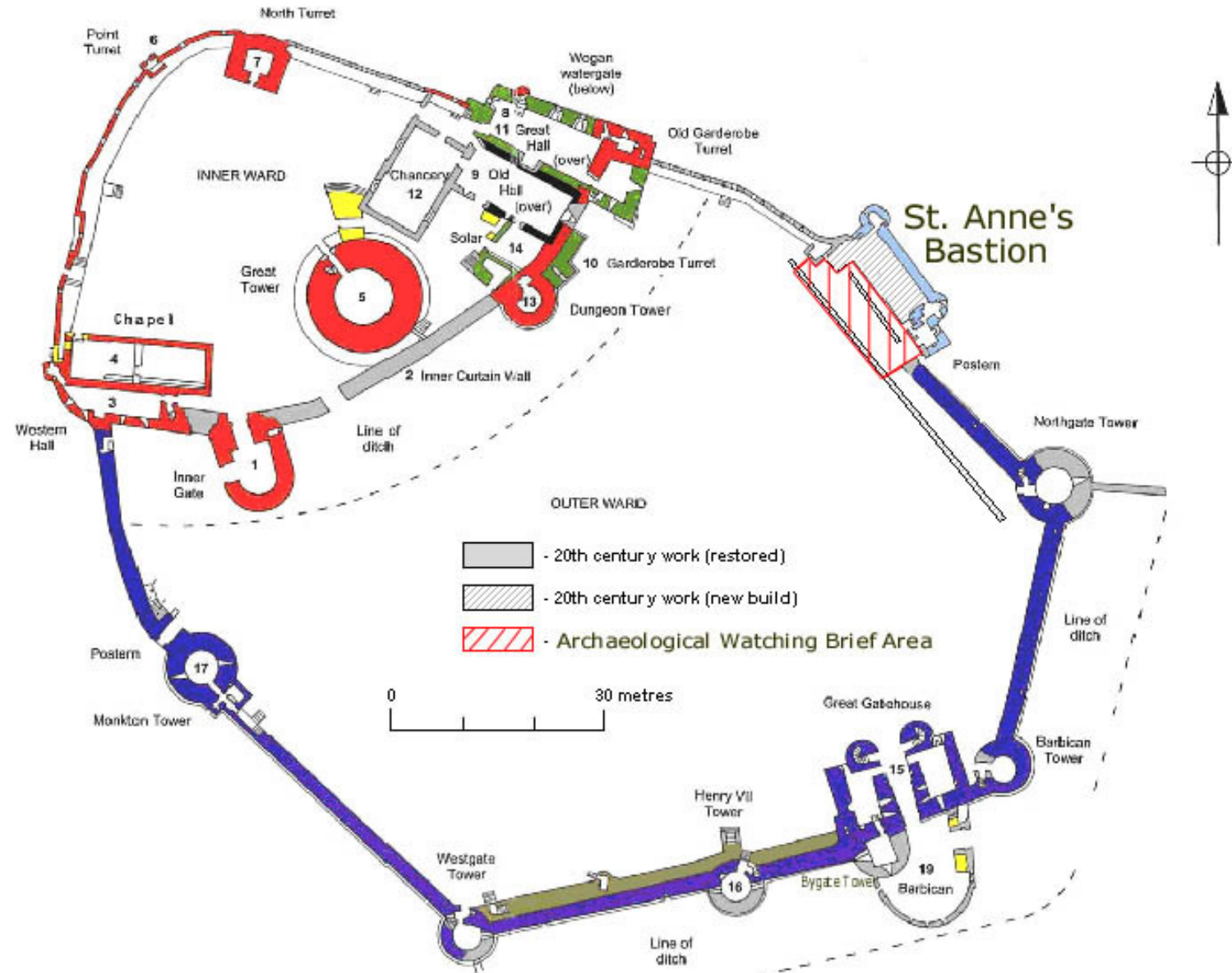


**Figure 2:** Extract from 1906 6" Ordnance Survey map of Pembroke.

In the late 1870s to the early 1880s Joseph Richard Cobb, the antiquarian, leased the castle from its owners and undertook some clearance work which led to the discovery of the Horseshoe Gate in the inner ward. He also carried out restoration work around the castle gateway, on the wall enclosing the Barbican and on the Bygate Tower (Cobb 1883).

In 1915 the castle was scheduled, one of the first privately-owned castles to be afforded such protection, and in 1928 it was acquired by Sir Ivor Phillips who commenced the first restoration, consolidation and rebuilding programme since that undertaken by Cobb, but on a much larger scale. The castle that we experience today is a direct result of this extensive work, which was completed by May 1940. The stairs and roof of the Keep (Great Tower) were restored, as were the Northgate, Westgate and Henry VII towers; extensive consolidation of the outer curtain wall, restoration of the inner curtain, and restoration of the Western Hall was also undertaken. In the area of St. Anne's Bastion, and the curtain wall between it and the Old Garderobe Turret to the northwest, much restoration, consolidation and new building was carried out. The new build was in the form of a cottage inserted into the rectangular interior of St. Anne's Bastion but it is not known whether this building incorporated any original medieval structural elements or footings. The cottage was later converted into the café and toilet block in front of which, to the southwest, is the area of the groundworks that are the subject of this report.

The castle currently lies within the Pembroke Historic Landscape Character Area (see Appendix I) and is a Grade I listed building.



**Figure 3:** Overall phased plan of Pembroke Castle (after Ludlow 2001), showing area of watching brief.

## St. Anne's Bastion

A description and discussion of St. Anne's Bastion is contained in the evaluation report (Ludlow 2006) but it is reprinted in full here as it is important in setting the context for a discussion of the results of the watching brief.

*St Anne's Bastion is a complex structure projecting from the northeastern side of the outer ward circuit. It is built on the edge of the limestone cliff on which the castle stands, overlooking the Pembroke River. It appears to represent a self-contained unit, rectangular in plan, comprising a circular turret to the northwest, connected by a stretch of curtain wall to a D-shaped turret conjoined with a square turret, to the southeast. Between the latter turret and the curtain wall to the southeast lies a postern. The whole structure projects boldly (9.5 metres) from the outer ward circuit.*

*In plan, the bastion in its present form reflects medieval arrangements and is shown in its unrestored form on the Ordnance Survey First Edition map of 1861 (Figs. 4 & 5). This map also shows the stump of a wall running parallel with the outer wall of the bastion but 8 metres to the southwest, as if to define a rectangular area within the bastion. Prints and photographs taken prior to restoration provide some further detail. The arrangements shown appear to be reflected in the present structure, but much of the inner faces of the turrets, the parapets, and the small rectangular open 'turret' that now forms the northwest corner of the bastion (see Figure 5) are missing. However, it is clear that the present corbel tables follow an earlier pattern. What is also clear is that it was always a substantial structure. Taken overall, the structural evidence suggests a date early in the 14<sup>th</sup> century, possibly under Aymer de Valence (1307-1324); succeeding Lords of Pembroke were largely absentee.*

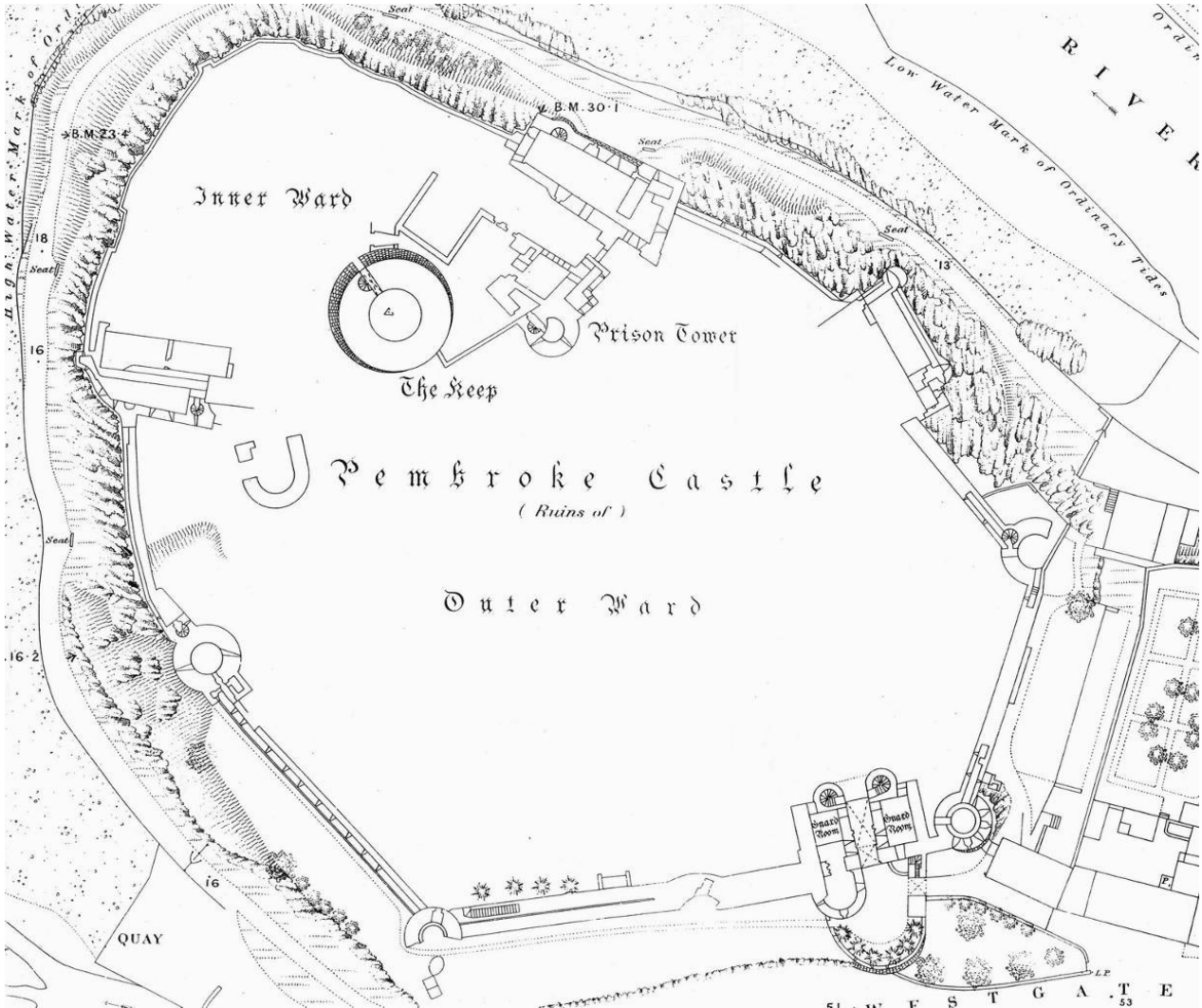
*Was St Anne's bastion merely defensive in nature? It may have been, but the parallel wall shown in 1861 (Figure 5) suggests that a rectangular building occupied the body of the bastion. Nevertheless, the pre-restoration prints and photographs suggest that the walls and turrets of the bastion were never any taller than today, particularly the northeast external wall which only stands to a height of one storey. However, there is space within the structure for a fairly large gabled building (at least 6m x 12m), open to the roof, with eaves at first floor level – in other words, a hall. Further (service) buildings within the outer ward may have been attached. Its detail – the corbel tables etc. – also suggest that the bastion may have housed a building of some status that, perhaps significantly, overlooked the river.*

