

CAREW CASTLE CAFÉ, CAREW, PEMBROKESHIRE 2018: ARCHAEOLOGICAL WATCHING BRIEF

SN06575 03775



Prepared by:
DAT Archaeological Services

For: Pembrokeshire Coast National
Park Authority



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Gan / By

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SUMMARY

DAT Archaeological Services were commissioned by Pembrokeshire Coast National Park Authority (PCNPA) to undertake an archaeological watching brief during groundworks for the proposed new café in the Walled gardens at Carew Castle (SN06575 03775). Carew Castle is a Scheduled Ancient Monument (reference PE001), the boundary of which encompasses the Walled Garden. The archaeological watching brief was required by way of a condition on both Scheduled Monument Consent and planning permission for the development.

Much of the area of the walled garden had been subject to previous archaeological excavations during the 1980s and 1990s, although this only covered a small area of the proposed new café building. The previous excavations revealed a series of six ditches which crossed the walled garden area from north to south which dated from the early medieval period (sometime after the 6th century AD). The ditches have been interpreted as suggesting a major fortification for an early royal centre, which were backfilled in the Norman period as the castle was first built.

An initial archaeological evaluation was undertaken within the footprint of the new café building under a Class 7 Consent issued by Cadw. The evaluation trench determined that significant archaeology lay below 0.50m across the café footprint, except at its eastern end where the probable remains of a continuation of one of the north to south aligned rock-cut ditches were revealed at around 0.45m depth. The area for a soakaway for the café located to the northwest was also evaluated confirming that it lay within an area previously excavated with undisturbed bedrock beneath.

Following discussions between PCNPA and Cadw it was agreed that a watching brief should be carried out throughout the groundworks for the proposed café. The proposed formation levels for the foundation slab of the new building lay at a maximum depth of 0.50m below existing ground level. Two drainage runs were also proposed running from the two northern corners of the building, one leading to a new soakaway, the other to an existing manhole.

The initial reduction in ground level of between 0.275m at the western end to 0.40m at its eastern end was undertaken across the entire footprint of the proposed café. A slightly deeper 'toe' trench was excavated around the perimeter of the footprint for stability of the slab. This was excavated to a further 0.20m depth at the western end of the footprint and a maximum of 0.10m at the eastern end to avoid disturbing archaeological remains.

Mortar and sand layers were exposed at the western end of the footprint, as noted during the evaluation, which have been interpreted as dump deposits associated with a former masons' compound which was located within the walled garden during modern restoration works at the castle. Just east of centre of the trench were the remains of the previous excavation area from 1993 which had been backfilled and compacted.

At the eastern end of the footprint it was possible to identify the former exposed surface of the April 2018 evaluation trench where the remains of the north to south aligned rock-cut ditch had been revealed at a minimum depth of 0.45m below ground surface. The 'toe' trench to the north and east of this ditch were reduced by hand by the archaeologist revealing clear bedrock to the east and the remains of a modern drainage trench to the north. The western edge of the ditch

was only partially visible, with most of it remaining unexposed by the groundworks.

Along the southern side of the café footprint were two service ducts inserted in 2013 when the new visitor centre was built. These followed the line of earlier electricity cabling. The 'toe' trench to the south of these was excavated through backfill associated with the installation of the services, with sand and mortar levels exposed to the west, the backfilled trench roughly in the centre and the north to south rock-cut ditch just visible to the east.

Further intrusive groundworks within the building footprint were not deep enough to expose underlying archaeological remains where new service ducting was placed or were located within the former backfilled excavation area from 1993 where radon gas mitigation was installed.

The drainage trench running from the northwestern corner of the footprint of the café to the soakaway location to the northwest was initially excavated to a depth of less than 0.40m and did not expose archaeology, although the tops of sand and mortar layers were just visible within the location of a new manhole inserted at its southeastern end, partly disturbed by an existing electricity cable. A drain pipe was exposed mid-way along the new drain route which had been inserted in 2013. In the northwestern part of the trench three further electricity cables were exposed indicating that the ground had been significantly disturbed in recent years. The trench was 0.70m deep at its northwestern end. No significant archaeology was exposed.

The soakaway was dug onto undisturbed natural bedrock with no archaeological remains surviving; avoiding the remains of previously excavated rock cut ditches. The remains of an existing soakaway were revealed on its southern side which was installed in 2013 during the construction of the visitor centre. This existing soakaway will have truncated the remains of one of the north-south rock-cut ditches.

The second drainage trench ran from the northeastern corner of the footprint of the café to an existing manhole to the northwest, inserted in 2013. The manhole was deeper than anticipated so the trench was around 0.70m deep trench dug into previously disturbed ground. This trench rose up to the southeast, running through the backfilled excavation area from 1993 and then at a depth above archaeological levels at its southeastern end.

The watching brief achieved the aims laid out in the written scheme of investigation and as agreed by Cadw to fulfil the conditions on scheduled monument consent. Through cooperation and assistance from Tree and Sons, the site contractors, it was possible to ensure that the groundworks for the new café footprint did not exceed 0.50m or cut into identified archaeological remains. The drainage trenches were excavated slightly deeper in places, but due to past disturbances from earlier services and other intrusions they did not expose, damage or destroy archaeological levels. The groundworks ensured that all archaeological remains were left undisturbed by the construction of the new café building.

