# CAREW CASTLE WALLED GARDEN, PEMBROKESHIRE: ARCHAEOLOGICAL EVALUATION 2018

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Prepared by: DAT Archaeological Services For: Pembrokeshire Coast National Park Authority





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# **ARCHAEOLOGICAL EVALUATION 2018**



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

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#### CAREW CASTLE WALLED GARDEN, PEMBROKESHIRE:

#### **ARCHAEOLOGICAL EVALUATION 2018**

#### SUMMARY

DAT Archaeological Services were commissioned by Pembrokeshire Coast National Park Authority (PCNPA) to undertake an archaeological evaluation of the proposed site of a new cafe building within the Walled Garden at Carew Castle, Carew, Pembrokeshire (SN06575 03775). Carew Castle is a Scheduled Ancient Monument (reference PE001), the boundary of which encompasses the Walled Garden. The construction of the new café building will require both planning permission (including a condition regarding archaeology) and scheduled monument consent from Cadw.

Following discussions between PCNPA and Cadw it was agreed that the evaluation could be carried out under a Class 7 consent in order to provide information to support the Scheduled Monument Application. The aim of the works was to determine whether the required depth of groundworks of 0.50m for the proposed new building would impact upon stratified archaeological remains. An area for a proposed soakaway to the northeast of the café was also evaluated to determine the depth of bedrock and confirm that the area had been previously fully excavated.

Trench 1 within the footprint of the proposed café revealed a depth of around 0.50m comprising crushed stone layers forming the existing surface of the interior of the walled garden, overlying a depth of former disturbed topsoil. These layers had been compacted, presumably when the existing crushed stone surface was laid. The remains of a former excavation trench from 1993 were encountered in the western half of the trench, backfilled with stone and modern detritus. A modern plastic pipe had also been cut through this area and partly to the east. This pipe trench was 0.68m below ground surface and had been cut into the natural bedrock.

On the western side of the trench a layer of crushed mortar overlying a demolition layer comprising broken limestone were revealed. They were encountered at 0.50m depth below ground level. These may be associated with 'a deposit of destruction material probably to be associated with the 16th century when the Outer Ward buildings were removed for the construction of the Renaissance gardens' (Austin 2015).

At the eastern end of Trench 1 a possible continuation of one of the six early medieval ditches recorded in the 1990s was exposed, at a depth of just under 0.50m. The possible ditch was backfilled with shattered limestone which may have originated from a stone faced bank that has been previously postulated for these ditches. These will need to be left undisturbed by the development.

Overall it is considered that the proposed 0.50m depth of material required to be excavated from the footprint of the new café will potentially expose underlying archaeological levels, but is unlikely to dig in to them further. The ground surface at 0.50m is already very compact and would form a good surface for the initial crushed stone layer of the proposed new café foundations.

Trench 2 was located over the area of the proposed soakaway for the new café building. The trench confirmed bedrock at between 0.52m and 0.60m below ground level and that all remains had been previously removed and the excavation area backfilled with crushed stone. The proposed location of the soakaway avoids the lines of the rock cut ditches excavated in 1993.

It is likely that an archaeological watching brief will be required during groundworks for the proposed new café building and associated drainage to archaeologically record any remains exposed by the works.

