

**CAREW CASTLE WALLED GARDEN,  
PEMBROKESHIRE:  
ARCHAEOLOGICAL EVALUATION 2019  
SN 06575 03775**



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For: Pembrokeshire Coast National  
Park Authority



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## CAREW CASTLE WALLED GARDEN, PEMBROKESHIRE: ARCHAEOLOGICAL EVALUATION 2019



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**CAREW CASTLE WALLED GARDEN, PEMBROKESHIRE:  
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**EXECUTIVE SUMMARY**

*DAT Archaeological Services were commissioned by Pembrokeshire Coast National Park Authority (PCNPA) to undertake an archaeological evaluation in Carew Castle Walled Garden ahead of proposed works for a new storage shed and improvements to foul drainage.*

*The evaluation has confirmed that the depth of groundworks required for the proposed development are unlikely to impact upon any previously unrecorded archaeological remains. An archaeological watching brief will still be required during the development.*

**CAREW CASTLE WALLED GARDEN, PEMBROKESHIRE:  
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**SUMMARY**

*DAT Archaeological Services were commissioned by Pembrokeshire Coast National Park Authority (PCNPA) to undertake an archaeological evaluation in Carew Castle Walled Garden ahead of proposed works for a new storage shed, improvements to foul drainage and other landscaping works. Carew Castle is a Scheduled Monument the extent of which covers the Walled Garden and the grounds to the east (PE001).*

*Being a Scheduled Monument PCNPA applied to Cadw for Scheduled Monument consent (SMC) for the proposed works. Cadw confirmed that an archaeological evaluation would be required prior to consent being granted to ascertain the depth, character and state of preservation of underlying remains in the areas where the proposals would involve below ground disturbance. The evaluation was carried out via a Class 7 consent based on the schedule to Article 2 of the Ancient Monuments (Class consents) Order 1994.*

*In total six trenches were opened within the proposed development area, five within the Walled Garden and one outside, just north of the footpath that runs along the causeway to the main entrance. Each trench was located where proposed groundworks will be deeper than 400mm below ground surface. The trenches also targeted areas which had been both subject to previous investigation in the 1990s and also areas where previous archaeological works had not taken place.*

*Trenches were carefully excavated by machine fitted with a flat bladed bucket to the top of archaeological deposits, natural geology or the depth of the proposed works for the project – whichever was encountered first.*

*The excavation revealed that the natural bedrock geology was often relatively shallow across the entire site area. The existing modern crushed stone surface within the walled garden could be seen to directly overlie the bedrock in Trenches 1, 3 and 5.*

*Trench 2 contained layers of buried topsoil and builders waste, consistent with findings from former excavations in 1993 and 2018. These overlay the natural bedrock. A single archaeological feature, possibly identified during the 1993 excavations, was identified at the eastern end of the trench.*

*Trench 4 was located in the northeastern corner of the walled garden and comprised a depth of 0.50m of modern material overlying buried subsoil, probably representing backfill from earlier excavations. Foundations for the proposed new shed in this area will not be required below the depth of modern material.*

*Trench 6 was located east of the walled garden and comprised shallow topsoil overlying a loose stony layer. It is considered likely that this material was deposited relatively recently, possibly associated with landscaping during construction of the path.*

*The evaluation has confirmed that the depth of groundworks required for the proposed development are unlikely to impact upon any previously unrecorded archaeological remains. An archaeological watching brief will still be required during any groundwork for the proposed development to ensure that in the unlikely event that any significant archaeological remains are encountered, they can be appropriately excavated and recorded.*

## **1 INTRODUCTION**

### **1.1 Project Commission**

- 1.1.1 DAT Archaeological Services were commissioned by Pembrokeshire Coast National Park Authority (PCNPA) to undertake an archaeological evaluation in Carew Castle Walled Garden (NGR SN 06575 03775; Figures 1 and 2), ahead of proposed works for a new storage shed, improvements to the foul drainage at the site and other landscaping works (Figures 3 – 5). Carew Castle is a Scheduled Monument (Reference PE001).
- 1.1.2 Carew Castle is owned and operated by PCNPA and the proposals will improve visitor facilities at the castle and provide storage for equipment for PCNPA staff. In 2018 an archaeological evaluation followed by a watching brief was undertaken by DAT Archaeological Services in advance of and during the construction of the new café building within the Walled Garden (Jenkins & Meek 2018a and b).
- 1.1.3 Being a Scheduled Monument PCNPA have applied to Cadw for Scheduled Monument Consent (SMC) for the new development proposals. Cadw 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. The evaluation was carried out 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*'.
- 1.1.4 The development proposals have also been submitted to and approved by the Planning Department of PCNPA (Planning Reference NP/18/0720/FUL). The archaeological advisors to the planning authority, the Development Management Section of Dyfed Archaeological Trust, recommended that an archaeological condition be attached to the forthcoming planning permission for the development proposals, although in the event the condition was not, probably as being a scheduled monument, Cadw's requirements for the SMC take priority. The recommended condition stated:

*No development shall take place until a qualified and competent archaeologist has submitted a written scheme of investigation (WSI) for approval in writing by the local planning authority. This WSI will describe the different stages of the work and demonstrate that it has been fully resourced and given adequate time. On behalf of the local planning authority, their archaeological advisors (DAT DM) will monitor all aspects of this work through to final discharging of the condition. This work will not be deemed complete until all aspects of the WSI have been addressed and the final report submitted and approved. Reason: to protect historic environment interests whilst enabling development.*
- 1.1.5 DAT Archaeological Services prepared a Written Scheme of Investigation (WSI) for the evaluation which was approved by Cadw and also the Development Management section of Dyfed Archaeological Trust. The results of this evaluation will address the concerns regarding the potential disturbance to buried archaeological deposits associated with the scheduled monument, from the development proposals.