*It is possible therefore that the bastion represents a 'Gloriette' – self-contained apartment(s) of high status, usually constructed for an individual and represented most famously at Leeds Castle in Kent, where it was built by Edward I for his wife Eleanor of Castille. The domestic buildings in the Lower Ward at Chepstow Castle, Monmouthshire, built by Earl Roger Bigod in the late 13<sup>th</sup> century, have recently been re-interpreted as a Gloriette (Rick Turner, Cadw, pers. comm.). They occupy a similar location to St Anne's Bastion, projecting from the curtain wall, on a cliff top overlooking the River Wye. These apartments appear to represent the main living accommodation, however, and it is possible that St Anne's Bastion was, like the Leeds Castle Gloriette, built for an individual – in this case, possibly Aymer de Valence's mother, Joan, who outlived her husband William de Valence by 11 years. It may have represented a dower apartment.*

*Rebuilding in the 1930s included the restoration of the bastion walls to their original height (indicated by surviving doorways from the turrets), the provision of crenellated parapets, the rebuilding of the inner faces of the turrets and the construction of the 'new' turret at the northwest corner. Pre-restoration photographs show the interior of the bastion as an area of rough ground, overgrown with grass and other vegetation, with areas of rubble debris. The wall shown in 1861 is not visible. The exact nature of the then topography is difficult to determine but there is a definite downhill slope from the outer ward to the south – which had been levelled as a grass tennis court in the 1920s – to the interior of the bastion. This was enhanced under Sir Ivor Phillips by the construction of a retaining wall, which still divides the flagged area in front of the present café and toilets, from the upper level – currently paved – to the southwest. The second retaining wall, further into the outer ward 6 metres to the southwest, was apparently constructed during the 1950s when the tennis court was surfaced (Maj. Ivor Ramsden, grandson of Philipps, pers. comm.).*

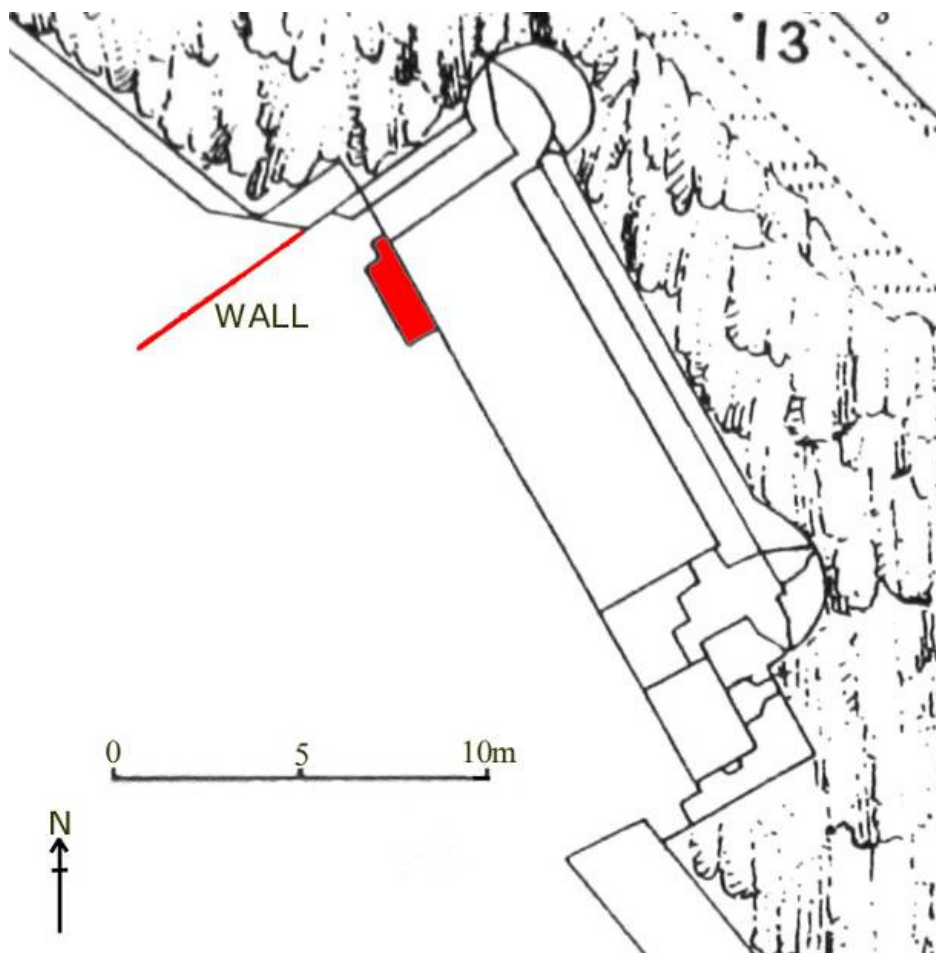
*The present café and toilet block was constructed as a cottage during the 1930s and was complete by 1939 (ibid.). The general form of this building and the disposition of its*

*openings appears to have been more-or-less as today, to judge from an aerial photo taken in 1938; the same arrangements more-or-less persisted into the 1980s, by which time it had been converted into a café and toilet. It was altered and upgraded in the mid 1990s but in overall form remained the same. The area between the two revetment walls was also surfaced with paving slabs. (Ludlow 2006).*



**Figure 4:** Extract from Ordnance Survey 1:500 Map, First Edition, 1861.

In addition to the observations made above with regard to the Ordnance Survey First Edition map of 1861, the presence of a wall-face projecting southwest into the outer ward from the northwest turret of St. Anne's Bastion and a rectangular building abutting the northwest corner of the rectangular space within the bastion should be noted (see areas marked in red in Figure 5 below). Both of these features lay, or partly lay, within the area of the groundworks for the café extension but were not apparent as features above ground prior to the commencement of the excavations.