As part of the reporting process for these works a brief review of the unreported watching brief works undertaken during the construction of the new visitor centre in 2013 has been completed. The photographs for this indicate a previously unrecorded east to west gully or ditch of 1m width and 0.50m depth ran to the north of the existing visitor centre. There is no information available regarding whether any finds or dating evidence were found within this ditch.

1. INTRODUCTION

1.1 Project Commission

- 1.1.1 DAT Archaeological Services was commissioned by Pembrokeshire Coast National Park Authority (PCNPA) to undertake an archaeological watching brief during the groundworks for the proposed new café in the Walled Garden at Carew Castle (SN06575 03775). Carew Castle is a Scheduled Ancient Monument (reference PE001), the boundary of which encompasses 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.
- 1.1.3 The works required Scheduled Monument Consent which was granted by Cadw following submission of relevant documentation including the results of a trial trench evaluation (undertaken under Class 7 consent) and an archaeological written scheme of investigation both prepared by DAT Archaeological Services. The designs of the café submitted by PCNPA proposed a raft foundation to minimise below ground impacts to archaeological remains, with the proposed service run depths and soakaway location also being designed to avoid impacts to below ground archaeology.
- 1.1.4 The Café building has also been granted planning permission (application reference NP/15/0509). An archaeological condition was attached to the planning permission to ensure appropriate mitigation in terms of archaeological remains. As the site was a Scheduled Monument the archaeological advisors to the planning authority (Development Management – Dyfed Archaeological Trust) stated that they would defer to Cadw on the project.
- 1.1.5 The written scheme of investigation for the watching brief was approved by Cadw prior to the works commencing.
- 1.1.6 The archaeological watching brief discussed in this report relates to works undertaken on 14, 15 and 16th May 2018.

1.2 Scope of Project

- 1.2.1 A Written Specification of Investigation (WSI) for the watching brief was prepared by DAT Archaeological Services prior to the commencement of works (see Appendix II). The specification outlined the methodologies by which the watching brief should be undertaken including those:
 - To monitor groundworks in order to identify the presence/absence of any archaeological deposits.
 - To appropriately investigate and record any archaeological deposits exposed by the groundworks and to ensure the preservation *in-situ* of any significant archaeological remains exposed.
 - To establish, where possible, the character, extent and date range for any archaeological deposits to be affected by the proposed groundworks.
 - To produce an archive and report of the results.
- 1.2.2 The overall scheme of work was summarised as follows: ***Archaeological attendance and recording during groundworks associated with the construction of the proposed new café building and associated services within the Walled Garden at Carew Castle, Pembrokeshire.***

The works will entail further recording of remains in the event they are exposed and ensure that any such remains are not further disturbed by the development proposals. The works will also include the production of a report and archive of the results.

1.3 Report Outline

- 1.3.1 This report describes the location of the development works, reviews the archaeological background, and provides a summary and discussion of the archaeological watching briefs and their results.

1.4 Abbreviations

- 1.4.1 Sites recorded on the Regional Historic Environment Record¹ (HER) are identified by their Primary Record Number (PRN) and located by their National Grid Reference (NGR). Dyfed Archaeological Trust Development Management – DAT-DM; Scheduled Monument – SM; Written Scheme of Investigation – WSI; -Pembrokeshire Coast National Park Authority - PCNPA.

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 ² –	1536 – 1750	
Industrial Period –	1750 – 1899	
Modern –	20 th century onwards	

Table 1: Archaeological and Historical Timeline for Wales.

¹ Held and managed by Dyfed Archaeological Trust, Corner House, Carmarthen Street, Llandeilo SA19 6AE.