## **1.2 Scope of the Project**

1.2.1 The initial advice from Cadw indicates that '*considering the extent of excavation proposed and the currently un-established potential impact this will have on scheduled archaeological features*' a recommendation for a Class 7 archaeological evaluation will be put forward to inform determination of the SMC application. It was indicated that the location of the trenches for the Class 7 consent evaluation will include:

- *within the walled garden - trenches of proposed excavation to a depth more than 400mm below existing ground surface;*
- *within the walled garden - trenches where archaeological investigation has not previously been undertaken; and*
- *The inspection chamber beyond the walled garden.*

1.2.2 Cadw also highlighted that the proposed foul water connection beyond the Walled Garden leading west downwards to the main road is also located within the scheduled area of the castle. The proposed route will lie immediately adjacent to an existing electrical cable and a water pipe serving the Walled Garden. Cadw asked that the possibility was considered of utilising the same trenches for the existing services and the proposed rising main to minimise any disturbance to archaeological remains that may be present in the area. A watching brief was undertaken during the installation of these existing services by the former PCNP Archaeologist, although the results of this watching brief have only been completed in summary form. The results are slightly expanded upon below.

1.2.3 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.

1.2.4 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.

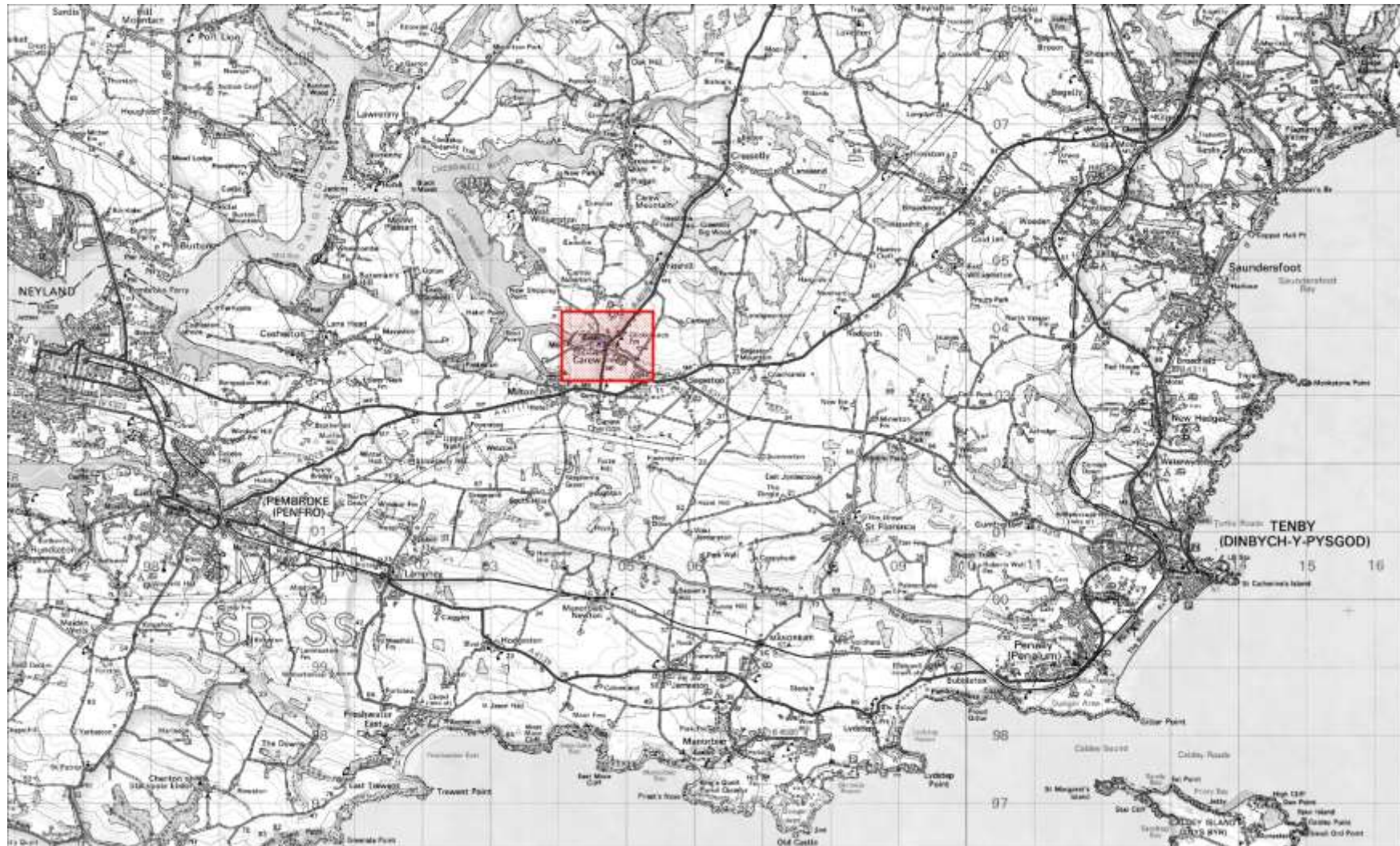
## 1.6 Timeline

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.

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

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

<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.