**Figure 5:** Detail of St. Anne's Bastion from Ordnance Survey First Edition, 1861.

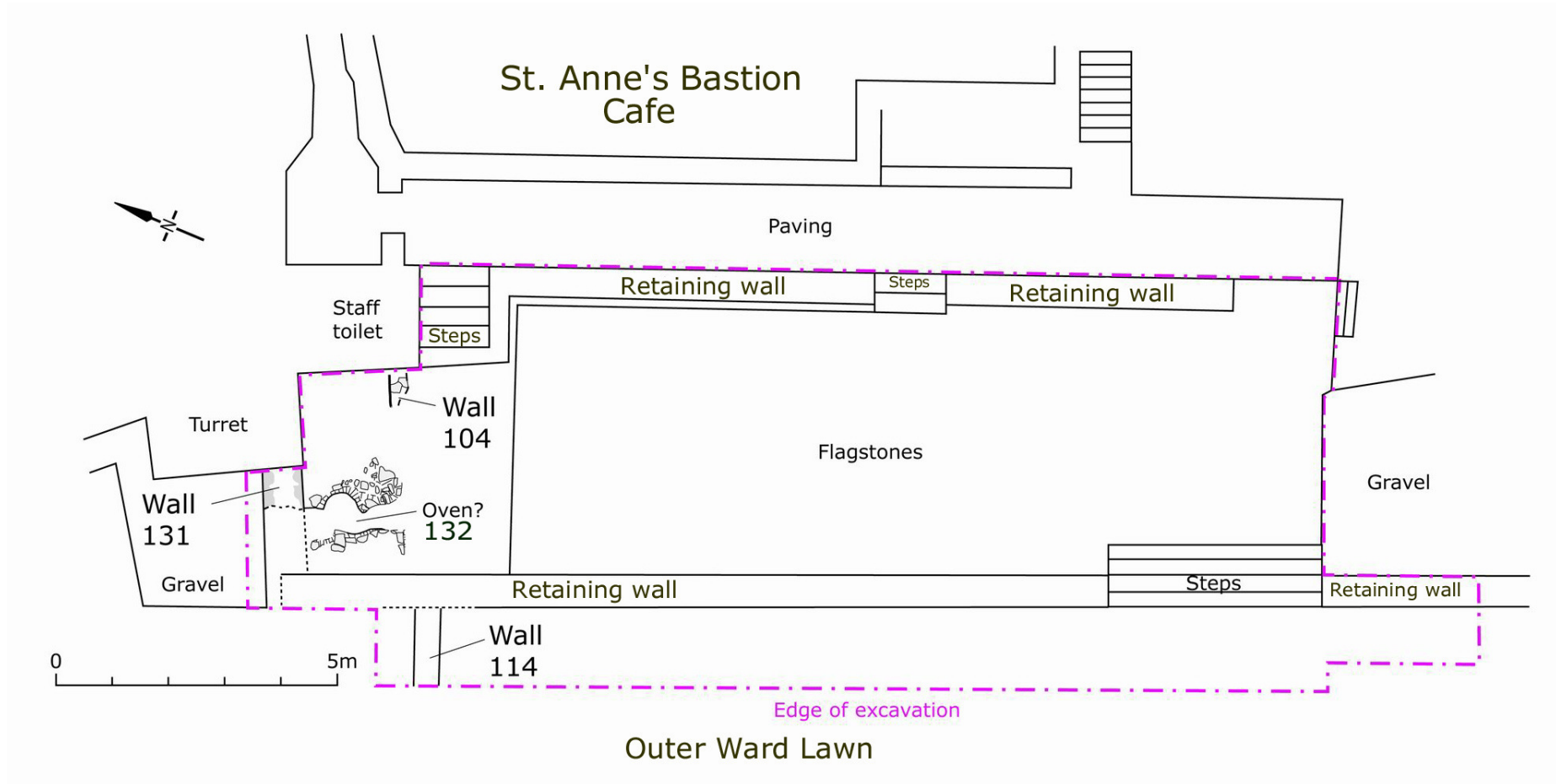
## **WATCHING BRIEF RESULTS**

The groundworks were carried out using a 4.5 ton tracked excavator with a toothed bucket for the demolition of the two retaining walls and removal of the flagstones and paved area in front (to the southwest) of St. Anne's Bastion (Photo 2). A toothless grading bucket was used to remove all other deposits down to either the top of archaeological features and deposits or the natural limestone bedrock.

The project area was approximately rectangular, measuring some 9m NE-SW by 22m NW-SE (see Figure 6), with lesser extensions at each end.

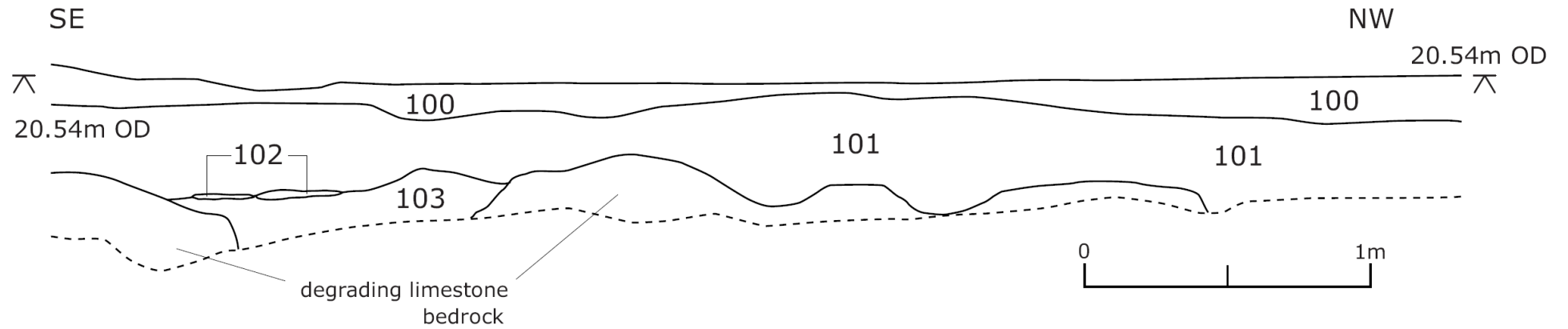
Demolition and removal of a 21.4m length of the 0.6m wide by 0.45m high southwestern retaining wall (including the stone steps) exposed a vertical profile of the stratified deposits making up the northeastern edge of the outer ward. The topsoil (100) varied in depth to between 0.1m and 0.2m along the section and overlay a succession of deposits, of varying depths, containing high percentages of building demolition debris in the form of shattered shale and roofing slate fragments, small and medium sized angular limestone and mortar fragments (Contexts 101, 103, 110, 113, and 151 to 155 inclusive; Figures 7 & 8). These layers continued down to the natural subsoil (109), where it was present, or lay directly on the deeply fissured undulating natural limestone bedrock. At the southerly end of the exposed section the bedrock was encountered at only 0.3m (20.24m OD) below the ground surface compared with a depth of 0.8m at the northerly end (19.8m OD). The demolition layers probably represent landscaping layers deposited during levelling-up in the outer ward for the construction of a tennis court in the 1920s, or perhaps later landscaping.

The butt end of a wall (114) was revealed in the north end of the section and this was further revealed by hand-excavating trenches to either side of it to the southeast and northwest. The wall (Figure 8 and Photo 4) lay some 0.2m below the present ground surface beneath a 0.1m depth of topsoil (100) and a 0.1m depth of the uppermost demolition layer (110). A modern electricity cable trench (117) was revealed cutting through the top of the wall to a depth of about 0.3m, some 0.4m from its eastern end. A 0.5m depth of homogeneous mid reddish brown friable silty clay soil (111) containing 20% small and medium size angular limestone fragments and frequent fragments of mortar lay against the southeast face of the wall. In section this layer continued to the southeast for about 0.9m before being apparently truncated and giving way to later demolition debris deposits (151) and (152). Layer 111 was seen to overlie and seal a c.0.12m deep compact dark brown silty clay deposit (120) containing 80% small angular fragments of limestone, which in turn directly overlay the natural bedrock. Layer 120 appeared to be a possible randomly laid metal surface.

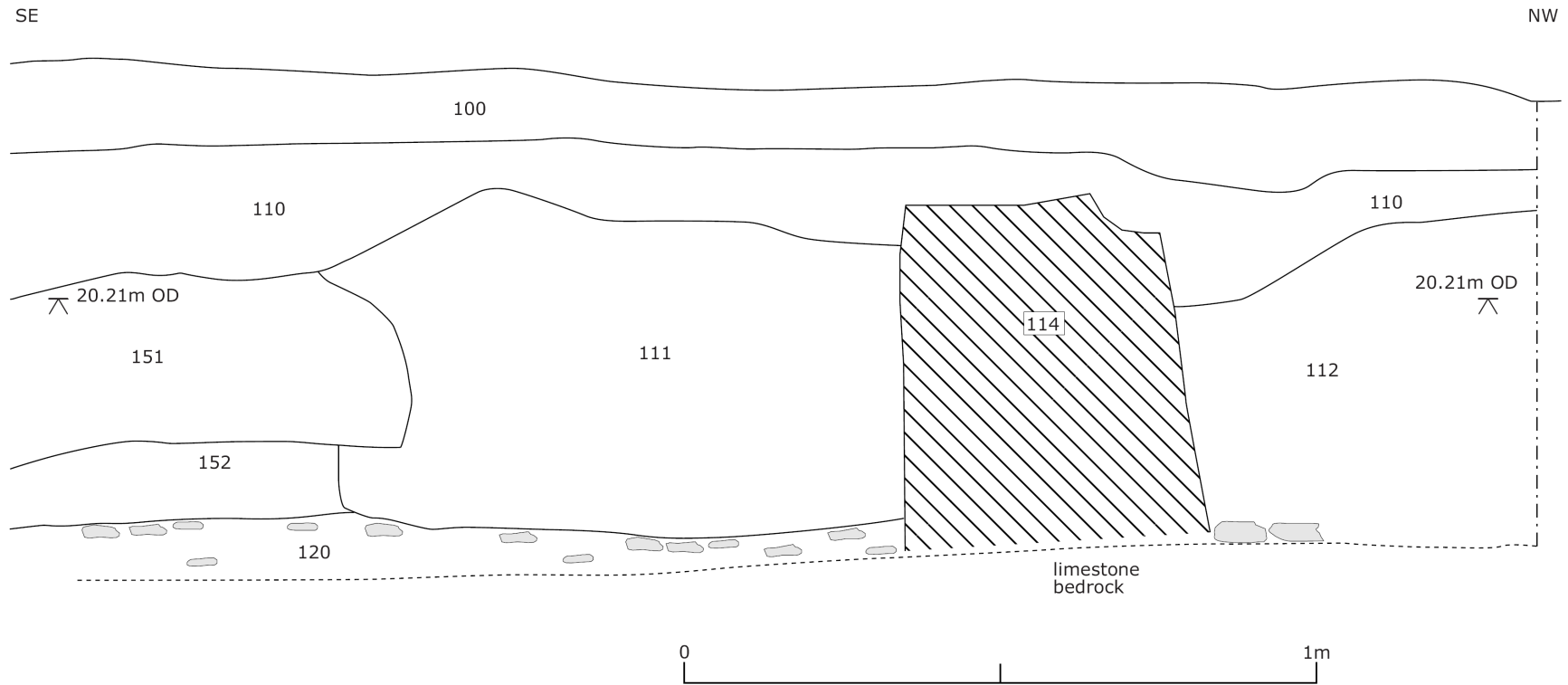


**Figure 6:** Extent of groundwork excavation area marked in purple.





**Figure 7:** Representative section of the revealed outer ward deposits after removal of the retaining wall and steps at the south edge of the site.