#### **1** INTRODUCTION

#### **1.1 Project Commission**

- 1.1.1 Pembrokeshire Coast National Park Authority (PCNPA) propose to erect a new cafe building within the Walled Garden at Carew Castle, Carew, Pembrokeshire (SN06575 03775; Figure 1 and 2). Carew Castle is a Scheduled Ancient Monument (reference PE001), the boundary of which encompasses the area between the A4075 to the east, Castle Lane to the south and the Mill Pond to the north. This area includes the Walled Garden.
- 1.1.2 Carew Castle is owned and operated by Pembrokeshire Coast National Park Authority (PCNPA) and the proposals will add to the visitor reception facilities at the castle. The initial proposals for the café were submitted along with a supporting written scheme of investigation for archaeological work prepared by Professor David Austin in 2015, which provided an excellent summary of the known archaeology of the area and the walled garden (planning application number NP/15/0509).
- 1.1.3 A response was received from the archaeological advisors to the planning authority (Development Management at Dyfed Archaeological Trust – dated 01-12-2016) regarding this WSI which stated 'We are happy to accept the general view of the submitted document, and would recommend that the work be undertaken as a staged approach. Initially this would involve an element of trial trenching within the footprint of the proposed development, which may lead to full excavation and/or a watching brief. At this stage we envisage at least one trench to run the length of the proposed building. This differs slightly from the suggested methodology within the WSI document which suggests the use of a  $1m \times 1m$  sondage or trial pit. However, when taking into account the potential significance of the archaeology, it is our professional view, that the archaeological resource can be better mitigated by the use of a larger and more informative trench.' Additional comments noted that 'we would wish to see several small amendments, including the above change in methodology before we could recommend its suitability for planning purposes. In addition, as these proposals lie within the scheduled area, Scheduled Monument Consent is also likely to be required.'
- 1.1.4 Following application to Cadw for Scheduled Monument Consent for the development proposals, they also confirmed the need for the implementation of an evaluation prior to development commencing to determine the depth, character and state of preservation of underlying remains. Cadw state within their response letter dated 26-03-2018 that 'Despite the long history of archaeological interventions at Carew and, specifically, within the walled garden, there are limited publications and, unfortunately, the national park's own archive has been partially misplaced following the retirement of their archaeologist. As a consequence, certain key information is not readily available. Notably:
  - the highest depths at which archaeology was encountered across different areas of the site; i.e. the degree of variation which may be expected - whether the archaeological excavations looked for features relating to the later use of the site or whether these were disregarded as the excavations were research - led and focused on the site's early history. If such garden features exist, they may be expected to survive below the topsoil but above the medieval; so within the assumed 400-500mm zone of 'safety'

- the depth below surface at which the rock-cut ditches in the NE part of the site are encountered (in the area affected by the proposed soak away)
- Without this information I consider it impossible to make a confident determination of this application, since I am unable to assess the potential impact on the evidential value of the site.'
- 1.1.5 Subsequent discussions between PCNPA and Cadw led to an agreement that the evaluation of the site area could be done via a Class 7 consent based on the schedule to Article 2 of the Ancient Monuments (Class consents) Order 1994 ("Works of archaeological evaluation), which states that 'consent may be granted for works of archaeological evaluation in order to supply the Welsh Ministers with information required for the determination of a scheduled monument consent application'. Cadw have stated in their response letter dated 26-03-2018 that 'In order to ascertain the most appropriate method for the proposed works at Carew Castle, the Inspector has suggested that a conditional consent under Class 7 is granted for an archaeological evaluation to inform this SMC application.'
- 1.1.6 DAT Archaeological Services were commissioned by PCNPA to prepare a new Written Scheme of Investigation to for more extensive evaluation of the proposed development area and undertake the evaluation. The results of the evaluation would address the concerns of both Cadw and the archaeological advisors to the planning authority regarding the potential disturbance to buried archaeological deposits from the development proposals.

#### **1.2** Scope of the Project

- 1.2.1 The Class Consent provided by Cadw for the evaluation was subject to a series of conditions regarding the scope of the evaluation and the questions it needed to address. The conditions were as follows:
  - 1. That the applicant shall appoint an archaeological contractor to carry out an evaluation of the walled garden. The evaluation shall excavate down to either:
    - The uppermost level of archaeological features or,
    - The natural ground surface or,
    - The maximum necessary depth to enable the development to take place, whichever is the highest.
  - 2. that the name of the contractor shall be supplied to Cadw in advance;
  - 3. That the contractor shall supply a written scheme of investigation (WSI) for the evaluation, which is to be agreed by Cadw prior to works commencing. The WSI needs to ensure that the evaluation shall address the points made, above, and that sufficient area is opened up to provide reasonable certainty of the impact of these proposals on the evidential value of the walled garden. The WSI should allow for at least one trench within the footprint of the café, at least one trench in the footprint of the soakaway, and investigations where necessary along the routes of the new drains (particularly at the deepest parts of the drains);
  - 4. that an interim report shall be produced which details the results of the archaeological evaluation, and is deposited within the regional Historic Environment Record; and