² 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

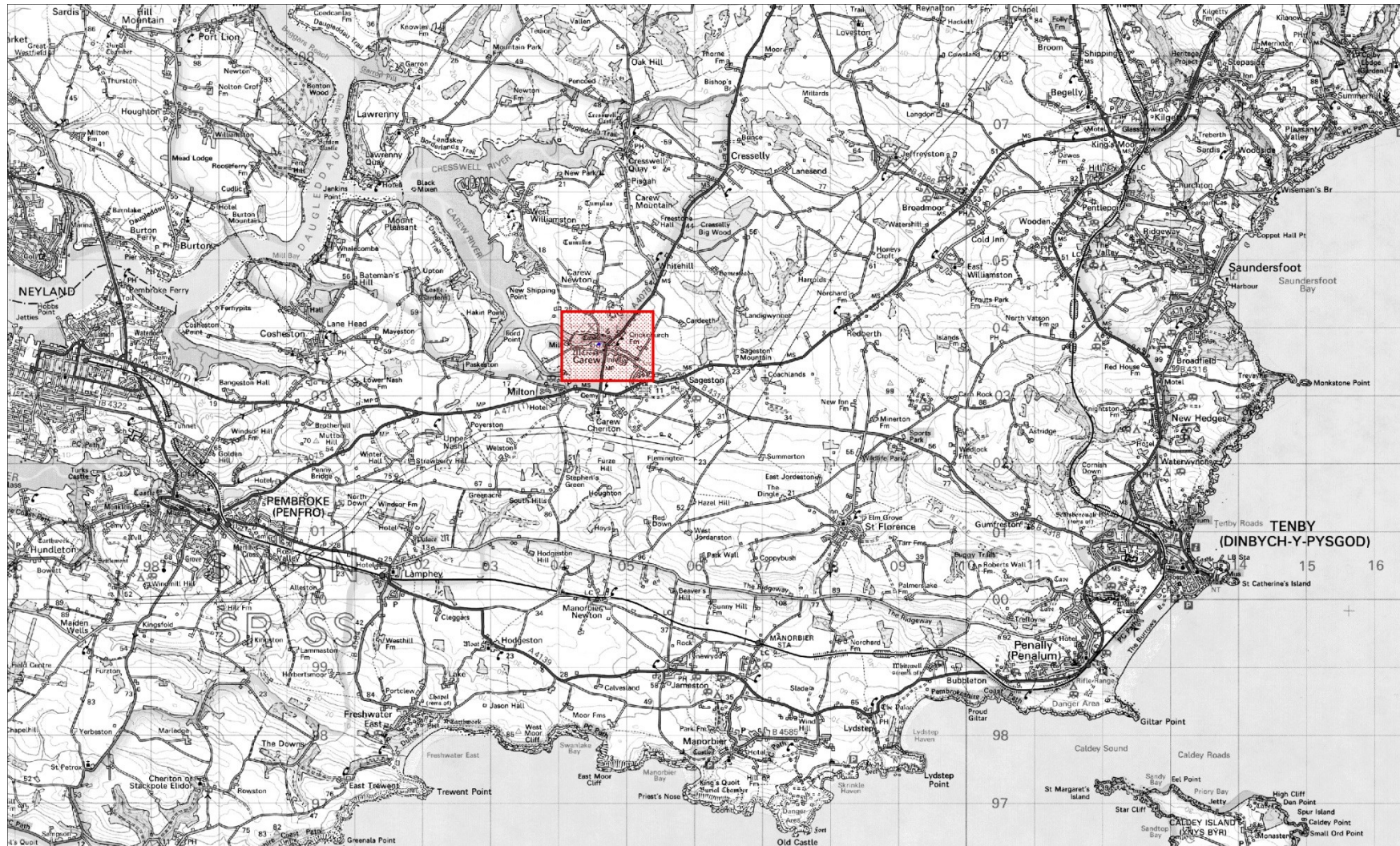


Figure 1: Location map of Carew (red boundary), based on the Ordnance Survey.

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

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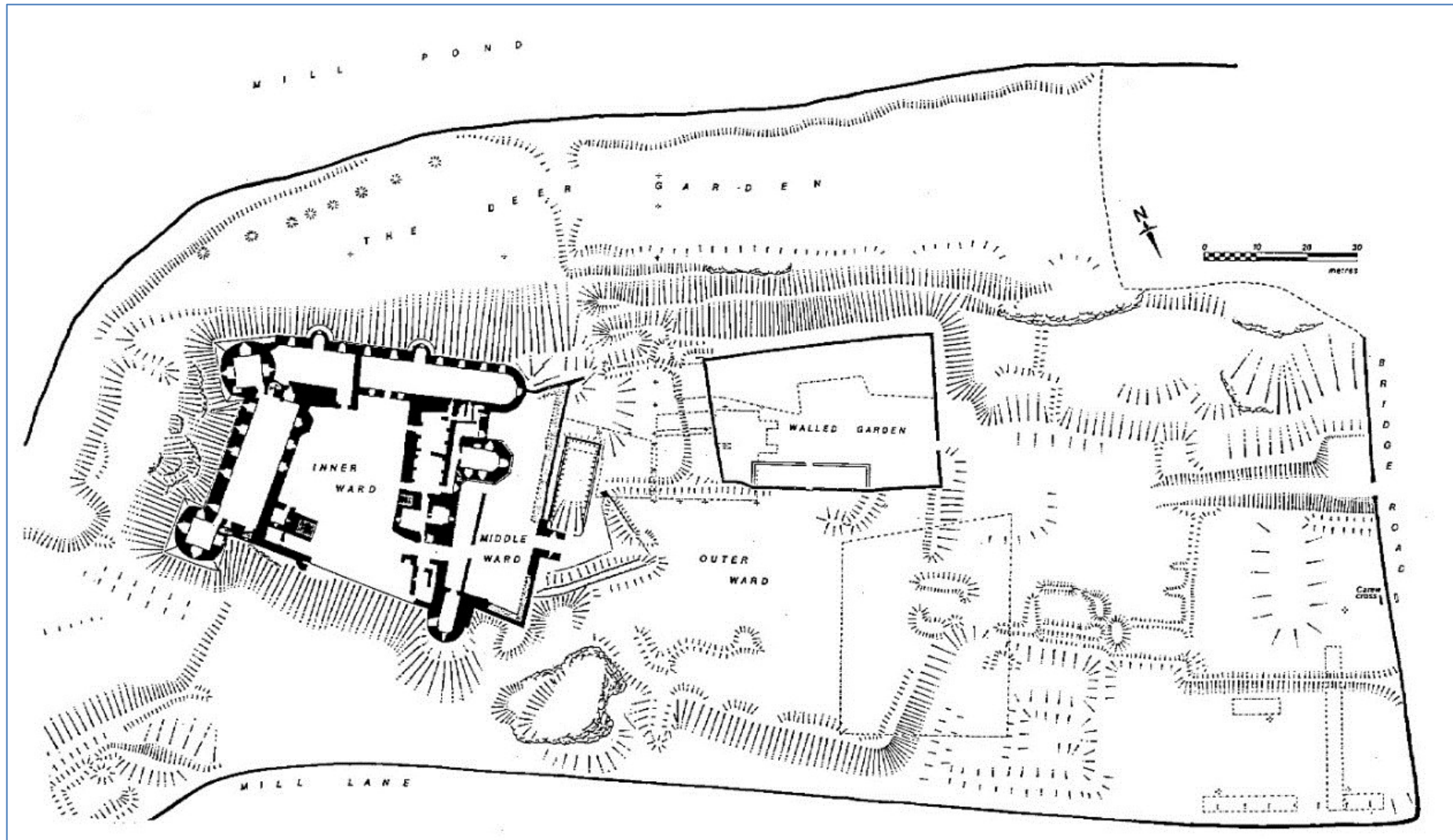