**Figure 8:** Section showing deposits on and around wall 114.

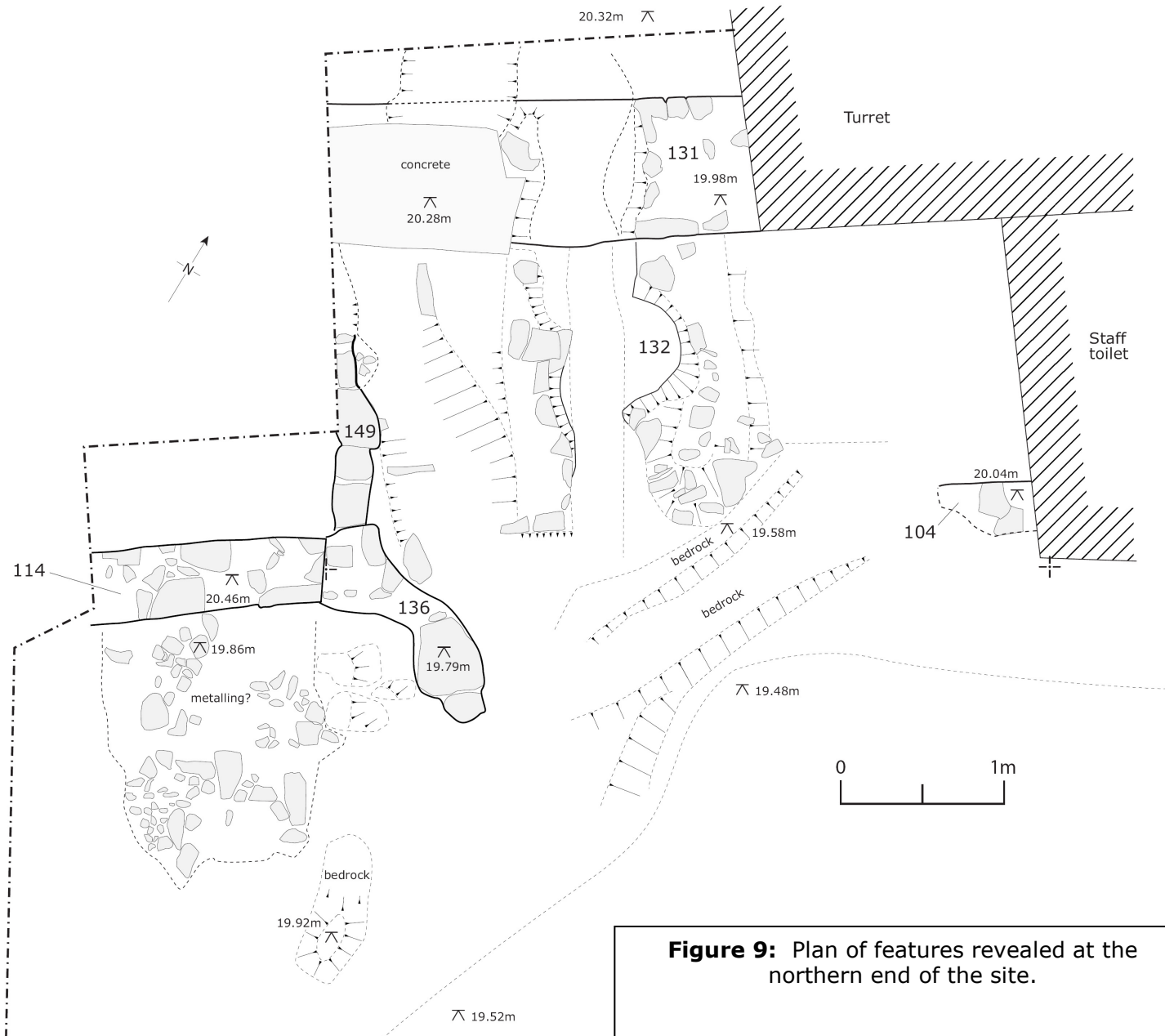
Finds recovered from layer 111 included oyster shells and several glazed sherds of North Devon Gravel Tempered ware pottery (dating from between the 16<sup>th</sup> and 18<sup>th</sup> centuries). On the northwest side of the wall the upper deposits mirrored the stratigraphic sequence on the southeast side, but here layer 110 overlay a 1m depth of homogeneous mid reddish brown friable silty clay soil (112) containing 15% small and medium size angular limestone fragments and only occasional mortar fragments. This deposit lay against the northwest face of wall 114 and was seen to directly overlie the natural bedrock. There was a concentration of medium size stones within 112 along the foot of the wall that may have represented tumble, at first it was thought that they were a stone footing for the wall but they did not exhibit any structural form. Several sherds of medieval pottery, from a number of distilling alembics<sup>3</sup>, glazed ridge tile fragments, roofing slates and animal bones were recovered from within (112). The alembic vessel sherds are considered to date from between the late 14<sup>th</sup> to 15<sup>th</sup> centuries and were possibly used in the production of aquavits and brandy wines for medicinal purposes or drinking. Alternatively, such vessels could be used for the production of nitric acid which was used to assay gold and silver. Given the status of Pembroke Castle as a royal and aristocratic residence none of these uses can be ruled out (Courtney, 2009).

The revealed wall (114) was aligned WSW-ENE, terminating at its eastern end. It was 0.66m high by 0.44m wide and continued westwards into the outer ward beyond the excavation trench for an unknown distance. It was lime mortar bonded and exhibited randomly coursed stonework on its northern face and larger coursed stonework facing on its southern side. This may suggest that it functioned as a revetment wall, or at least that it was only the southern side that was exposed. The top of the wall appeared to be even and flat (apart from the damage caused by the service trench) indicating that it may remain at its full height, but this is uncertain.

The demolished modern retaining wall had been built upon a 1.10m wide by 0.22m thick concrete slab foundation, which underlay it for its whole length. During the removal of this and the compacted modern gravel surface near the northern end of the site, a curvilinear single course of large and medium size mortar-bonded limestone blocks (136) was revealed mortared to the bedrock (Figure 9 and Photo 5). This feature was 1.2m long by 0.12m wide by 0.12m high and was abutted (a mortared abutment) by, or abutted, wall 114; the true relationship between 136 and 114 was unclear because the laying of the concrete foundation slab and construction of the modern retaining wall appeared to have compromised the fabric of 136, however, the presence of the butt joint suggests phased construction.

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<sup>3</sup> See Paul Courtney's Pottery report for Context (112) in Appendix II at the end of report.



**Figure 9:** Plan of features revealed at the northern end of the site.

A northwest to southeast linear arrangement of mortared limestone blocks (contexts 148 & 149) was revealed abutting the northwestern end of 136 (Figure 9). Further removal of the concrete slab and overburden (comprising disturbed ground caused by service installation) revealed a circular mortared stone structure (132). Within its centre was a hollow of 0.9m diameter at its top and 0.6m diameter at its base. This steep sided hollow was lined with mortared masonry and slates. A large modern service trench, aligned NNW-SSE, cut through the centre of this feature. The lower fill removed from the base of the hollow within structure 132 contained compacted fill with a high percentage of mortar and occasional fragments of charcoal (context 142). There is possible evidence of the outer face of the structure in the form of a linear arrangement of mortar-bonded stone revealed to the southeast of the circular hollow (Photo 7 and Figure 9). On its south-westerly side the outer wall of the structure may be represented by the linear configuration of stones 149 and their possible extension 148, the alignment is good but any definitive relationship is lost due to the intrusion of modern service trenches.

Structure 132 was shown to be abutting the footing of a southwest to northeast aligned wall (131) (Photo 8 and Figure 9). Wall 131 was 0.82m in width with a 2.5m length exposed, it was at least 0.4m in height at its northeastern end, however it had been badly damaged by service trenches along the rest of its revealed length. At its southwest end the concrete foundation slab for the retaining wall was left *in situ* (Photo 9), and this obscured the majority of the wall, although it was still discernible beneath. Wall 131 was constructed directly upon the underlying bedrock. It is considered likely that the wall represents a continuation of the northwest end wall of St Anne's Bastion, the alignment of which appears to be shown on the first edition 1:500 scale Ordnance Survey map of 1861 (Figures 4 & 5).

To the northeast of the stone structure 132, a layer of mixed material was excavated (context 133) (Photo 10). The layer contained a significant quantity of finds including an iron arrow head, medieval pottery (Saintonge green glazed sherd and Dyfed gravel tempered ware), medieval glazed ridge tile fragments, animal bones and oyster shells, a fragment of window lead, fragments of roofing slates with nail holes, a sherd of green glazed white stoneware and several sherds of North Devon gravel tempered ware pottery. A discrete NNW to SSE aligned linear spread of stone noted within this layer may have represented demolition rubble from the northeastern side of structure 132, perhaps defining the extent of the northeast side of the structure. The insertion of modern services to the staff toilet block had caused considerable disturbance to layer 133 and, in so doing, appears to have added to the destruction of the northeastern side of structure 132.