- 5. That Cadw's regional inspector shall be notified of the evaluation dates as far in advance as possible in order to visit the work in progress if required.
- 1.2.2 A Written Scheme of Investigation (WSI) for the archaeological evaluation was prepared by DAT Archaeological Services prior to the commencement of works. This was approved by both Cadw and the archaeological advisors to PCNPA, Dyfed Archaeological Trust Development Management.
- 1.2.3 The WSI outlined the following tasks for the project:
  - To establish the character, extent and date range (where possible) for any archaeological deposits identified within the site area that will be affected by the proposed works;
  - To use the information to design a future mitigation strategy at the site which will enable any identified remains to be protected in the first instance, or appropriately investigated and recorded where they will be affected by the proposed development;
  - To prepare a report and archive on the results of all stages of archaeological works.

#### **1.3 Report Outline**

1.3.1 This report provides a summary and discussion of the archaeological evaluation and its results.

#### 1.4 Abbreviations

1.4.1 Sites recorded on the Regional Historic Environment Record (HER) are identified by their Primary Record Number (PRN) and located by their National Grid Reference (NGR).

#### 1.5 Illustrations

1.5.1 Printed map extracts are not necessarily produced to their original scale.

### 1.6 Timeline

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

	Approximate date	Period
3C _	<i>c</i> .450,000 – 10,000 BC	Palaeolithic –
Pre	<i>c</i> . 10,000 – 4400 BC	Mesolithic –
hist	<i>c</i> .4400 – 2300 BC	Neolithic –
öri	<i>c</i> .2300 – 700 BC	Bronze Age –
	<i>c</i> .700 BC – AD 43	Iron Age –
	AD 43 - <i>c.</i> AD 410	Roman (Romano-British) Period –
	<i>c</i> . AD 410 – AD 1086	Post-Roman / Early Medieval Period -
Hist	1086 - 1536	Medieval Period –
tori	1536 - 1750	Post-Medieval Period <sup>1</sup> –
n	1750 - 1899	Industrial Period –
	20 <sup>th</sup> century onwards	Modern –

**Table 1**: Archaeological and Historical Timeline for Wales.

<sup>&</sup>lt;sup>1</sup> The post-medieval and industrial periods are combined as the post-medieval period on the Regional Historic Environment Record as held by Dyfed Archaeological Trust



Figure 1: Location map of Carew (red boundary), based on the Ordnance Survey.

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Figure 2: More detailed location map showing Carew Castle Walled Garden (red boundary)

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#### 2 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

#### 2.1 Brief History (based on Austin 2015)

- 2.1.1 Carew Castle is located on the upper tidal limits of the navigable Carew River, a tributary heading northwest towards the Cleddau. It is likely to have always been a favoured location for human occupation, as indicated by the archaeological evidence retrieved from the site, including some prehistoric remains, indications of Roman and post-Roman activity, and of course the medieval and post-medieval remains of the extant castle.
- 2.1.2 From excavations undertaken in the 1980s and early 1990s the first clear evidence for a fortified site at Carew may date from the early medieval period, evidenced by a series of 6 parallel ditches on the eastern side of the standing castle remains, and crossing through the area of the walled garden. Austin places these sometime after the 6<sup>th</sup> century AD forming a major fortification which he suggests could be the 'gaer' derivation of the early place-name 'caer-rhiw'. The ditches may have each had stone-faced earthen banks topped by palisades. Austin considers that '*it is likely that the site was a royal centre, which seems to be indicated by the presence of the Carew Cross which names an 11<sup>th</sup> century king of Deheubarth'. This earlier site survived until the Norman period at which time it was backfilled and levelled and a new castle site established.*
- 2.1.3 It is probable that the first stone castle at Carew was erected by Gerald of Windsor who 'was given custody of the Earldom of Pembroke and marries Princess Nest, the daughter of Rhys ap Tewdur, the last king of Deheubarth'. Austin also considers it possible that the Carew site formed part of Princess Nest's dowry, 'but it is certain that the site for the castle was deliberately chosen for its ancestral meaning. Indeed the castle plan precisely captured that of the Dark Age fortress with its ditches contained by the Outer Ward. When this latter area was created all the Dark Age defences were deliberately slighted and made invisible.'
- 2.1.4 The castle was developed throughout the medieval period and much of the Inner Ward survives relatively intact. During the Tudor period the site is given to Rhys ap Thomas by Henry VII at the end of the 15<sup>th</sup> century, who transforms it into a mansion by 1509. After 1588 it was acquired by Sir John Perrot and the Tudor wing was added overlooking the river to the north. Austin considers that 'this seems never to have been fully completed, but the plans and execution did include the slighting of the Outer Ward with the systematic removal of its stone buildings which seem to have been processed through lime-kilns to make mortar for the building programme. On the cleared area gardens were created, mostly now only earthworks, but including the surviving Walled Garden in which the proposed development is to take place'.
- 2.1.5 The castle remained empty after Sir John Perrot was imprisoned and executed for treason in 1592. It was briefly occupied during the Civil War but otherwise was maintained as a monument by the Carew family until it passed into the guardianship of PCNPA in 1985.