Figure 3: Survey of the castle and earthworks prior to the archaeological works begun in 1988
D. Austin and Dyfed Archaeological Trust – used in the 1992, 1993 and 1994 interim reports and Austin 2015

2. 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 (Figures 1 and 2). 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 (Figure 3).
- 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 6th 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 11th 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 15th 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.

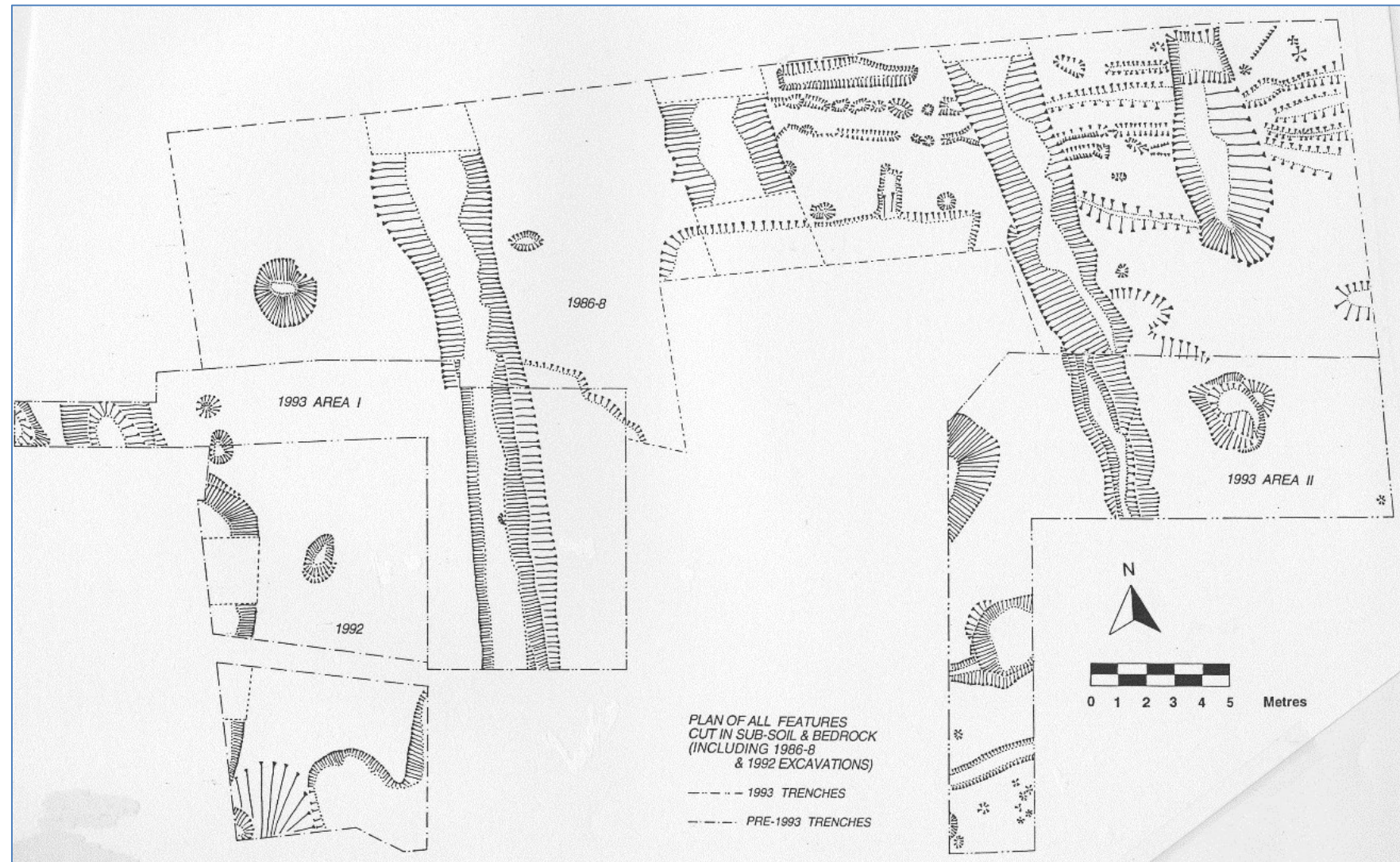


Figure 4: Plans of all features cut in sub-soil and bedrock (including 1986-1988 and 1992 Excavations)
Taken from Carew Castle Interim reports for 1993 and 1994 (Austin 1994, 1995 & 2015).