The possible southeast face of structure 132 lay some 1.75m to the southeast of its abutment with wall 131, whilst the possible southwest face of the structure, represented by linear features 149 and 148, lay some 3.5m to the southwest of the linear configuration of loose stones noted within layer 133. Although the evidence is at best nebulous, due to the destruction caused by the intrusion of the modern service trenches, it is possible to conjecture that structure 132 was rectangular and measured 3.5m long by 1.75m wide with its northwest side abutting wall 131. An exact interpretation of the structure is not possible due to its damaged state, but it clearly represents a possible oven or kiln involved in some industrial or domestic process.

A short length of mortared stone wall (104) projected 0.54m into the excavated area from beneath the staff toilet block structure to the east (Photo 10 and Figure 9). Wall 104 had been badly truncated and it was not possible to determine any relationships between it and any of the other significant contexts revealed during the course of the groundworks in the surrounding area; however, it is possible

that it represents a fragment of one of the northwest end walls of the building depicted on the Ordnance Survey map of 1861 (the red coloured building in Figure 5).

To the north of the previously flagged area in front of St Anne's Bastion, the natural bedrock was found to lie very close to the ground surface (this area was previously laid to gravel). Beneath the flagged area the natural topography sloped gently down from the southeastern end of the site before rising sharply immediately to the southwest of the staff toilet block (Photo 9). As previously noted during the archaeological evaluation undertaken in 2006 (Ludlow 2006), the majority of the formerly flagged surface was underlain by a number of 19<sup>th</sup> and 20<sup>th</sup> century levelling layers (contexts 106, 107, 108, 121, 122, 123, 128 & 129) (Photo 11). The make-up layers were sealed beneath a modern concrete slab (105) of 0.25m depth, which had been laid between the two retaining walls as a base for the former flagged surface. These make-up layers were presumably derived from imported material used to landscape this part of the site, as suggested in the 2006 evaluation report, to fill the hollow in the natural bedrock. Layer 130, which lay directly beneath the levelling layers on top of the bedrock, contained evidence of possible medieval activity, indicated by the presence of bone, mortar fragments and oyster shells.

Following discussions between CADW: Welsh Historic Monuments and Pembroke Design Ltd it was agreed to modify the design of the café to enable preservation of all the revealed structures *in-situ*. All loose masonry on the structures was consolidated using a sympathetic mortar mix<sup>4</sup>, voids in the structures were filled with a loose limestone gravel<sup>5</sup> to prevent further movement and then covered with a geo-textile<sup>6</sup> prior to their reburial (Photos 13 and 14). This work was undertaken in the presence of an archaeologist at the behest of Cadw as part of the archaeological watching brief.

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<sup>4</sup> The mortar mix was in the ratio of 2 x sand, 2 x lime and 2 x small sea-washed Old Red Sandstone pebbles.

<sup>5</sup> Limestone gravel 8mm to dust.

<sup>6</sup> 'Aztex NW 100'.

## CONCLUSION

During the groundworks for the construction of the footings for the new café extension all the deposits excavated from between the two retaining walls to the southwest of St. Anne's Bastion appeared to represent levelling-up layers that had been deposited during the landscaping work undertaken in the 1930s and 1950s. The work undertaken at that time appears to have destroyed any medieval deposits or features that may have existed then. Little or no evidence of the medieval activity hinted at during the course of the 2006 archaeological evaluation was revealed in this area during the watching brief.

All the significant archaeological features and deposits revealed during the groundworks were located at the northwest end of the site buried beneath the northwestern end of the outer retaining wall, the gravelled area and the northwestern edge of the flagged area. The natural bedrock in this part of the site was much shallower than elsewhere in the site area and lay outside the main area of construction of the cottage and other rebuilding undertaken during the 1930s. Although the insertion of service trenches (for water pipes and electricity cables) extensively damaged structure 132 and walls 114, 104 and 131, enough of these features survived to allow their existence to be successfully demonstrated and recorded during the watching brief.

No absolute dates for any of the revealed structures or archaeological deposits was proven during the archaeological recording but it is thought (Ludlow 2006) that St Anne's Bastion was built, by Aymer de Valence, in the 14<sup>th</sup> century. This would suggest that the revealed wall footing 131, which is considered to be associated with the Bastion, was constructed at that time. The fact that structure 132 was shown to abut wall 131 proves only that it was constructed after the wall, but actually when we cannot know.

The presence of medieval pottery and lack of later finds in deposits 111 and 112 which lay up against either side of wall 114 suggest that they remained relatively unscathed during episodes of landscaping associated with the construction of the tennis court in the 1920s, and it may therefore be of some antiquity.

Regarding the remnant wall 104, it is possible that it represents part of the building depicted on the 1860 Ordnance Survey map, its alignment and position certainly suggest this to be the case but its date is not known.

The results of the watching brief were successful in that they allowed the opportunity to reveal these previously unknown structural features, thereby adding to our knowledge of Pembroke Castle's history whilst at the same time enabling them to be preserved *in situ*, following cooperation with the architects.

## PHOTOGRAPHS



**Photo 1:** View of St. Anne's Bastion taken from the Keep, view east, prior to groundworks.



**Photo 2:** Oblique view of the two retaining walls and flagstone area in front of St. Anne's Bastion prior to groundworks. View north.





**Photo 3:** Outer ward deposits revealed after removal of retaining wall and steps  
View northwest.



**Photo 4:** Wall 114 showing its SE face with possible metallised surface (120) in front of it, and modern service trench cutting its NE end. Prior to the removal of the retaining wall concrete foundation on the far right of the picture. Scales are 1m and 0.5m.



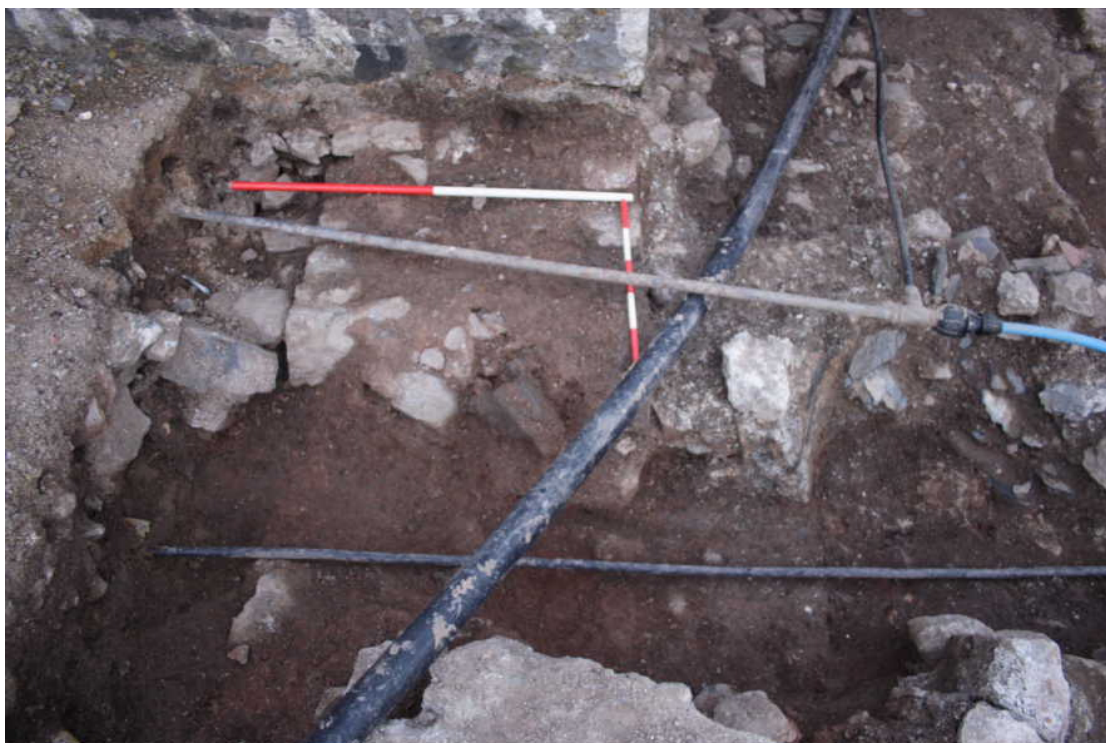
**Photo 5:** View of 136, centre of picture, looking west-southwest, scales 1m and 0.5m.



**Photo 6:** View of 136 and its relationship with 149/148 on right hand side of picture, looking west-southwest, scales 1m and 0.5m.



**Photo 7:** View of structure 132, its central circular hollow (0.5m scale), and the disturbance from modern services, looking north-west. The southern edge of the structure is indicated by the 1m scale.