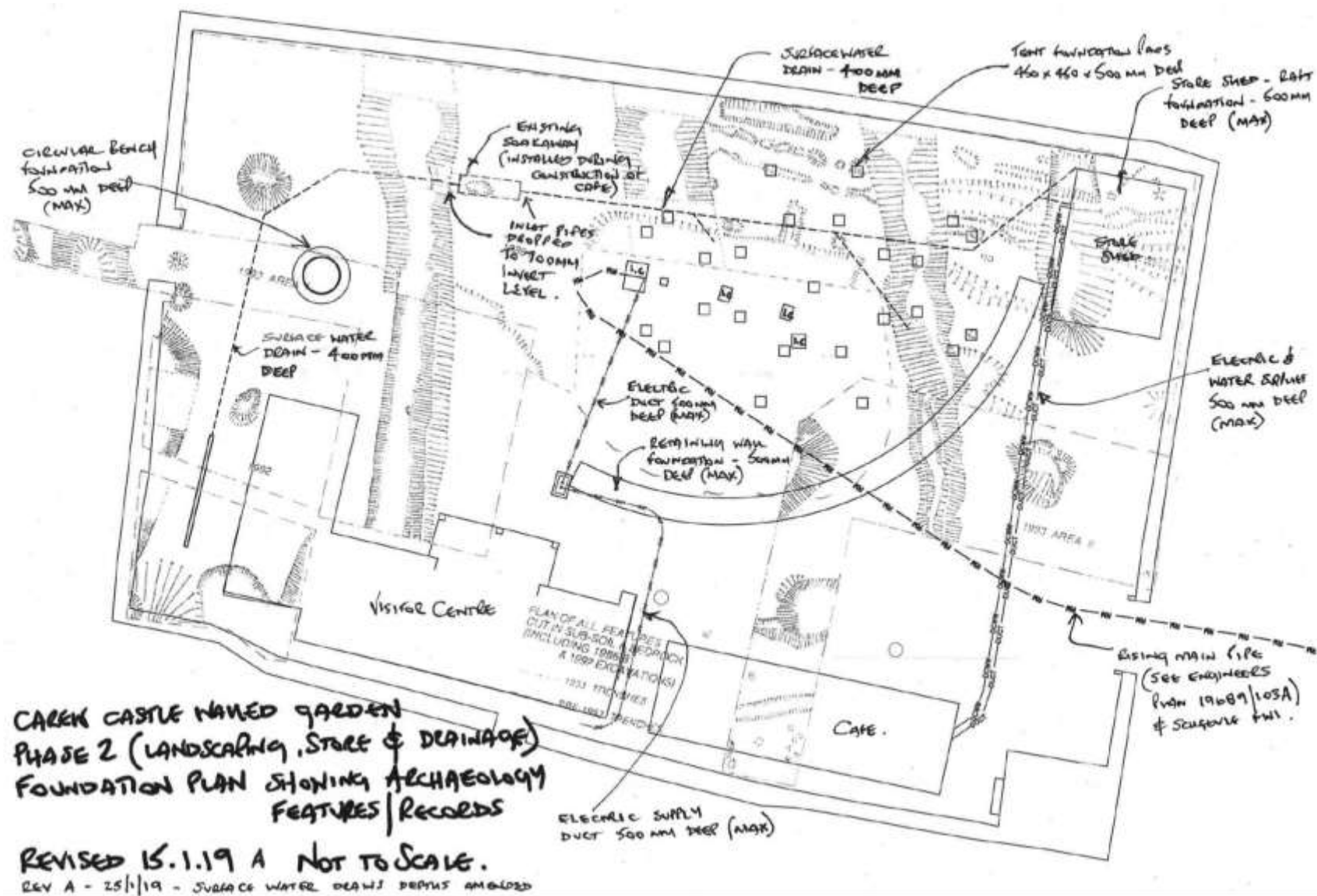
Reproduced from the Ordnance Survey 1:50,000 scale map with the permission of The Controller of Her Majesty's Stationery Office, © Crown Copyright Dyfed Archaeological Trust Ltd., The Shire Hall, Carmarthen Street, Llandeilo, Carmarthenshire SA19 6AF. Licence No 100020930





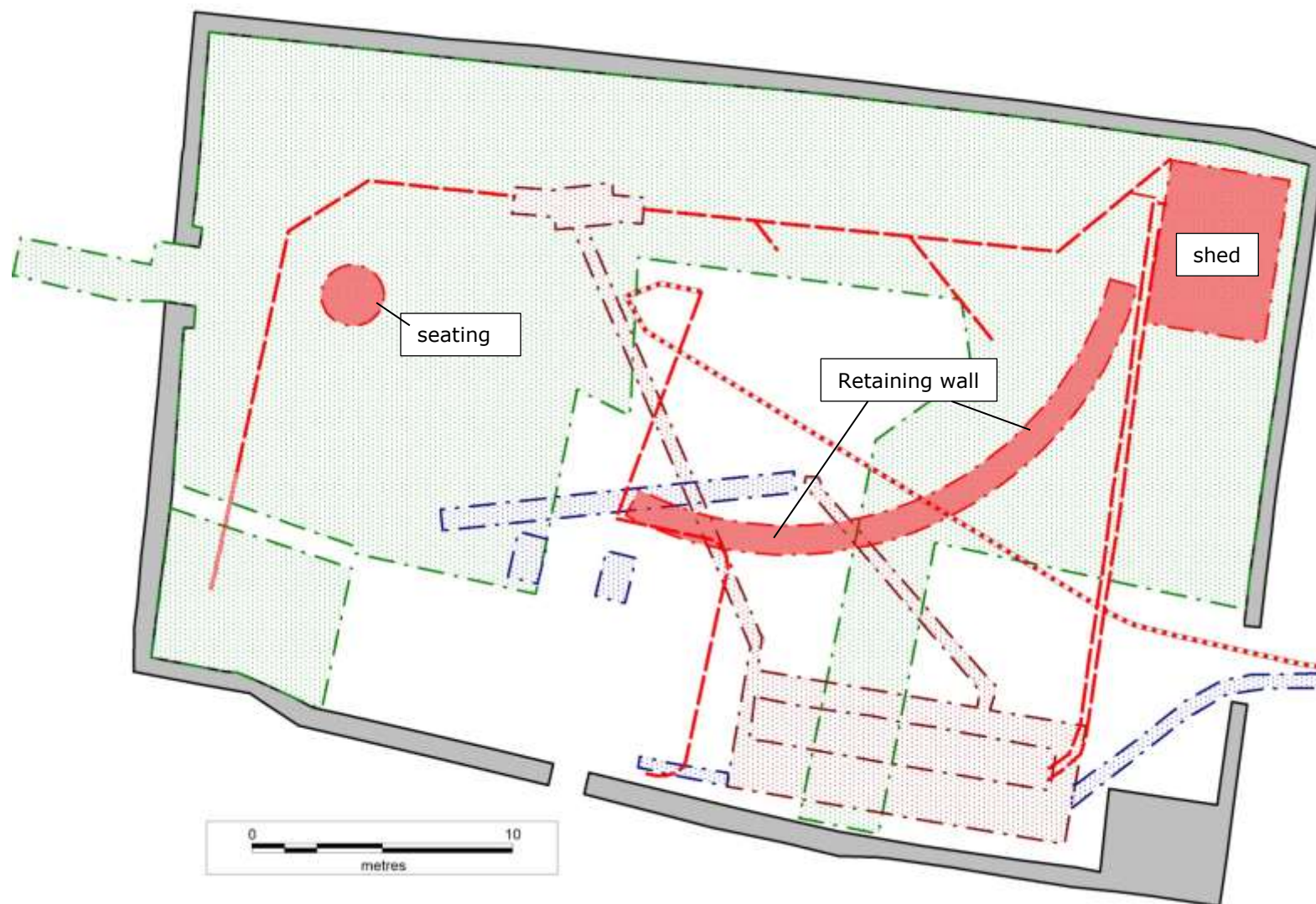
**Figure 2:** Detailed location map showing Carew Castle Walled Garden (red boundary)