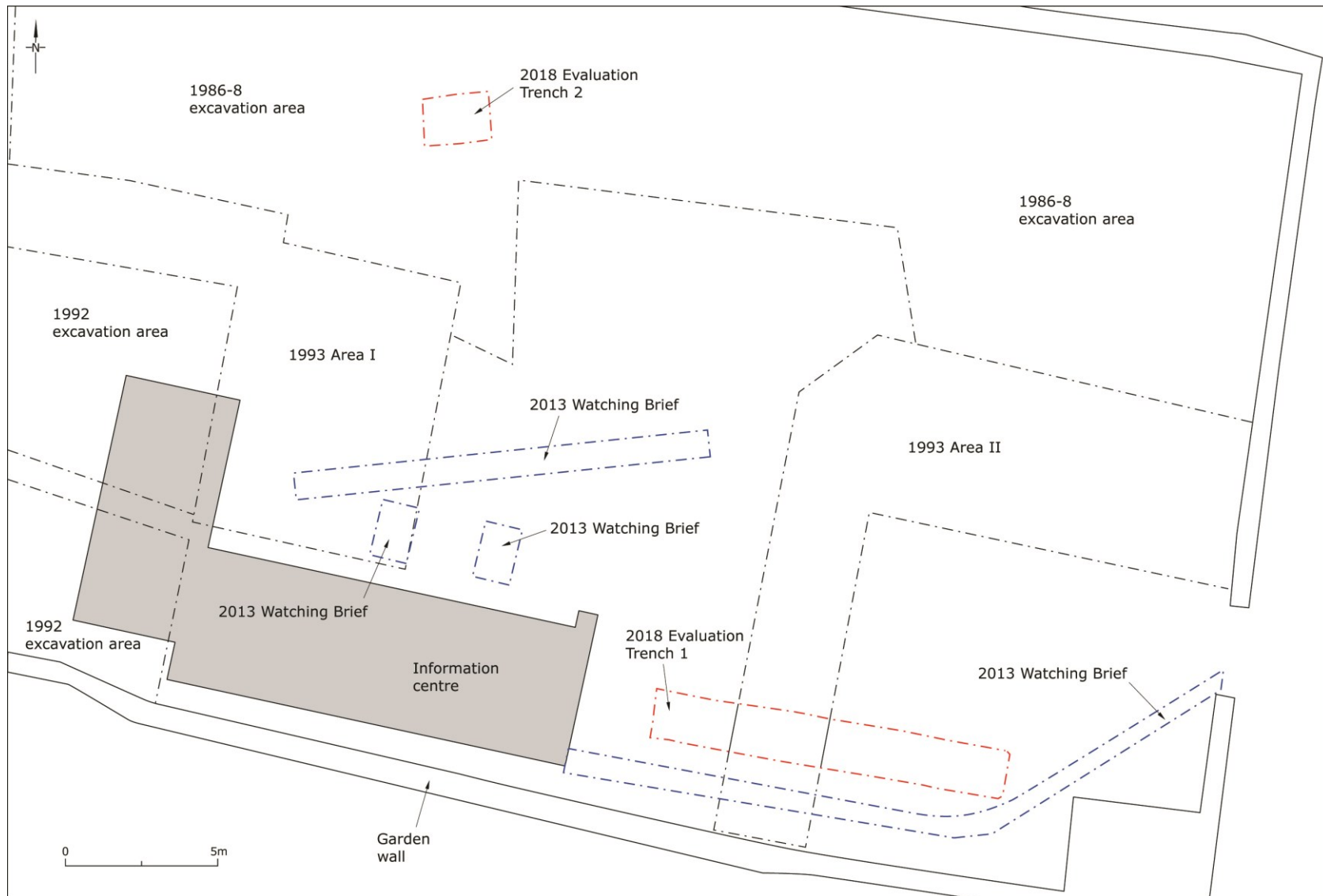


Figure 5: Plan of previous archaeological investigation areas, including 2018 evaluation works and watching brief areas from 2013

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 (see Figure 4) (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 north-eastern corner and a strip leading down into the south-eastern part of the site (see Figure 4). The area of the proposed café will be located in the south-eastern corner in an area where only a small amount of previous excavation has been undertaken (see Figure 4).
- 2.2.3 It is known that the previously excavated areas as shown in Figures 4 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 (Figure 4) 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 south-eastern 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 16th 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 (figure 4) II the depth of these deposits averaged 50-60 cms.*'
- 2.2.5 In order to provide information to support the Scheduled Monument Application ahead of the proposed Café an archaeological evaluation was undertaken by DAT archaeological services in April of 2017 (Jenkins and Meek 2017). 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 in this area (see Figure 5-Trench 1 2018).
- 2.2.6 During these excavations the remains of a former excavation area from 1993 were encountered within Trench 1 (Figure 4 – Area II) backfilled with stone and modern detritus. A modern plastic service pipe had also been inserted through this area (Figure 5 (108)).
- 2.2.7 On the western side of the trench a layer of crushed mortar overlying a demolition layer comprising broken limestone were revealed (Figure 5-(105, 106)). 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).
- 2.2.8 At the eastern end of Trench 1 (2018) 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 (Figure 5 ((103)). 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.
- 2.2.9 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 (Figure 5 – Trench 2, 2018). This

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.