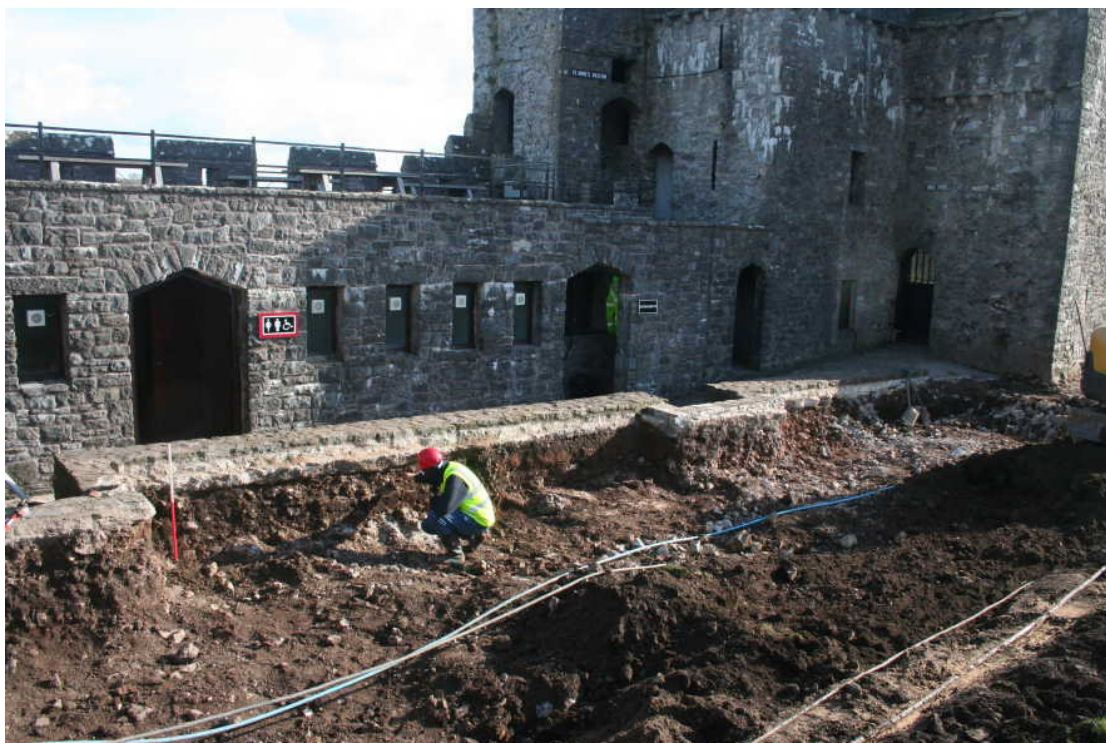
**Photo 8:** View of wall 131, looking northeast, showing abutment of structure 132 to right, and truncation from modern services, scales 1m and 0.5m.



**Photo 9:** Overview of northern end of site showing the fall of the natural bedrock in the foreground, with structure (132) behind, remnant concrete slab for retaining wall to rear left and extensive truncation from modern services, scales 1m and 0.5m.



**Photo 10:** View northeast across structure 132, with wall 131 to the left, layer 133 in the upper part of the photo and truncation from modern services, scales 1m and 0.5m. Wall 104 lies in the upper right part of the photograph.



**Photo 11:** Working shot showing make-up layers in southeastern part of site, view east, scale 1m.



**Photo 12:** Machine excavation of bedrock to form the footprint of the new café, with red spray-paint line showing agreed limits of groundworks to preserve archaeological remains.



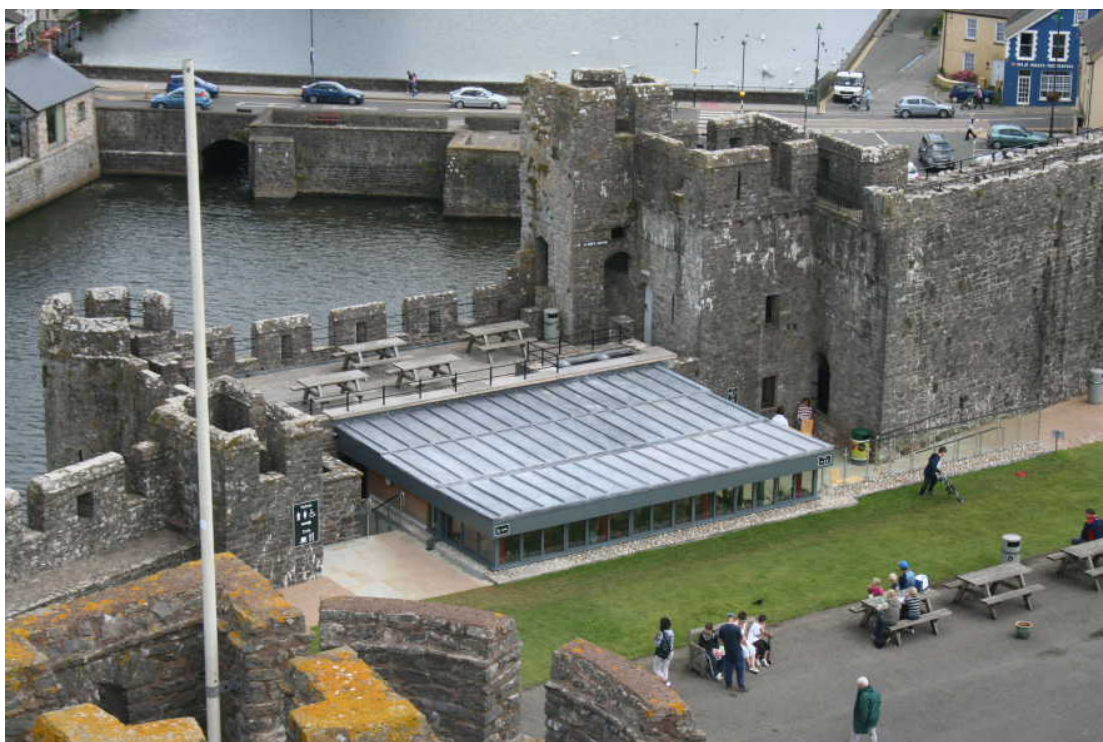
**Photo 13:** Revealed structures as they looked after consolidation, immediately prior to their reburial in February 2009.



**Photo 14:** The graded limestone (8mm to dust) laid over the revealed archaeological features prior to being covered by a geotextile membrane (top right).



**Photo 15:** A view of the new café after completion, looking southeast.



**Photo 16:** View of St. Anne's Bastion taken from the Keep, view east, after the construction of the new café.

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Tithe Map and Apportionment of The Parish of St. Mary, Pembroke, 1842



## **APPENDIX I: PEMBROKE HISTORIC LANDSCAPE CHARACTER AREA**

### **Historic Background**

Pembroke is located on an elongated Carboniferous Limestone promontory at the head of one of the many creeks of the Milford Haven waterway. There is no hard evidence to suggest a settlement on the site prior to the foundation of the Norman Castle and town, but the discovery of Roman coins in the 1880s indicates a Roman presence in the area. Also, the manner in which Roger de Montgomery made straight for Pembroke in 1093 to found his castle implies the presence of a pre-Norman Welsh administrative centre on the site. Pembroke's town charter was granted before 1135. However, it is likely that a settlement had begun to form near to the castle from 1093. A mint was present by 1130. The town prospered and grew rapidly. Two churches lay within the circuit of the town walls with Monkton Priory outside to the south. By the 16th century the town was in decline. Although the county town following the creation of Pembrokeshire in 1536, Pembroke's role seems mainly to have been titular with many of the functions taken by Haverfordwest. However, a customs house was established at Pembroke in 1599 following reorganisation of maritime legislation, although few vessels were registered to the town. It seems to have functioned more as a merchant seat than as a dock. Donovan, writing in 1806, expressed the hope that the port of Pembroke 'might one day rise to consideration'. The growth of Milford Haven, Pembroke Dock and Neyland dashed these hopes. Even so, sailing ships occasionally called at Pembroke's quay, the last being 'Kathleen & May' which made regular visits to the North Quay down until the 1960s. Constructions such as bridges, dams, mills and quays were undertaken at various times in the history of Pembroke. A bridge was mentioned in the town charter - this is taken to be a reference to the north bridge. A mill is first mentioned in 1199. It is considered that this mill stood close to the north bridge. By 1678, the mill was a substantial stone-built tidal corn-mill, with the bridge acting as a dam for the mill-pond. This mill continued to function until after World War 2, but it burnt down in 1956, and its remains were demolished in 1968. A second mill, mentioned in 14th century accounts lay to the south side of the castle. The railway came to Pembroke in 1863, when a station was opened east of the town, within one of the early suburbs shown on Speed's map of 1611.

Included in this area is the core of the former Bush estate on the northern bank of the Pembroke River, now a secondary school and residential home. A house and gardens had been established here by 1772, when they were depicted on an estate map. 19th century estate maps show a similar pattern.

Apart from houses and other buildings close to the bridge, very little development had taken place prior to the 20th century on the northern bank of the Pembroke River opposite the town. Early 19th century estate maps show a landscape of regular fields and farms. A similar position pertained to the south and east of the medieval town. It is in these three areas – the northern side of the Pembroke River, the north-facing slopes to the south of the town and those to the east of the town – that housing development, including council and private estates, has occurred. Housing to the west of Monkton is included in Pembroke historic landscape character area. Morphologically this is similar to 20th century development, but an examination of 19th century maps shows that between 1841 and 1859 a grid pattern of house plots was laid out that still survives. By 1859, houses had been constructed on many of the plots and others were ready for development.

### **Description and essential historic landscape components**

This is an urban area and consists of the centre of Pembroke together with neighbouring built-up areas such as Monkton and Kingsbridge. The historic core of Pembroke is constructed on a low, east-west aligned, limestone ridge, to the north and west of which lies the tidal (but now dammed) Pembroke River and to the south an area of marshy land (now partly reclaimed and under car parks). Pembroke Castle on the western end of this ridge dominates the whole of the town that developed in stages eastwards from the castle, along one long main street, and possibly received two lines of defences prior to the construction of the present walls in the early 14th century. The remains of the walls still encircle the historic core of the town, which includes two medieval parish churches, St Mary's, and St Michael's. St Michael's developed as an extra-mural parish church (and market) beyond an earlier phase of town defences. Essentially the historic core comprises the long street flanked by shops, businesses and houses constructed in medieval burgage plots. Many of the buildings date to the late 18th century or early 19th century and consist of two and three storey structures built in the Georgian tradition. These account for most of the 103 listed buildings in the town. There are, however, both earlier and later houses and structures present, including some late-medieval vaulted cellars and a row of 17th century town houses on Westgate Hill. Quays with some stone-built warehouses situated to the north of the castle date to the 19th century. Southwest of the castle Monkton medieval church provides a secondary focus for the settlement. Houses here mostly date to the 19th century and 20th century. To the west of Monkton village is a large 20th century council housing estate. A tide mill formerly stood on the bridge over the Pembroke River. Apart from warehouses and quays very little development occurred the north of the river until the 20th century. Large housing estates now lie here, and a secondary school and sports centre have been constructed on part of the old Bush estate. 19th century housing also lies to the east of the town, including a terrace of single storey cottages. Further out to the east and south are extensive 20th century housing estates.