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**Figure 3:** Proposed works for new storage shed, retaining wall, seating, drainage and rising main (plan provided by PCNPA)





**Figure 4:** Former areas of archaeological investigation within the walled garden including (1986-1988 and 1992 - 3 green; 2013 watching brief approximate areas in blue; and the evaluation and watching brief 2018 brown) with the proposed areas of shed, retaining wall, seating, drainage and rising main superimposed in red

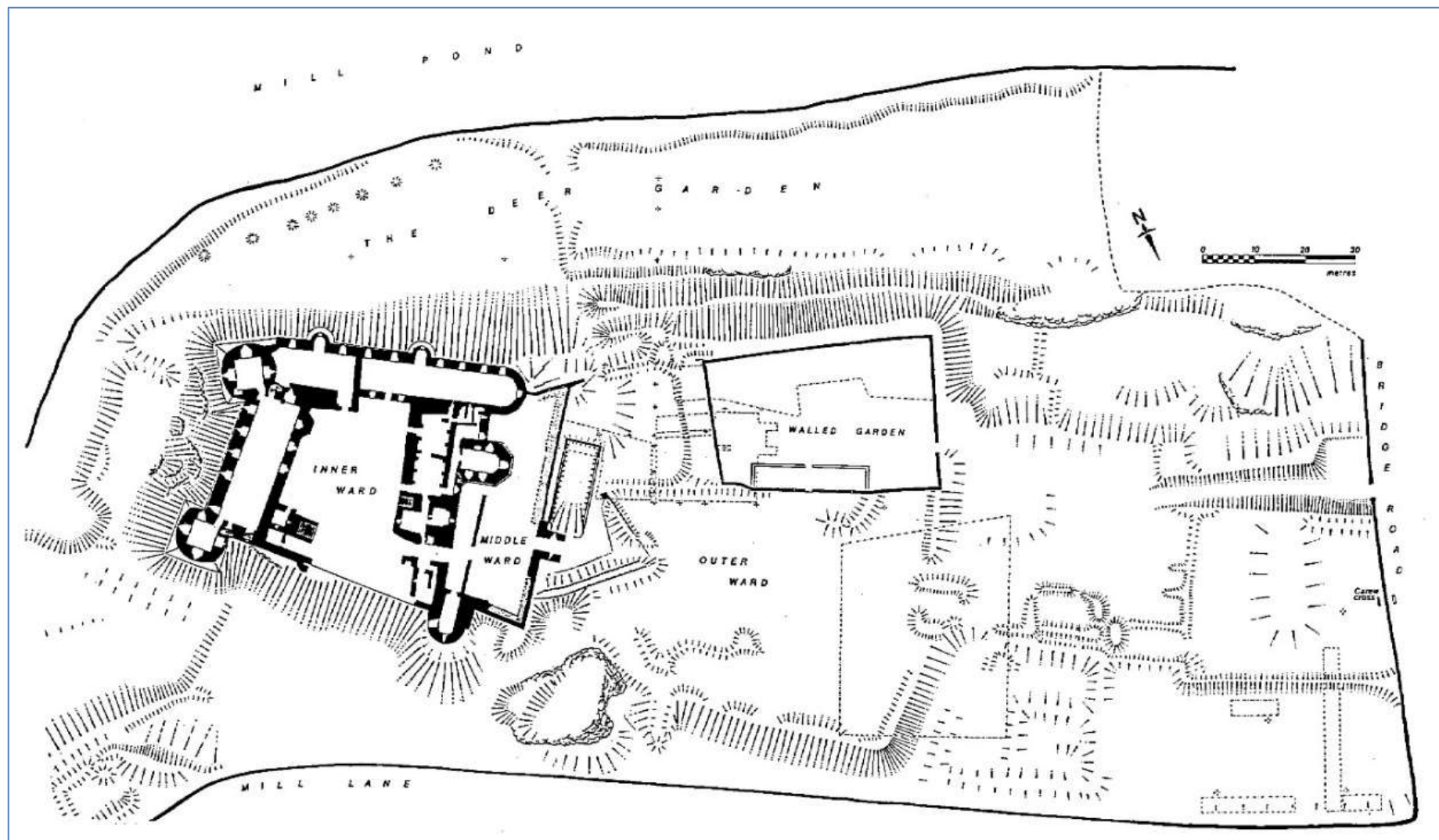


## **2 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND**

### **2.1 Brief History (based on Austin 2015 (Figure 6))**

- 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'. It has been interpreted that each of the ditches 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.