2.2.10 2013 Watching Brief

2.2.10.1 Archaeological monitoring was undertaken during the installation of services associated with the existing visitor centre and toilets in 2013. The full details of what was found during these works, including descriptions, notes and depths of disturbance is unfortunately not available, but a series of photographs and plans from the works have been provided by PCNPA which are discussed below.

2.2.10.2 From the available information it would appear that the watching brief undertaken was restricted to areas of service trench installation where it cut through previously undisturbed or unexcavated ground (Figure 5). The actual footprint of the new visitor centre lay directly on top of a former works building and partly on an area fully excavated in the 1990s. It is assumed that due to the disturbance from the previous building and the former excavation areas, that no watching brief was deemed necessary for the main building.

2.2.10.3 An electric and a BT service duct were inserted during this stage of works (as exposed during the 2018 watching brief), running along the southern edge of the walled garden from the rear of the new visitor centre. These appeared to follow almost the exact line of earlier electricity cabling and an earthing wire (as also noted in 2018). The observed works can be seen in Photos 1, 2 and 3. It would appear that the service run was excavated to a depth of less than 0.50m below ground level, exposing underlying sands and mortar to the west and dark soils to the east, with the former excavated area in the centre (as seen in the evaluation trench).



Photo 1: View east along service duct trench from adjacent to new visitor centre (2013)



Photo 2: Example section through service duct trench along southern edge of walled garden, with wall behind (2013)



Photo 3: View northeast along service duct trench where it turned towards the eastern entrance to the walled garden (2013)

2.2.10.4 The alignment of the drain observed during the 2013 works is shown on Figure 5, which ran to the north of the new Visitor Centre connecting with an existing manhole (Photos 4, 5 and 6). The depth of the drain cut would appear to be around 0.70m deep. The base of the trench appears to have exposed dark silty soil, possibly remnants of garden soil from use of the walled garden. The photos do not indicate any significant archaeology being exposed, other than the garden soils. An existing electric cable can be seen cutting across the eastern end of the drainage trench.



Photo 4: View west across drainage trench leading to manhole at start of excavation, marked in yellow (2013)



Photo 5: View east along drainage trench from visitor centre toilets towards existing manhole (2013)



Photo 6: View west along drainage trench from existing manhole towards toilet block, with existing electricity cables visible crossing the trench (2013)

2.2.10.5 In addition to the service runs, two further rectangular areas measuring approximately 2m by 1m were excavated on the northern side of the new visitor centre. It is presumed these were excavated for drainage connections, although this is uncertain.

2.2.10.6 The westernmost of these rectangular trenches (Figure 5) appears to have been located within the former excavation area from the 1990s (Photo 7). Bedrock was exposed in places around 0.25m depth with dark soil and rubble mix above. The trench was deeper to the north, possibly due to a dip in the bedrock level. The maximum depth of the trench would appear to be around 0.80m depth.



Photo 7: View east across western rectangular trench showing bedrock and mixed dark soil and rubble layer above

2.2.10.7 The eastern rectangular trench (Figure 5) must have been dug through previously unexcavated ground. Bedrock was again exposed at a shallow depth on the southern side of the trench, possibly at around 0.30m below ground level. The photographs clearly show an east to west aligned ditch or gully crossing through the trench of around 0.50m depth and 1m width (maximum) filled with a dark silty soil with few inclusions. The ditch was U shaped in profile (Photos 8 and 9). The northern edge of the feature extended beyond the edge of the excavated trench. It is possible that the deeper area within the western trench related to a continuation of this feature to the west.



Photo 8: East facing section of eastern rectangular trench showing clear rock-cut ditch profile (with western trench just visible behind)



Photo 9: West facing section of eastern rectangular trench showing clear rock-cut ditch profile

3. WATCHING BRIEF METHODOLOGY

3.1 Fieldwork

- 3.1.1 This watching brief was undertaken in accordance with the CIfA Standard and Guidance for an Archaeological Watching Brief (2014). The Written Scheme of Investigation (Appendix I), outlining the archaeological works proposed and providing a detailed methodology for the watching brief, was approved by Cadw and the Development Management section of Dyfed Archaeological Trust prior to the commencement of the works.
- 3.1.2 Recording of all archaeological features or deposits conformed to best current professional practice and was carried out in accordance with the Recording Manual³ used by DAT Archaeological Services.
- 3.1.3 The contractor appointed by Pembrokeshire Coast National Park Authority to build the café and undertake groundworks were Tree and Sons Ltd. The machining was done using a JCB 3CX back-hoe excavator. The contractors and machine operator were made aware of the archaeological issues on the site and were cooperative and helpful throughout the watching brief.

3.2 Post-Fieldwork Reporting and Archiving

- 3.2.1 All data recovered during the fieldwork has been collated into a site archive structured in accordance with the specifications in Archaeological Archives: a guide to best practice in creation, compilation, transfer and curation (Brown 2011). The National Standards for Wales for Collecting and Depositing Archaeological Archives have also been adhered to (The Federation of Museums & Art Galleries of Wales 2017). A digital archive will be deposited with the Royal Commission on the Ancient and Historical Monuments Wales (RCAHMW), created to their requirements (ibid.).
- 3.2.2 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.
- 3.2.3 This report is fully representative of the results of the fieldwork.