Pembroke is a very distinctive historic landscape character area and contrasts with neighbouring farmland. To the northwest, the fringes of the town are separated from Pembroke Dock's housing estates by just a few fields. Within a few years these two towns will form a single small conurbation.

**APPENDIX II: SPECIALIST POTTERY REPORT (P COURTNEY)****Pembroke Castle Distilling Ceramics*****Paul Courtney 21/11/2009 (revised)***

Eleven sherds weighing 595g were recovered from context 112 in a high-fired (beginning to vitrify) version of the Bristol Redcliffe jug fabric. All the sherds appear to come from at least three distilling vessels, all wheel-thrown. The cores of the sherds were mostly pale grey but occasionally dull orange. The exterior surfaces were mostly dark grey or occasionally orange-buff, indicating a final phase of firing in a reducing (oxygen scarce) atmosphere. Sherds from all three vessels have splashes of thin greenish glaze on the exterior; though, this may have been acquired accidentally from other pots during firing.

This normally light-firing fabric derives from clays derived from Carboniferous, Coal Measures strata which occurs north and north-east of Bristol, with additional sand tempering. It remains unclear if Carboniferous outcrops were being transported to the potteries or alluvial clays in the Avon valley being exploited. Thin sectioning has identified the following inclusions in Bristol Redcliffe wares: quartz, quartzite, clay pellets, sandstone, small black iron ore fragments, decomposed limestone, fine mica and in some samples feldspars (Vince 1984, 42; Knowles 2004). Wasters, but no evidence of kilns, have been found in two areas of Bristol: St Thomas Street and Redcliffe Hill, both on the south side of the Avon. On current evidence either or both could areas could have produced this type of pottery that the ware was produced in the Redcliffe suburb of Bristol (Burchill 2004). Redcliffe wares were produced from the late 13<sup>th</sup>-15<sup>th</sup> centuries. Wheel-thrown jugs were widely exported westward along the South Wales coast (Good and Russett 1987, 36-7; Vince 1991, 105-6: fabric Jb; Papazian and Campbell 1992, 35-6 and Figure 14).

**Vessel 1.** Two joining sherds comprise the rim and part of the collecting channel of an alembic of Moorhouse (1972, Figure 31:3-5) type 2, a type designed to fit onto an underlying ceramic flask or cucurbit. Three more sherds appear to come from the conical dome of the same vessel (totalling 306 g.). (bag 1 and 2).

**Vessel 2.** Three joining sherds come from the rim and upper body of a distilling flask or cucurbit (Latin cucurbita = gourd) with an external flange to hold an alembic. A further rim and a body sherd can be assigned to the same vessel (totalling 279 g.) For parallels see examples of 14<sup>th</sup> to 16<sup>th</sup> century date, see Moorhouse 1972 (Figure 28:4, Figure 31: 8 and Figure 32). (bags 3 and 4).

**Vessel 3.** A single rim sherd (17 g.) comes from a second distilling flask though only a fragment of the lost flange survives. This sherd appears slightly less highly fired than the others. The interior has an opaque, dull pale-green to brown glaze with flaking edges. The surface of the glaze (examined at x20 magnification) is uneven and creviced but looks glaze-like when ground. The glaze does not appear to have formed properly, or fused correctly with the ceramic surface, during the original firing and may have further damaged from being heating during use. Moorhouse (1972, 113) noted internal glazes as a characteristic feature of distilling bases, though there is no sign of an internal glaze in vessel 2, though only the upper part of the vessel survives. (bag 5).

## Discussion

The process of distillation has probably been practiced since at least the second Millennium B.C. but effective "pure distillation" is believed to have been developed in the Islamic world around A.D. 800; thus the Arabic roots of such terms as alembic and alcohol (Forbes 1970). Distillation took place by heating a liquid in the flask or cucurbit. The vapour condensed as it cooled on the interior surface on the dome of the alembic above and collected as liquid in the channel above the rim. The liquid then flowed through a spout into a receiving vessel. Distilling flasks in Britain date from the late 13<sup>th</sup> century onward but Moorhouse (1972, 107-11) noted that they may have initially have been used with glass alembics as ceramic alembics can be normally dated to the 15<sup>th</sup>-17<sup>th</sup> centuries. One must be highly cautious of circular dating but a late 14<sup>th</sup> to 15<sup>th</sup> century date thus seems more likely for the Pembroke distilling ceramics than earlier.

William Worcestre in 1478 appears to have carried a memorandum from Dom Dan Walter of Brockweir 'in Tintern', presumably a monk, to John May, wax-maker in Winch (now Wine) Street, Bristol. May was to send his child to the potter of Hanham Abbots to ask him to make two pots, as had been made previously, except that the mouth was to be less by ¼ inch. A width of a treen measure is represented graphically as approximately 84 mm or 3 5/16 and is said to be for a pot for distillation (*olle pro distillatorio*) (Harvey 1969, 76-9; Neale 2000, 268-9). If this is a correct representation of size it could be the mouth of either a small alembic or cucurbit (for use with a glass or ceramic alembic). The smallest ceramic example illustrated by Moorhouse (1972, Figure 31: 5) from London measured 100 mm externally or c. 94mm internally. A ceramic cucurbit from Pontefract (*ibid.*, Figure 28:4) measured only c. 60mm at the rim externally. By comparison, vessel 2 (a cucurbit) at Pembroke Castle is of c. 160 mm external diameter at the mouth and the alembic (vessel 1) around 180-200 mm.

Hanham Abbots was a village about 5 miles east of Redcliffe on the north banks of the Avon. A potter in such a rural location at this date was almost certainly a ceramic potter rather than a metal-worker. The latter was suggested by Neale apparently on the flimsy grounds that a brass battery industry was later located along this stretch of the Avon (2000, 269). It is even just possible that this pottery was the source of the Pembroke distilling equipment, given its closeness to Bristol and known Coal measures strata north of the Avon. Medieval distilling vessels were used for alchemy, distilling aquavits and brandy-wines for consumption as drinks or medicines, and producing nitric acid for assaying silver and gold (F. Greenaway in Moorhouse 1972, 83-7). Given Pembroke Castle's role as a royal and aristocratic residence, none of these functions can be ruled out. In the 15<sup>th</sup> century, both Edward IV and Henry VI employed alchemists (Hughes 2002).

Other medieval sherds from context: Dyfed gravel tempered ware jugs (2 shs) and ridge tile (1 sh) and Llansteffan-Type jug (1 sh).

Vessel 2 at Pembroke is c. 160 mm external diameter at the mouth and the alembic (vessel 1 ) around 190-200 mm similarly.

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**APPENDIX III: LIST OF CONTEXTS WITH DESCRIPTIONS**

| <b>Context No.</b> | <b>Description</b>   |
|--------------------|--|
| Layer 100          | Homogeneous dark reddish brown friable silty clay topsoil, containing less than 2% small angular stone. Outer ward topsoil.  |
| Layer 101          | Mixed greyish brown friable silty clay containing 25% small & medium size angular limestone fragments, high % of mortar fragments, frequent modern red brick and roofing slate fragments. Layer of dumped building debris to make up ground in outer ward.   |
| Layer 102          | Sand laid in electric cable trench 117. Same as 118. (Modern intrusion noted in Section drawing No. 301).  |
| Layer 103          | Light reddish brown friable silty clay containing high % of mortar fragments and small and medium size angular shale and limestone fragments. Layer of dumped building debris to make up ground in outer ward.   |
| Structure [104]    | Truncated <i>in situ</i> mortared stone wall footing comprising angular limestone blocks. Width 0.21m by 0.7m high by 0.54m long, aligned WSW-ENE. It continues beneath the modern staff toilet block wall, underpinning it.   |
| Layer 105          | Modern concrete slab foundation for flagged surface between inner and outer retaining walls, 0.25m thick. Structural, modern.  |
| Layer 106          | Mid reddish brown friable silty clay containing 25% mortar fragments 2% small angular limestone fragments and occasional fragments of anthracite.  |
| Layer 107          | Light reddish brown friable silty clay containing 15% small angular limestone fragments and occasional mortar fragments.   |
| Layer 108          | Mortar rich (90%) layer lying on natural subsoil, possibly associated with construction of wall 104?   |
| Layer 109          | Natural subsoil, dark reddish brown stiff/compact silty clay containing occasional small limestone fragments. Present between limestone fissures and in discrete patches on limestone bedrock.   |
| Layer 110          | Light reddish brown friable silty clay containing 20% mortar fragments 5% small and medium angular limestone fragments and occasional fragments of anthracite. Post- medieval potsherds, animal bone, oyster shell fragments, and Victorian clay tobacco pipe bowl and stem fragments found in this layer.                                 |
| Layer 111          | Homogeneous mid reddish brown friable silty clay containing 20% small and medium size angular limestone fragments, frequent mortar fragments. Medieval pottery, roofing slate fragments and 2 square-headed iron nails found in this largely undisturbed context against SE side of Wall 114.  |
| Layer 112          | Homogeneous mid reddish brown friable silty clay containing 15% small and medium size angular limestone fragments, occasional mortar fragments. Several sherds of medieval pottery, medieval ridge tile and holed roofing slates found in this undisturbed context against NW side of Wall 114; see P Courtney pottery report Appendix II. |
| Layer 113          | Discrete layer of shattered shale and slate fragments, same layer as 152 but appeared in section to intrude into 111.  |
| Structure [114]    | Wall, mortared and randomly coursed stonework on northerly side with coursed facing stonework on south side. 1.34m length revealed (but continues beyond southwest edge of excavation), 0.44m wide by 0.66m high. Aligned WSW-ENE. See 136 as possible continuation.   |
| 115                | Thought at first to be footing for wall 114 but actually discrete stones at interface of 112 and bedrock. Stones within 112.   |
| 116                | Thought at first to be footing for wall 114 but likely tumble from same and/or part of layer 111 or disturbed metalling from 120   |
| Cut 117            | Modern service trench, for electric cables.  |
| Layer 118          | Same as 102. Lower fill of 117, modern service trench. Yellow sand.  |
| Layer 119          | Upper fill of 117, modern service trench. Dark brown silty clay.   |
| Layer 120          | Compact dark brown silty clay containing high % small angular stone fragments possibly laid to form a metalled surface (?) in front of SE side of Wall 114. Frequent oyster shell and bone fragments present in this layer, which lay directly on the natural bedrock.   |