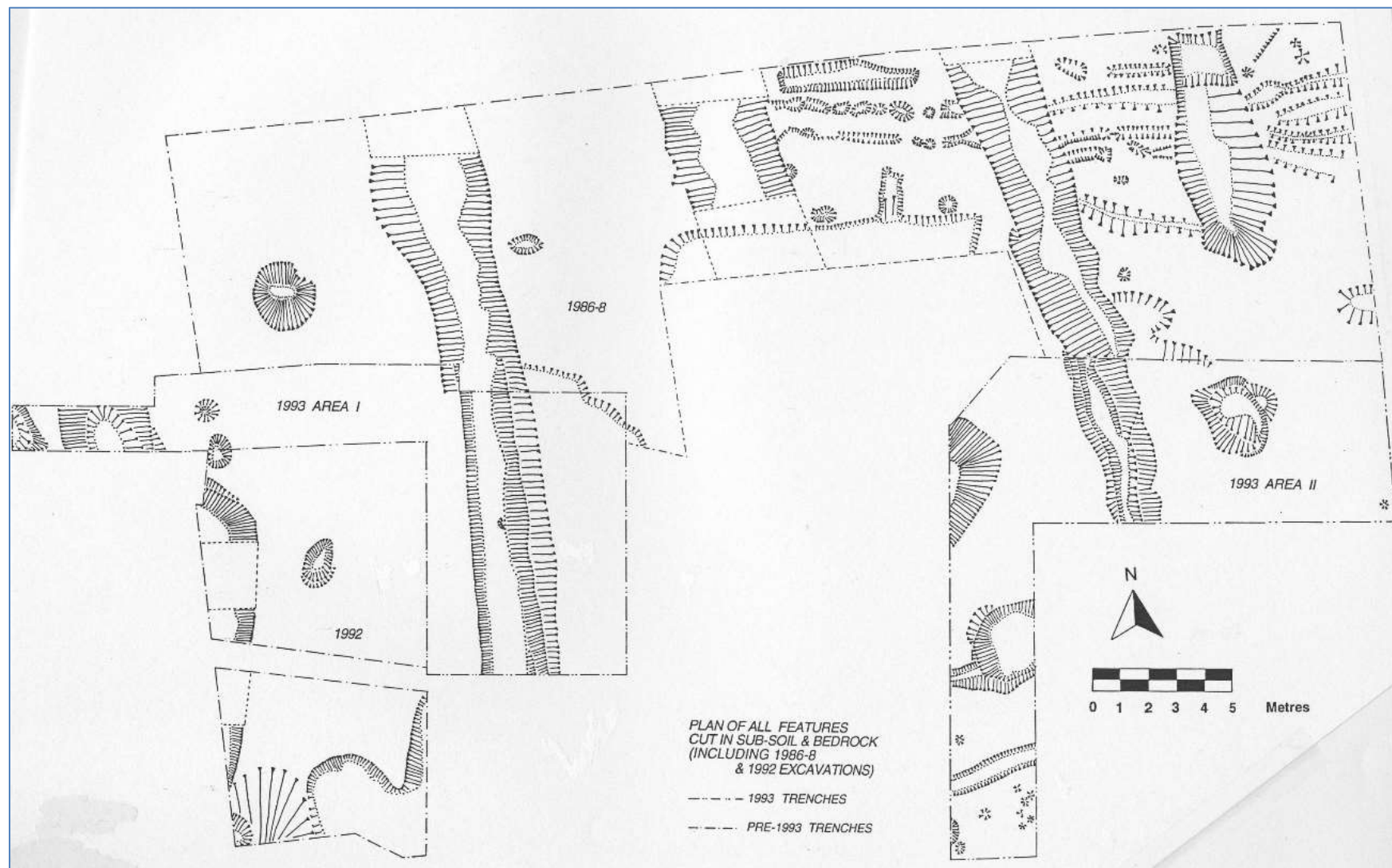




**Figure 6:** Survey of the castle and earthworks prior to the archaeological works begun in 1988  
(D. Austin and Dyfed Archaeological Trust – used in the 1992, 1993 and 1994 interim reports and Austin 2015)

## **2.2 Previous archaeological results within the walled garden** (Figures 7 and 8)

- 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 was difficult to determine the full extent and depth of archaeological features identified during these previous excavations. Austin estimated 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. The café development proposals aimed 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.
- 2.2.6 The area of the proposed soakaway and associated drainage for the café mainly lay northwest of the café building from its northwestern corner, running into an area that had been previously excavated. The depth of the soakaway and adjacent drainage was around 0.70m depth which would expose and potentially truncate the remains of the rock cut ditches previously excavated. The location of the soakaway was moved from that originally proposed to avoid disturbing the rock cut ditches. Further drains led northwest from the northeastern corner of the building.
- 2.2.7 Prior to the works commencing an archaeological evaluation of the café area and associated drainage trenches was undertaken in early 2018 through a Class 7 consent on scheduled monument consent for the café, in a similar way to the evaluation proposed for the new shed and rising main detailed in this document.



**Figure 7:** 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)





**Figure 8:** Plans of all investigated areas within the walled garden including 1986-1988 and 1992 - 3 Excavations (green), the 2013 watching brief (approximate areas in blue) and the evaluation and watching brief from 2018 (brown)

2.2.8 The results of the archaeological evaluation in April 2018 were summarised as follows:

*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. (Jenkins and Meek 2018a)*

2.2.9 Following the results of the evaluation a design method was developed for the café which allowed for its construction and associated drainage, mitigating any potential disturbance of buried deposits. An archaeological watching brief was implemented during the groundworks

2.2.10 The results of the watching brief (Jenkins and Meek 2018b) confirmed the results of the evaluation and also indicated a relatively consistent 0.50m of modern stone and backfill layers overlying earlier deposits excluding the eastern end of the café building. Here the archaeological deposits were visible at a slightly higher level, although through discussion with the site contractors it was possible to leave these deposits undisturbed. This area also contained one of the early medieval ditches first recorded during excavations in the area in the 1990s. The eastern edge of the feature was just exposed within the trench and potentially the western side was visible in a few places.

2.2.11 Drainage runs and the soakaway were excavated through areas where no archaeological deposits were visible; probably indicating they lay below the levels excavated. Of note were two modern drainage trenches

that ran below the level of the ones inserted for the café. Information recorded by the PCNP archaeologist for the construction of the new visitor centre and associated drainage in 2013 was consulted (and the results partly incorporated in the 2018 watching brief report) which indicated that the underlying drains dated from that time.

2.2.12 As noted above, a previous archaeological watching brief was undertaken by the PCNP archaeologist during the construction of the new visitor centre. This included works inside the walled garden and also the excavation of a trench for an electricity and water cable leading from the walled garden to the east, adjacent to the main path to the castle. It is intended that the proposed rising main will try and follow this service trench to minimise the possibility of disturbing underlying archaeological remains. A series of photographs from this watching brief have been made available by PCNP which show that the drainage trench was around 0.40m to 0.50m deep in the area immediately east of the walled garden (Photos 1 and 2). As it ran downslope towards the Carew Inn, the trench was probably around 0.30m deep at most (Photos 3 and 4). Although the bucket used to excavate the service trench was 0.40m wide, it can be seen that the final width of the trench was probably around 0.60m.

2.2.13 Figure 5 shows all areas of previous archaeological investigation within the walled garden, showing identified archaeological features.