**Figure 3:** Survey of the castle and earthworks prior to the archaeological works begun in 1988 (D. Austin and Dyfed Archaeological Trust – used in the 1992, 1993 and 1994 interim reports and Austin 2015)

#### 2.2 Previous archaeological results within the walled garden

- 2.2.1 The first excavations undertaken within the walled garden were carried out by Sandy Gerrard between 1986-8 with further phases of work in and around the walled garden between 1992 and 1995 (Austin 1993, 1994 & 1995).
- 2.2.2 Excavation areas within the walled garden included all of the northern and western sides, the majority of the northeastern corner and a strip leading down into the southeastern part of the site (Figures 4 & 5). The area of the proposed café will be located in the southeastern corner in an area where only a small amount of previous excavation has been undertaken.
- 2.2.3 It is known that the previously excavated areas as shown in Figures 4 & 5 were taken down to the underlying geological bedrock and thus all deposits have been removed.
- 2.2.4 Within the WSI prepared by Austin (2015) he notes that 'Area II excavated in 1993 is the most relevant ... (for this development) ... because it gives a clear insight into the nature of the unexcavated deposits in the southeastern corner of the Walled Garden. ... In summary there are deposits at the top which are associated with the period of use by PCNP as a yard for the masons restoring the castle as well as one service trench ... . The builders' material lay over a deep layer of garden soils, which itself lay over a deposit of destruction material probably to be associated with the 16<sup>th</sup> century when the Outer Ward buildings were removed for the construction of the Renaissance gardens. These deposits in turn gave directly onto the bedrock. In all, in Area II the depth of these deposits averaged 50-60 cms.'
- 2.2.5 Due to the lack of available published information on the archaeological excavations within the walled garden (other than the interim reports, Austin 1993, 1994 & 1995) it is difficult to determine the full extent and depth of archaeological features identified during these previous excavations. Austin estimates that the full depth of deposits within the area of the proposed café averaged 0.5 0.60m depth onto bedrock, but that would assume that all archaeological remains will be present within this depth and it does not take into account any build-up of material which may have occurred across the site in more recent years.
- 2.2.6 The development proposals aim to cause a maximum of 0.50m depth of disturbance within the footprint of the new café, but thus could potentially remove all deposits and expose any that are cut into the underlying bedrock. It should be noted that from the results of the previous excavations Austin suggests that only modern deposits lie above the bedrock, but potentially features associated with the former walled garden could still survive within the thick deposit of garden soil he notes, especially near to the walls of the walled garden (such as the remains of former footpaths or structures that formerly leant up against the walls).
- 2.2.7 The area of the proposed soakaway and associated drainage lies to the northwest of the café building from its northwestern corner, running into an area that has been previously excavated. The depth of the soakaway and adjacent drainage will be around 0.70m which would certainly expose and potentially truncate the remains of the rock cut ditches previously excavated. It is understood that the location of the soakaway may be moved to avoid disturbing the remains of the ditch cut. A second drainage trench will run to the northwest from the northeastern corner of the proposed structure to join in with an existing manhole and drain. Around half of this route leads through a previously excavated area.



**Figure 4:** Plans of all features cut in sub-soil and bedrock (including 1986-1988 and 1992 - 3 Excavations) Taken from Carew Castle Interim reports for 1993 and 1994 (Austin 1994, 1995 & 2015)

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**Figure 5:** Plans of all features cut in sub-soil and bedrock (including 1986-1988 and 1992 - 3 Excavations) with the present development proposals superimposed. Taken from Carew Castle Interim reports for 1993 and 1994 (Austin 1994, 1995 & 2015) Plan prepared and supplied by Andrew Muskett of PCNPA, with provisional location of soakaway shown (North to top).