|                 |  |
|-----------------|--|
| Layer 121       | Light brown friable silty clay containing 40% small angular fragments of limestone and mortar.   |
| Layer 122       | Dark brown friable silty clay containing 30% small and medium angular limestone fragments and mortar. Greater concentration of mortar at bottom of layer at interface with natural bedrock and subsoil 109. Medieval and post-med pot.   |
| Layer 123       | Mid reddish brown friable silty clay containing occasional small angular fragments of limestone and mortar and rare coal fragments. Exhibits a distinct slope down to the southeast, average depth 0.19m.  |
| Cut 124         | Modern service trench for disused ceramic pipe.  |
| Layer 125       | Fill of 124, sand.   |
| Layer 126       | Upper fill of 124, dark brown friable silty clay.  |
| Layer 127       | Dark brown friable silty clay containing 15% small angular limestone fragments and occasional fragments of mortar and coal varied in depth from 0.10m at northwest end to 0.20m at southeast. Victorian penny dated 1861 found in this layer and a sherd of 19 <sup>th</sup> / 20 <sup>th</sup> century cream ware pottery.  |
| Layer 128       | Dark brown friable silty clay containing 30% small and medium angular limestone fragments and mortar. Greater concentration of mortar at bottom of layer at interface with natural bedrock and subsoil 109. Slightly less mortar content than 122. Post-med pot/tile and animal bone.  |
| Layer 129       | Dark brown friable silty clay containing 20% small angular limestone fragments and occasional fragments of shattered roofing slate and mortar flecks.  |
| Layer 130       | Reddish brown friable silty clay containing 20% small angular limestone fragments, 20% mortar fragments and occasional small fragments of shattered slate. Animal bone and oyster shells.  |
| Structure [131] | Wall footing 2.5m long by 0.82m wide, mortar bonded limestone blocks, aligned WSW-ENE and continuing beyond excavation into the outer ward to the SW and beneath the turret to the NE. Best preserved at NE end where it is at least 0.4m in height, elsewhere it has been badly damaged by intrusion of modern services (134, 137, 140 and 144) but it is still discernible. Partly obscured by a section of remnant concrete foundation slab for the retaining wall that was left <i>in situ</i> after groundworks. The wall is constructed directly on the natural bedrock. Probably medieval (14 <sup>th</sup> century), having same alignment as, and possible continuation of, NW end wall of St. Anne's bastion.  |
| Structure [132] | Possible oven or other structure for use in industrial or domestic process. The structure has been severely compromised by the intrusion of many modern services (esp. 140, which cuts through its centre from the northwest to the southeast) and building episodes. The central core of the structure comprises a space (0.9m diameter at top and 0.6m at base) enclosed by steeply sloping partially slate lined circular wall of mortar-bonded masonry to a height of c.0.5m. The structure abuts wall 131 to the NW. There is evidence of the outer face of the structure in the form of mortar bonded linear stone on southeast side some 1.75m from its abutment with wall 131. On its westerly side the outer wall of the structure may be represented by linear configuration of stones 149 and their possible extension 148, the alignment is good but relationship is lost due to intrusion of modern service trenches 137 and 144. Beyond the corework on the north-easterly side and its interface with layer 133 there was no direct evidence for the presence of a wall-face to the structure (See 133); more damage had been done here by a modern service pipe trench (134) leading to the adjacent staff toilet block. No charcoal or burnt material was apparent on the face of the structure's core but occasional flecks were found within the disturbed fill 141 of intruding service trench 140. A medieval tile fragment was retrieved from the corework on the northeast side of the structure. |
| Layer 133       | Light reddish brown silty clay containing 5% mortar, 30% small subangular limestone fragments and occasional medium size fragments with adhering mortar. A discrete linear concentration of rubble within this layer could represent demolition rubble from 132 but possibility of contamination of this much-disturbed context is high. Very finds-rich layer with iron arrow head, medieval pottery (Saintonge green glazed sherd and Dyfed gravel tempered ware), med. glazed ridge tile fragments, animal bones and oyster shells, roofing slates with nail holes, a sherd of green glazed white stoneware and several sherds of North Devon gravel tempered ware pottery.   |
| Cut 134         | Modern service trench.   |
| Layer 135       | Dark brown friable silty clay containing frequent mortar fragments. Fill of modern service trench 134.   |
| Structure [136] | A curvilinear arrangement of a single course of mortar-bonded limestone blocks, 1.2m long  |

|                 |   |
|-----------------|---|
|                 | by 0.42m wide by 0.12m high, curving down to the southeast and appearing to be a continuation of wall 114; however, it is not tied into 114, it is a mortared butt joint. The stones are mortared onto the natural bedrock. This feature lay directly beneath the modern concrete slab foundation for the southwest retaining wall. |
| Cut 137         | Modern services trench containing ceramic pipe (disused).   |
| Cut 138         | Possible foundation cut for 'oven' structure 132 at its southeast edge, revealed by damage to structure by modern service trench 140.   |
| 139             | Dark brown friable silty clay containing occasional small angular fragments of limestone, less than 2% mortar fragments and occasional charcoal flecks. Fill of 138, contaminated by 141 after partial destruction of 'oven' 132 by 140.  |
| Cut 140         | Modern service trench containing blue alkathene water pipe, 0.25m wide, cutting through centre of 'oven' structure 132 and wall 131.  |
| 141             | Dark brown friable silty clay containing 15% small and medium size angular fragments of limestone, rare fragments (but occasional flecks) of charcoal. Mixed back-fill of modern services trench 140. Window lead strips and medieval glazed ridge tile fragment present in fill.   |
| 142             | Light greyish brown friable silty clay, high % of mortar, occasional small angular fragments of limestone, slate fragments and charcoal flecks. Fill at base of 'oven' structure.   |
| 143             | Dark brown friable silty clay, occasional large fragments of subangular limestone, 30% small fragments of limestone and frequent white and pink mortar fragments. Probably tumble/demolition debris from wall 131.  |
| Cut 144         | Modern services trench containing ceramic pipe (disused).   |
| Layer 145       | Soil fill of modern service trench 144.   |
| Layer 146       | Soil fill of modern service trench 137.   |
| Layer 147       | Dark brown friable silty clay unexcavated, probably part of corework structure of 'oven' 137.   |
| Structure [148] | Continuation to the northwest of 149, possible wall, severely compromised by service trench 137, but discernible as small limestone blocks bonded with pink mortar and appearing to continue beneath concrete foundation fragment of retaining wall left <i>in situ</i> . See 149 and 132.  |
| Structure [149] | A linear arrangement of mortared stones that may be abutted by wall 136 at its southeastern end, and may continue as 148 to the northwest. Severely compromised by modern services and the insertion of the retaining wall; it may represent the westerly wall face of 'oven' structure 132. See 132.                               |
| Cut 150         | Possible foundation cut for wall 148.   |
| 151             | Light reddish brown silty clay containing 30% small angular fragments of shattered shale and frequent mortar fragments. Building demolition debris dumped to make up outer ward.  |
| 152             | Mid brown friable silty clay containing 40% medium size shattered shale and slate fragments, occasional mortar fragments. Exhibits sloping tip lines. Building demolition debris dumped to make up outer ward.  |
| 153             | Dark brown friable silty clay containing 30% small angular fragments of shattered shale and frequent mortar fragments. Building demolition debris dumped to make up outer ward.   |
| 154             | Reddish brown friable silty clay containing 20% small angular fragments of shattered shale and frequent mortar fragments. Outer ward make up building demolition debris.  |
| 155             | Dark brown friable silty clay containing 15% small fragments of angular limestone, occasional fragments of shattered shale or slate and rare flecks of charcoal and mortar fragments. At interface between building demolition debris tip layers and natural subsoil 109 and bedrock in outer ward.                                 |



# PEMBROKE CASTLE CAFÉ, PEMBROKESHIRE: ARCHAEOLOGICAL WATCHING BRIEF

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*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*