**Photo 1:** View east from entranceway into Walled Garden showing excavation of service trench (for water and electric) (PCNPA 2013)





**Photo 2:** View west towards entranceway into Walled Garden showing excavation of service trench (for water and electric) (PCNPA 2013)



**Photo 3:** View west towards Walled Garden showing excavation of service trench (for water and electric) across grassed area on brow of slope (PCNPA 2013)



**Photo 4:** View west towards Walled Garden showing excavation of service trench (for water and electric) on the downslope area leading towards Carew Inn (PCNPA 2013)



### **3 TRIAL TRENCH METHODOLOGY (Figure 9)**

#### **3.1 Fieldwork Methodology**

- 3.1.1 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.
- 3.1.2 To ascertain the depth, significance, and state of preservation of potential archaeology six trenches were excavated where works will be below 400mm from the ground surface (Figure 9). None of the trenches were excavated beyond the depth of the proposed works for the project.
- 3.1.3 Trenches were excavated using a mini mechanical excavator with a flat bladed bucket under constant archaeological supervision. The existing crushed stone surface within the walled garden was removed and stockpiled adjacent to the trenches. Further underlying soils were removed in level spits to the level where potential archaeological remains are visible (whether associated with post-medieval or earlier activity) or where natural ground is reached or at the depth required for the development proposals.
- 3.1.4 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>.
- 3.1.5 Six trench locations were proposed in the WSI as follows (although Trench 1 and Trench 5 were switched during the evaluation):

**Trench 1 - T1** A trench along the route of the proposed rising main in an area near the entrance to the Walled Garden which has not been subject to previous excavation.

**Trench 2 - T2** A trench running along the line of the proposed new rising main within the walled garden where excavations have not previously been undertaken – running into previous excavation area to confirm depth of backfilled deposits.

**Trench 3 - T3** A trench within the area of the proposed new retaining wall area where it lies in an area not previously excavated (although we know that quite a few former drains cross the area).

**Trench 4 - T4** Trench within the footprint of the proposed shed base to confirm the depth of backfill in this area over former excavations from the 1990s. It is understood that c.500mm of clean stone backfill has been noted in this area during previous works.

**Trench 5 - T5** A test pit in the area of the –proposed round bench footing area in the western side of the walled garden to determine the depth of backfill in that area over the previous archaeologically excavated area.

**Trench 6 - T6** A trench in the area of the proposed air vent/manhole and along the line of the former electricity and water cabling trench east of the Walled Garden entrance. It is understood that the manhole in this area may be excavated to a depth of around 1m. The trench will excavate down to the top of archaeological deposits or the top of natural ground, whichever is reached first and also determine the line,

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<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.

width and depth of the existing cabling trench. Most of this trench will need to be hand excavated.

### **3.2 Timetabling of fieldwork**

- 3.2.1 The evaluation works were carried out on Wednesday 6<sup>th</sup> and Thursday 7<sup>th</sup> February 2019.

### **3.3 Post-Fieldwork Reporting and Archiving**

- 3.3.1 All data recovered during the fieldwork will be collated into a site archive structured in accordance with specifications in Archaeological Archives: a guide to best practice in creation, compilation, transfer and curation (Brown 2011), and the procedures recommended by the National Monuments Record, Aberystwyth.
- 3.3.2 The results of the fieldwork have been assessed in local, regional and wider contexts. The report includes a desk-based research element to ensure that the site is placed within its wider archaeological context.



**Figure 9:** Trench Location Plan (T1 – T6) superimposed on plan of Walled Garden, showing former excavation areas, Information Centre and new Café building

## **4 RESULTS**

### **4.1 Introduction**

- 4.1.1 During the evaluation six trenches were excavated (Figure 9). Five trenches were opened within the Walled Garden and one to the east of the entrance. Each trench in the Walled Garden (Trenches 1 to 5; T1 – T5) was overlain by the modern stone crushed surface made of fine gravels, sands and building waste which covers the majority of the interior. Trench 6 (T6) was located immediately north of the extant footpath on the causeway leading towards the main entrance to the castle through the Walled Garden. This trench was overlain by grass and topsoil.

### **4.2 Trench 1 (T1 - Figure 9)**

- 4.2.1 Trench 1 measured 5m x 1.20m and was orientated roughly east - west within the eastern entrance of the Walled Garden (Photo 5). The trench was located to target the line of the proposed rising main as it enters the Walled Garden. Groundworks in this area require excavation of up to 0.50m depth.
- 4.2.2 To the west of the trench, the crushed stone surface was directly overlying the limestone bedrock geology, which was present at just 0.35m below ground level.
- 4.2.3 At the eastern edge of the trench the bedrock sloped down into a hollow, with similar characteristics to a small rock cut ditch, although no coinciding linear feature had been recorded in the previous archaeological work immediately north of the trench. It was considered most likely to represent a natural undulation in the bedrock.



**Photo 5:** View northwest from entrance of Walled Garden along Trench 1, with Carew Castle behind





**Photo 6:** View west along Trench 1, with possible natural hollow visible in the foreground. At the far end of the trench the natural bedrock is exposed 0.35m below ground level, directly below the stone crushed surface.

- 4.2.4 The hollow was approximately 0.23m deep and filled with clean, brown silty clay (Photos 6 and 7). Overlying this was a band of loose dark silt, possibly a remnant of a former garden soil.



**Photo 7:** Natural hollow in Trench 1 after excavation, viewing south

### 4.3 Trench 2 (T2 - Figure 9)

- 4.3.1 Trench 2 measured 10m in length and was orientated roughly northwest – southeast (Photo 8). It was located to target the course of the proposed rising main part of which had an estimated required depth of up to 1.20m below ground surface. The trench mostly lay in an area not previously subject to excavation in the 1990s.
- 4.3.2 The northwestern end of the trench was initially excavated to a width of 1.20m wide but was reduced to 0.75m because of an exposed electricity cable (Photo 8). The trench was excavated to an average depth of 0.70m below ground surface, corresponding with the depth of bedrock.



**Photo 8:** View southeast along Trench 2, with bedrock in foreground and electricity cable on trench edge

- 4.3.3 At approximately 2.35m from the eastern end of the trench, the top of a concrete capped modern sewer pipe was exposed (Photo 9). This presumably connects to the two manhole covers seen to the north and south of the trench (Figure 9), associated with the existing septic tank system in use in the Walled Garden.
- 4.3.4 Below the modern crushed stone surface present across the entire length of the trench was a 0.07m deep band of black silty clay, the likely remnants of the former garden soil within the Walled Garden. This overlay a dark brown silty loam, 0.38m deep, with frequent inclusions of mortar fragments and small stones. This material is similar to layers seen during previous work in the Walled Garden, either layers of demolition material or waste associated with stone masonry working when the castle was restored in the 20<sup>th</sup> century.
- 4.3.5 The limestone bedrock was exposed in the base of the trench. The bedrock was naturally undulating with an obvious slope observed towards the western end of the trench.
- 4.3.6 To the east of the sewage pipe the bedrock dipped again. It is possible that the dip at this end was associated with a pit or hollow recorded during the 1993 excavations (Figure 9; Photos 9 and 10).