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#### **3 TRIAL TRENCH METHODOLOGY**

- 3.1 This evaluation was undertaken in accordance with the Chartered Institute of Archaeologists' (CIfA) Standard and Guidance for an Archaeological Field Evaluation (2014). It followed the methodology laid out in the WSI for trial trenching as approved by Cadw and the archaeological advisors to the planning authority.
- 3.2 To ascertain the depth, significance and state of preservation of the potential archaeology within the footprint of the proposed new café building, a trench (Trench 1) measuring approximately 1.6m in width and which ran for the full length of the proposed building *c*.12m was excavated (Figure 6).
- 3.3 The depth of excavation required for the proposed new café building is estimated at 0.50m; therefore the depth of the trial trench did not exceed this depth. Any archaeological remains beneath this depth will not be affected by the construction of the raft footing for the new building.
- 3.4 The initial excavation of the trench was done using a mini excavator fitted with a flat bladed bucket under full archaeological supervision. The existing crushed stone surface within the walled garden was removed and stockpiled adjacent to the trench. Further underlying soils were removed in level spits to the level where potential archaeological remains were visible (whether associated with post-medieval or earlier activity).
- 3.5 A similar excavation methodology was employed for the area of the soakaway and adjacent drain, Trench 2 (Figure 6). The proposed location of the soakaway was within an area that has been previously excavated and backfilled and ascertaining the depth of the natural bedrock was the main aim of the excavation within this area. Trench 2 measured 1.55m by 2.20m, also aligned roughly east to west.
- 3.6 Following machine excavation, Trench 1 was hand cleaned to ascertain the presence, or absence, of archaeological deposits. Hand excavation was then undertaken to reduce the trench to the 0.50m level, with small sondages excavated through a modern feature and the backfilled excavation area from the 1990s.
- 3.7 All deposits were recorded by archaeological context record sheet, scale drawing, photography and site notebooks using the DAT Archaeological Services' Recording Manual<sup>2</sup>.
- 3.8 All surveying was undertaken using a Trimble Differential Global Positioning System (DGPS) to provide accurate locations of the trenches and levels above ordnance datum. It was evident during the DGPS survey of the site that the Walled Garden lies around 2m due south from that recorded on Ordnance Survey mapping. The survey results have been located in relation to the actual layout of the Walled Garden so that the evaluation trenches and proposed café building / associated drainage can be related.

<sup>&</sup>lt;sup>2</sup> DAT Archaeological Services use the Recording Manual developed by English Heritage Centre for Archaeology. A copy will be available for inspection if required.

#### 4 TRIAL TRENCH RESULTS

4.1 The evaluation was carried out on the 16<sup>th</sup>, 18<sup>th</sup> and 19<sup>th</sup> of April 2018. There was heavy rain on the 17<sup>th</sup> preventing progress but otherwise the weather was warm and dry.

#### Trench 1 (Figures 6, 7 and 8)

4.2 Trench 1 measured 1.6m by 12.5m and was orientated roughly east west along the length of the proposed new café building (Photo 1). The upper layers comprised the modern crushed stone surfaces across the Walled Garden made of fine gravels, sand and builders waste (101), (102) and (103) (Photos 2 and 3). These had a maximum combined depth of 0.33m.



Photo 1: View east across Trench 1 during cleaning showing wall of walled garden



**Photo 2:** Western end of trench, viewing south, showing crushed stone surface layers and underlying band of dark humic soil (former topsoil?)



**Photo 3:** View northwest across south facing section of trench, with make-up crushed stone layers visible at eastern end of trench

- 4.3 Beneath the modern surface of the Walled Garden was a dark brown humic soil (104) which could potentially be derived from the use of the Walled Garden (Photos 2 and 3), although only modern finds were recovered from the layer (ceramics and modern detritus which was noted and discarded). This possible garden soil layer was a maximum of 0.22 m depth, being thickest at the western end of the trench.
- 4.4 Towards the western end of Trench 1 the former archaeological trench excavated by Professor David Austin in 1993 was revealed, cut [109] (Photo 4). This trench appears to have been backfilled with demolition rubble, general builders waste, cement and other detritus. The 1993 excavations revealed a modern sewer trench containing a plastic pipe

which ran approximately north-east by south-west. This sewer trench continues through Trench 1 consisting of a cut with vertical edges filled with orange clay and garden soil, with large angular stone inclusions (108) and central plastic pipe (Photo 5, Figure 7).