3.3 Timetabling of Fieldwork

- 3.3.1 The watching brief was undertaken on the 14th, 15th and 16th of May 2018 during the whole period that intrusive groundworks were taking place during this project.

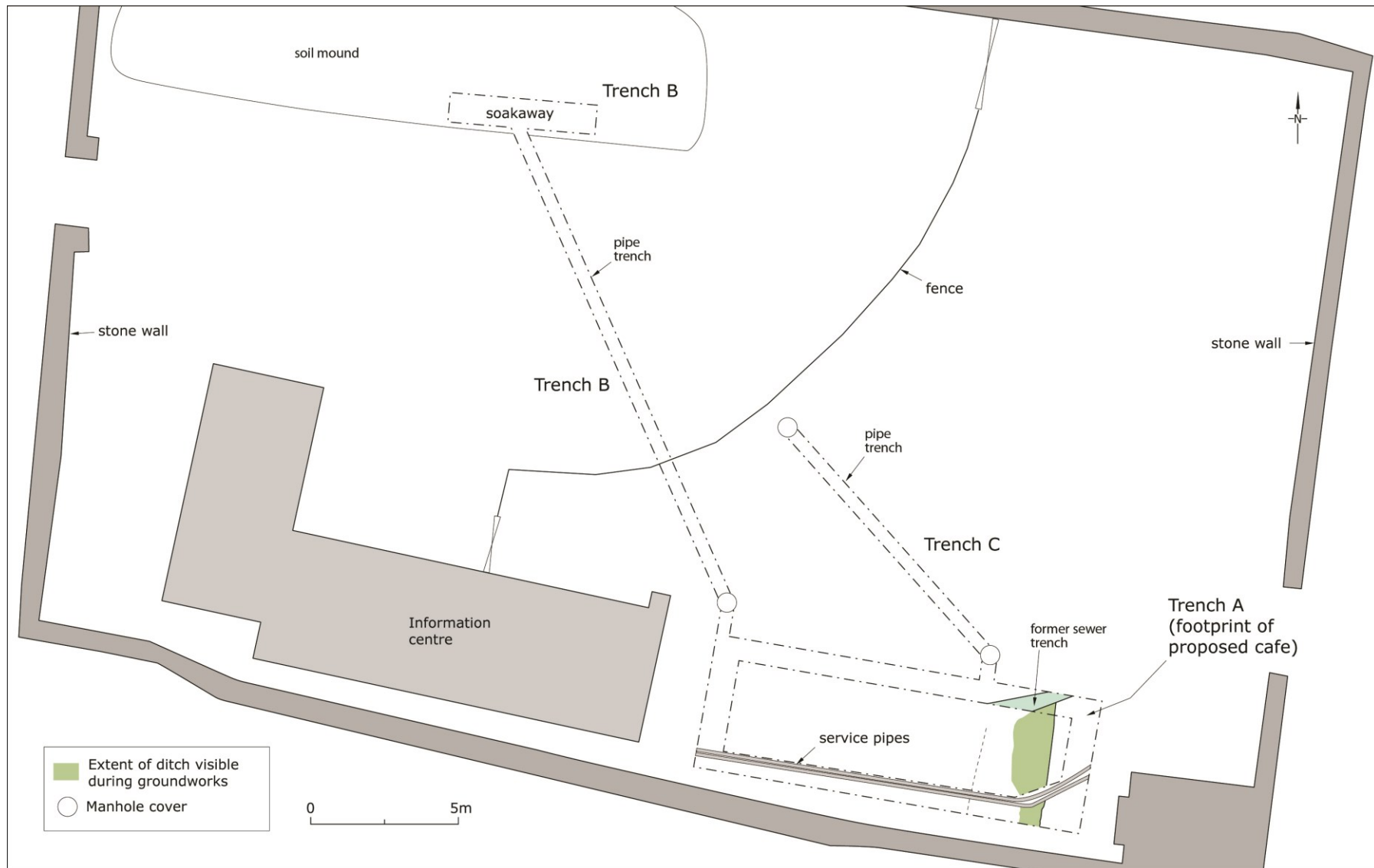


Figure 6: Plan of Trenches A, B, and C. Note extent of confirmed ditch fill with dotted line suggesting western edge.