**Photo 9:** View northwest along Trench 2. The concrete capping of the sewer pipe can be seen towards the foreground.



**Photo 10:** Cut for modern services at western end of Trench 2 filled with light brown silty clay.

- 4.3.7 At the eastern end of the trench the cut for the 1993 excavation was observed (Photo 9). This contained a gritty, sandy backfill with inclusions of mortar fragments and modern debris.

- 4.3.8 At the western end of Trench 2 a service trench was visible cutting into the bedrock (Photo 11). The service trench was filled with a light brown silty clay soil with frequent inclusions of small angular stones.
- 4.3.9 No significant archaeological remains were identified within the trench excluding the possible rock cut edge of the pit or hollow recorded in the 1993 excavations. No sign of the north to south aligned ditch recorded during previous excavations was identified within Trench 2.

#### **4.4 Trench 3 (T3 - Figure 9)**

- 4.4.1 Trench 3 was located to target the foundations for a proposed curving revetment wall. The trench was also curved and measured approximately 5.40m in length and 1.20m in width. The foundations for the proposed retaining wall will require an excavation depth of up to 0.5m.
- 4.4.2 Bedrock was exposed at the base of much of the trench at a depth of only around 0.35m below ground level.
- 4.4.3 The eastern end of the trench was significantly disturbed by modern service pipes (Photo 10), one of which was inserted in 2018. Two ran roughly north to south and the third (2018) was aligned northwest to southeast, running from the eastern end of the café to the adjacent manhole.
- 4.4.4 A water pipe and electricity cable ran across the western end of the trench aligned roughly north to south (Photo 11).
- 4.4.5 No archaeological remains were identified within the trench.



**Photo 11:** View west along Trench 3. Modern service pipes have heavily disturbed the eastern end of the trench. The remainder of the trench shows exposed bedrock directly below the crushed stone surface.





**Photo 12:** View east along Trench 3 with electricity cabling visible in the foreground

#### **4.5 Trench 4 (T4 - Figure 9)**

- 4.5.1 Trench 4 was located in the in the north east corner of the walled garden in the area of the proposed storage shed. The proposals will require groundworks up to 0.50m in depth for its foundations. The trench was orientated roughly north-south and measured 4.20m x 1.20m (Photo 13). It was excavated to a depth of 0.50m.
- 4.5.2 Below the existing crushed stone surface was a depth of grey stone grits, presumably make-up layers for the extant surface (Photo 14).
- 4.5.3 A further layer of dark grey clay and abundant crushed stone lay beneath this. It is likely that this material was imported following the earlier excavations to level the ground surface (Photo 14).
- 4.5.4 A light brown silty clay subsoil was exposed in the base of the trench at 0.50m depth (Photo 14). It is presumed that this also represents initial backfill from the previous archaeological excavations undertaken in the Walled Garden.
- 4.5.5 Bedrock was not exposed within this trench. No archaeological remains were identified within the depth of trench excavated.



**Photo 13:** View north of Trench 4.



**Photo 14:** West facing section of Trench 4 showing the crushed stone surface, a possible former surface and the underlying subsoil.

**4.6 Trench 5 (T5 - Figure 9)**

- 4.6.1 Trench 5 was located near the western entrance into the Walled Garden, in the area of a proposed circular bench. The proposed bench will require foundations of a maximum of 0.50m depth.
- 4.6.2 Trench 5 measured 1.15m x 0.80m and was orientated roughly east – west. It was excavated to a depth of approximately 0.45m where the natural bedrock was revealed directly beneath the crushed stone surface (Photo 15).



**Photo 15:** Trench 5. Excavation revealed bedrock lying directly below the crushed stone surface.



#### **4.7 Trench 6 (T6 - Figure 9)**

- 4.7.1 Trench 6 was located to the east of the Walled Garden at the site of the proposed inspection chamber / air vent. The required depth of excavations in this area will need to be a maximum of 0.70m depth to accommodate the proposed chamber. The trench was located directly to the north of the existing footpath that runs along the causeway to the eastern entrance of the Walled Garden in an area that was under grass, immediately adjacent to a fall in ground level to the north down towards the Carew River (Photo 16).
- 4.7.2 The trench measured approximately 2m x 1.2m wide, aligned roughly east to west. The southern edge of the trench was partly extended to uncover the line of existing services (water and electricity) installed when the new visitor centre was constructed in 2013 and previously observed by the PCNPA archaeologist. The line of the services was confirmed (Figure 9) and it was noted that they were exposed at a shallow depth (roughly 0.20m below ground surface), although the actual service trench was deeper.
- 4.7.3 Trench 6 was covered in a c.0.16m thick layer of dark brown silt and turf. This overlay a loose, brown silty clay soil with frequent large stone inclusions. The soil also contained some mortar fragments, charcoal, coal, animal bone, shell and a single sherd of Devon Gravel Tempered ware.
- 4.7.4 The loose nature of the fill was such that it was not considered to be of any great age and it was removed by machine onto the limestone bedrock. The bedrock was very flat on the western side and in the centre of the trench but sloped up on the eastern edge. The flat area of bedrock lay 0.80m below ground level (slightly deeper than the required excavations).
- 4.7.5 A thin layer of light brown silty clay was recorded directly overlying the bedrock within the excavated area.



**Photo 16:** Trench 6 viewing west towards the entrance to the Walled Garden with Carew Castle behind



**Photo 17:** Trench 6 viewing west with the flat area of bedrock exposed in the base of the trench



**Photo 18:** Trench 6 viewing east, with bedrock rising up and with extension on the southern side (right) where the trench exposed the extant service runs

## **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 an application for Scheduled Monument Consent for a proposed new storage shed, improvements to foul drainage at the site and associated landscaping.
- 5.2 The aim of the works was to evaluate the currently unestablished potential impact the works would have on underlying archaeological deposits. A scheme of archaeological evaluation works was proposed and agreed by Cadw involving the opening of five evaluation trenches within the walled garden where groundworks of more than 400mm below existing ground surface were being proposed for the development and where archaeological investigation had not previously been undertaken. A sixth trench was located in the area of a proposed inspection chamber to the east of the walled garden, but still within the Scheduled Monument area of Carew Castle (PE001).
- 5.3 The evaluation revealed relatively shallow depths of bedrock across the Walled Garden area, often directly underlying the existing crushed stone surface. This was the case observed in Trenches 1, 3 and 5.