**Photo 4:** View of western end of Trench 1 after cleaning, viewing east, with scale bar located on area of backfilled excavation trench from 1993



**Photo 5:** Line of sewer trench running through Trench 1 with excavated pipe located within backfilled excavation trench from 1993, viewing east-northeast

4.5 At the western end of the trench was a mortar dump (105) which measured at its thickest 0.21m deep (Photo 6). This layer was made up almost entirely of crushed mortar with occasional, much larger fragments. Its eastern extent was truncated by the 1993 excavation trench but it did not appear to continue in the eastern half of the trench. Beneath this layer lay demolition rubble (106) consisting of compact orange clay with large amounts of slate roof tile inclusions (Photo 6). This layer was not excavated as it lay beneath 0.50m but like layer (105) it did not appear to continue on the eastern side of the 1993 trench. It is likely that both these layers (105, 106) are from the same phase of demolition, although their origin and date is not clear.



**Photo 6:** Mortar dump (105) and demolition rubble (106) at western end of Trench 1, viewing east

4.6 At the eastern end of the trench an approximately 2.25m wide linear feature, running north to south, crossed the trench. It consisted of light brown silt containing a very high concentration of fractured limestone (113), cut [112] (Photo 7). This was initially thought to be bedrock but subsequent investigations suggested it is more than likely to be a continuation of one of the ditches uncovered in the 1993 excavation. Both had similar fills and there is a good alignment between the two features, even though a 0.10m deep sondage, excavated along its western edge proved to be inconclusive. These ditches were thought to be part of the original castle defences, of early medieval date. Stratigraphically it seems to predate all other features in this trench.



**Photo 7:** Fractured limestone layer (113) at eastern end of Trench 1, possibly a continuation of early medieval ditch identified in 1990s excavations

- 4.7 Bedrock, where visible, consisted of fractured white limestone with occasional brown silt inclusions. Often bedrock was difficult to discern because of the modern buried topsoil (104) which had been compacted into it.
- 4.8 It was clear that the area had been vibro-compacted to some extent, presumably when the modern crushed stone surface had been laid across the Walled Garden. The material to a depth of around 0.5m had been affected by this process to some degree, with soils relatively compact and hard to excavate, although did not appear to have been significantly distorted by this process.
- 4.9 The following table (Table 2) provides averaged levels for the top of the trench (ground level) and excavated base of the trench from west to east demonstrating the depth of material excavated. As can be seen in some places the trench was probably excavated within 0.05m above or below the required level, but this may be deceptive as the level values have been averaged out. The on-site archaeologists ensured that the depth of the trench section was measured using a hand tape to get the required 0.50m depth. It should also be noted that there is a roughly 0.14m drop in the upper ground level from the western end of the trench to the eastern end. Assuming the formation level for the new café building is dug to no more than 0.50m depth from the existing ground surface then there should be no impact to any underlying archaeological levels.
- 4.10 The trench was backfilled and levelled at the end of the works (Photo 8).



**Photo 8:** Trench 1 following backfilling and levelling at the end of the works with Carew Castle behind

Location in trench	Тор	Base	Depth
West End	13.40m aOD	12.86m aOD	0.54m
West of	13.38m aOD	12.88m aOD	0.50m
centre			with sondage excavated to 0.60m
			depth
Centre of	13.45m aOD	13.00m aOD	0.45m
trench			with sondage excavated to 0.50m
			depth
East of	13.50m aOD	13.02m aOD	0.48m
centre			With sondage through (113)
			excavated to 0.60m depth
East End	13.54m aOD	13.02m aOD	0.52m

**Table 2:** Depths of trench (in m above Ordnance Datum)

#### Trench 2

- 4.11 Trench 2 was excavated within the area of the proposed soakaway for the new café (Figure 6; Photo 8) to the north of the existing entrance and visitor centre building. The trench was designed to confirm that this area had already been fully excavated during the excavations in 1993 and that there were no remaining archaeological remains likely to be affected by the proposed works, and to confirm the depth of the natural bedrock.
- 4.12 Trench 2 measured 1.55m x 2.2m and was orientated roughly east-west. The trench was excavated down to bedrock using a 1.60m grading bucket on a 360 degree excavator. The trench was initially excavated through a pile of topsoil which had been stored in this part of the site. The topsoil appeared to have been laid directly upon the crushed stone surface that had been laid across the interior of the Walled Garden in recent years.



**Photo 9:** General view of the area of Trench 2 showing stockpile of topsoil, viewing east towards eastern wall and entrance into Walled Garden

4.13 Following removal of the piled topsoil, the deposits detected comprised different layers of modern gravels similar to layers (101), (102), and (103) in Trench 1. However in Trench 2 the gravels were laid directly onto bedrock which was likely stripped in the 1993 excavations and were much thicker with an average combined depth of 0.52m (Photos 10 and 11).



Photo 10: View northwest across excavated area of Trench 2, showing piled topsoil over gravel layers



**Photo 11:** View north of south facing section of Trench 2 showing gravel layers sitting directly upon bedrock

- 4.14 It was clearly evident to the on-site archaeologists that the area had been previously excavated to bedrock and backfilled with layers of crushed stone. No archaeological remains were detected during the excavation of this trench. The upper crushed stone layers may have been associated with the recent Walled Garden ground surface.
- 4.15 Natural bedrock was identified at a depth of between 0.52m and 0.60m from present ground surface. The top of the crushed stone surfaces below the topsoil pile was not cleanly identified and varied in recorded height between 13.35m aOD and 13.00m aOD (an average of 13.19m aOD). It is assumed that the upper level (13.35m aOD) would be more likely to represent the true ground level in this area, and the lower levels possibly caused by disturbance during removal of the topsoil pile. The base of the trench and bedrock was reached at levels of between 12.70m aOD and 12.85m aOD (an average of 12.79m aOD).
- 4.16 Based on the results of the trench it was not considered necessary to further investigate the line of the proposed drainage trench which will enter the soakaway from the south as it was evident that the former excavated area had been cleaned to bedrock and was later backfilled with crushed stone.



Figure 6: Trench location plan in relation to Walled Garden and previous archaeological investigations

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#### 5 CONCLUSIONS

- 5.1 The archaeological evaluation undertaken at the scheduled monument of Carew Castle (PE001) was carried out under a Class 7 consent in order to provide information to support the Scheduled Monument Application for the erection of a new café building within the Walled Garden of the castle.
- 5.2 The aim of the works was to determine whether the required depth of groundworks of 0.50m for the proposed new building would impact upon stratified archaeological remains. This was addressed by Trench 1 excavated within the footprint of the proposed building.
- 5.3 A further aim of the works was to establish the depth of bedrock within the area of a proposed soakaway to the northwest of the café footprint and to confirm that the area had been previously fully excavated.
- 5.4 Trench 1, within the footprint of the proposed café was partly machine excavated to initially remove the crushed stone surface that lies across the interior of the walled garden. Below this a very compact dark humic soil was encountered, potentially representing former garden soils. These had presumably been compacted when the crushed stone surface had been laid. Modern material was noted within this possible former topsoil suggesting that it had been disturbed in recent times, possibly during levelling inside of the walled garden for previous temporary structures that stood in the area. The combined depth of the modern surface and the underlying topsoil disturbed in modern times, was around 0.50m across the entire trench.
- 5.5 The remains of a former excavation trench dating to the 1993 excavations undertaken by Professor David Austin were encountered just west of centre within the trench. The former excavation trench had been backfilled with stone as well as remnants of plastic and other modern detritus and apparently compacted afterwards. The backfilled trench was excavated to a depth of 0.50m with a small sondage excavated on its eastern edge to confirm the depth of the bedrock. This area actually revealed a plastic sewer pipe crossing through the trench in a northeast to southwestern direction, partly visible on the eastern half of the trench and within the backfilled area from 1993. The pipe trench was 0.68m depth maximum from ground surface and cut into the underlying bedrock. The presence of the service trench in the area had already been highlighted by David Austin (2015). Further service trenches associated with the new entrance and visitor centre to the castle lay to the south of the trench and were purposefully avoided by the evaluation. The installation of these would have been monitored by the former PCNPA archaeologist.
- 5.6 On the western side of the trench, beyond the former excavation area, was a layer of crushed mortar overlying a demolition layer comprising broken limestone. The upper material was encountered at the 0.50m depth limit of the trench (although dug into slightly below this level). The layers were not dated and their origin is uncertain. Austin (2015) notes that the Walled Garden was previously used by '*PCNP as a yard for the masons restoring the castle*, although as these deposits were sealed by the disturbed topsoil layer they are probably earlier. They could thus be related with 'a deposit of destruction material probably to be associated with the 16th century when the Outer Ward buildings were removed for the construction of the Renaissance gardens (Austin 2015).
- 5.7 At the eastern end of Trench 1 a linear feature was encountered which was partially filled with shattered limestone. This feature would actually correspond with one of the early medieval ditches recorded during the