### ***Trench 1***

- 5.4 Trench 1 was located inside the eastern entrance to the Walled Garden on the line of the proposed rising main. This area had not been subject to previous archaeological excavation. The natural limestone bedrock was exposed at a depth of around 0.35m below the existing ground surface. The bedrock was slightly undulating.
- 5.5 The proposed rising main will have no impacts upon any archaeological remains within the footprint of Trench 1.
- 5.6 To the west of this trench the rising main will pass through a previously excavated area and is unlikely to impact upon any archaeological remains.

### ***Trench 2***

- 5.7 Trench 2 lay northwest of Trench 1 along the continued route of the rising main. Groundworks in this area may be as much as 1m in depth although located in a narrow area. The Trench was located in an area not previously excavated, other than at its eastern end which was targeted to, and succeeded in, clipping the edge of the 1993 excavations.
- 5.8 The possible continuation of a pit or hollow recorded during those excavations could be seen extending into the end of the trench as well.
- 5.9 The remnant of a former garden soil was seen below the modern crushed stone surface overlying a probable demolition deposit or waste associated with the restoration of stonework in the 20<sup>th</sup> century. This same sequence was also recorded in 1993 (Austin 1993), but a much deeper band of garden soil was recorded at that time. This would indicate that the Walled Garden area has previously been subject to landscaping and levelling since the 1993 excavations, possibly when the modern surface was laid.
- 5.10 The majority of Trench 2 was excavated through modern deposits onto bedrock. A sewer pipe trench crossed the eastern end of the trench and a further service trench was visible at the western end.
- 5.11 Other than the edge of the possible pit or hollow excavated in the 1993 excavations which extended into this trench, the proposed rising main will not impact upon any archaeological remains within the footprint of Trench 2.

- 5.12 The area west of Trench 2 has mostly been subject to previous investigation or contains service runs and inspection chambers.

***Trench 3***

- 5.13 Trench 3 targeted the proposed foundations for a new revetment wall within the Walled Garden.
- 5.14 The majority of the trench was machined through modern layers onto relatively shallow bedrock. No archaeological features were recorded truncating the bedrock, although a number of modern drains were present at the eastern end of the trench which had significantly disturbed the area.
- 5.15 A water and electricity cable were noted crossing the trench at its western end.
- 5.16 The proposed foundations for the revetment wall are proposed to extend beyond the footprint of the trench, but these will lie in previously investigated areas (and partly within the area of Trench 2).

***Trench 4***

- 5.17 Trench 4 was located in the northeastern corner of the walled garden to target the footings of a proposed new storage shed. The foundations will be around 0.50m in depth.
- 5.18 The trench revealed a depth of 0.50m of modern imported crushed stone material used for levelling and former ground surfaces.
- 5.19 At the base of the trench a layer of subsoil was reached, which may represent backfill from previous excavations in the area. This would be similar to some of the material noted during evaluation of the Café building undertaken in 2018 (Jenkins and Meek 2018a).
- 5.20 The depth of foundations required for the proposed shed will not impact below the make-up and crushed stone layers in this area.

***Trench 5***

- 5.21 Trench 5 targeted the proposed bench adjacent to the western entrance to the Walled Garden. It is proposed that a maximum depth of 0.50m will be required for the proposed bench, although in reality a shallower footing would suffice.
- 5.22 Bedrock was exposed in the base of the trench directly below modern ground surface material.
- 5.23 The foundations for the proposed bench will not impact upon any archaeological deposits within the footprint of Trench 5.

***Trench 6***

- 5.24 Trench 6 was located to the east of the Walled Garden to target the site of a proposed inspection chamber and air vent for the rising main. The proposed depth of groundworks in this area would be 0.70m below ground level.
- 5.25 The line of the existing water and electricity services leading to the walled garden were identified at a shallow depth immediately north of the existing footpath. These were only exposed in a small extension on the southern side of Trench 6 and were not investigated further.
- 5.26 Below the topsoil a layer of loose stony soil was encountered, that had the character of recently redeposited material rather than compact and settled archaeological material. The loose material was removed by machine within the area of the trench, exposing the bedrock at a maximum depth

of 0.80m below ground surface. The deepest area of bedrock was very flat before rising upwards at the eastern end of the trench. It is possible that the area had been subject to previous landscaping. Potentially loose stone and soil had been dumped in this area, possibly during construction of the existing footpath into the walled garden. As the ground slopes down to the north towards the Carew River it makes it more likely that the area was levelled at some point in recent times, although it is not recorded when. The single sherd of North Devon gravel tempered ware found within the loose material merely tells us the material is of post-medieval or later date.

- 5.27 The area of deep loose backfilled stone in Trench 6 would be an ideal location for the proposed inspection chamber / air vent.
- 5.28 Only a very small stretch of the proposed rising main running through the scheduled area east of the Walled Garden was investigated in 2019. Based on the results of the watching brief undertaken during the installation of previous services in 2013, and the fact that the line of this existing service trench may be able to be used for the rising main, it is considered unlikely that any significant disturbance of archaeological remains that may be present along its route would occur.

### ***Overall Conclusions***

- 5.29 The results of the evaluation would suggest that the proposed works associated with the new storage shed, rising main and landscaping within and east of the Walled Garden are unlikely to impact upon any previously recorded archaeological remains.
- 5.30 An archaeological watching brief will still be required during the groundworks for the proposed development works to ensure that in the unlikely event that any archaeological remains are encountered they can be appropriately excavated and recorded.



## **6. SOURCES**

### **Publications**

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# **CAREW CASTLE WALLED GARDEN, PEMBROKESHIRE: ARCHAEOLOGICAL EVALUATION 2019**

RHIF YR ADRODDIAD / REPORT NO. 2019-07

RHIF Y PROSIECT / EVENT RECORD NO. 117004

**Chwefror 2019**

**February 2019**

Paratowyd yr adroddiad hwn gan / This report has been prepared by  
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Mae'r adroddiad hwn wedi ei gael yn gywir a derbyn sêl bendith  
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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