1990s excavations that crossed through the walled garden. It was noted in the interim reports prepared by Austin (1993, 1994 and 1995) that the ditches were partially filled with stone which suggests each ditch had a stone faced earthen bank. The top of the visible feature lay at around 0.48m below the existing ground surface. It would be exposed by the proposed groundworks associated with the new café building, with a thin skim potentially removed. It is suggested that as the area was so compact (associated with vibro-compaction of the site at some point – possibly when the existing crushed stone surface was built) that there would be no need to dig into it further and adequately recorded through a watching brief when the footprint was reduced to ground level.

- 5.8 Overall it is considered that the proposed 0.50m depth of material required to be excavated from the footprint of the new café will potentially expose underlying archaeological levels, but is unlikely to dig in to them further. Based on the proposed construction methodology, the site area would be reduced to formation level and a layer of crushed stone imported and deposited across the trench, before being overlaid by a geo-textile membrane and then concrete for the raft foundation poured on top of this. As noted above the ground surface at 0.50m is already very compact and would form a good surface for the initial crushed stone layer.
- 5.9 Trench 2 aimed to determine the depth of the underlying bedrock within the area formerly excavated in 1993, where it was intended to install a soakaway and drainage for the new café building. The trench confirmed bedrock at between 0.52m and 0.60m below ground level (not including the topsoil pile on top). All remains had been previously removed and the excavation area backfilled with crushed stone. The proposed soakaway and associated drainage will cause no impacts to archaeological remains. The location of the soakaway has been amended from that shown in Figure 5 by PCNPA in order to avoid the lines of the early medieval ditches excavated in 1993 in order that the rock cut remains will remain undisturbed by the excavation of the soakaway.
- 5.10 Two drainage runs will exit the proposed building from its northwestern and northeastern corners. The northwestern run will link with the soakaway and run for the most part at a level above 0.50m depth below ground surface, dropping lower within the areas previously excavated. The northeastern drain will cross through part of the former excavation area and link with an existing manhole directly north of the proposed building which is presumed to have been previously archaeologically monitored when it was installed by the former PCNPA archaeologist.
- 5.11 It is likely that an archaeological watching brief will be required during groundworks for the proposed new café building to ensure that in the unlikely event that any archaeological remains are encountered above 0.50m depth, they can be appropriately excavated and recorded. It is considered most likely that remains of the early medieval ditch identified in the eastern part of Trench 1 will be exposed just above the formation level for the new building, and this must be left undisturbed. As noted above, the compacted nature of the ground and the proposed construction methodology is such that this should not cause any issues to the proposed raft foundation. The exposed ditch alignment can be appropriately recorded through the implementation of the archaeological watching brief.

#### 6. SOURCES

#### Publications

- Austin, D. (ed.) 1993, Carew Castle Archaeological Project: Interim Report 1992 Lampeter: Department of Archaeology
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# CAREW CASTLE WALLED GARDEN, PEMBROKESHIRE:

# **ARCHAEOLOGICAL EVALUATION 2018**

RHIF YR ADRODDIAD / REPORT NO. 2018-25 RHIF Y PROSIECT / EVENT RECORD NO. 112145

## Ebrill 2018

April 2018

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

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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