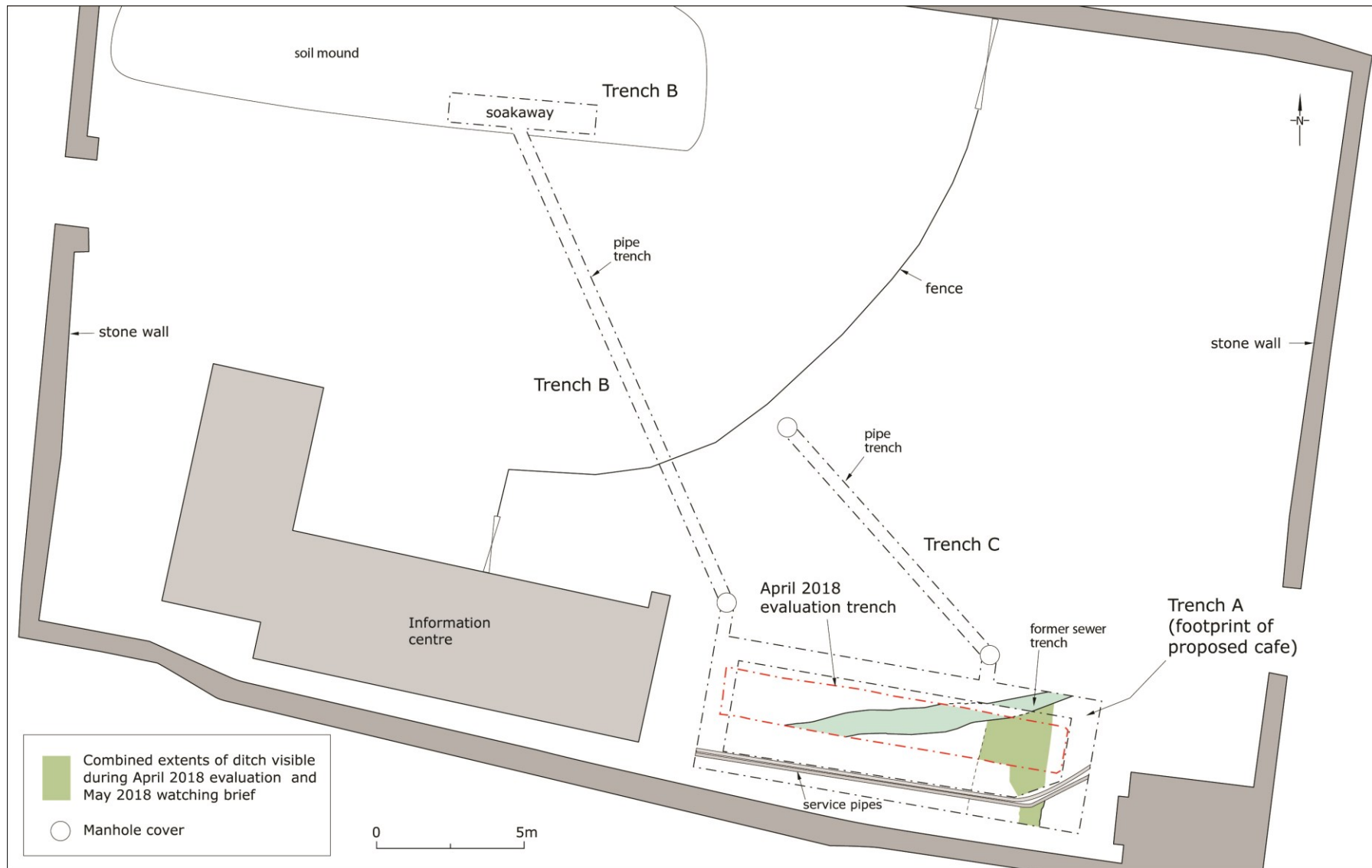


Figure 7: Combined Plan of April 2018 evaluation trench (Jenkins and Meek 2018) and May 2018 watching brief.

4. RESULTS

4.1 Introduction

- 4.1.1 The groundworks monitored during this watching brief are broken down into three parts for discussion; Trench A, which incorporates the footprint of the new café; Trench B, a drainage run leading northwest from the northwestern corner of the café to a soakaway; and Trench C another drainage trench which led from the northeastern corner of the café to a manhole to the northwest (Figure 6).

4.2. Trench A

- 4.2.1 Trench A was initially excavated across the footprint of the café using a toothless bucket (Photo 10). The area excavated measured 13.25m x 4.55m with its longest axis aligned roughly east/west (Figure 6). The footprint lay between 0.65m and 0.72m north of the south wall of the walled garden. It lay around 1.85m east of the visitor centre and 1.5m to 2m from the building in the southeastern corner of the walled garden (Figure 6). The area was initially excavated to a depth beneath ground level of 0.275m at the western end and 0.40m at the eastern end of the footprint. The depth of material removed became gradually deeper to the east due to a slight rise in the ground level. A laser level was used by the site contractors to ensure a consistent depth across the footprint.



Photo 10: View northeast at commencement of excavation of footprint of café, extent marked by red lines

- 4.2.2 Close to the southern edge of the excavated area two service ducts were exposed: a grey one containing BT cables and an orange one containing the electricity supply (Photo 11). These ducts were installed when the adjacent visitor centre was built and the service trench was observed by the PCNP archaeologist in 2013 (Photos 1, 2 and 3). They lay around 1m – 1.35m from the southern wall of the walled garden, before turning to the northeast near the eastern end of the footprint of the building, towards the entrance to the walled garden. Redundant earthing and electricity cables were also found within this southern 'toe' of the slab, indicating that the ground had been disturbed here previously.



Photo 11: Southern edge of café footprint showing exposure of orange and grey service ducting and redundant earthing cable, viewing east



Photo 12: View west along orange and grey service ducting following removal of 'toe' with sand exposed beneath, and with redundant electricity cable visible

- 4.2.3 Around the perimeter of the footprint of the café a 0.75m wide 'toe' was required for the slab foundation which was excavated in general a further 0.10m - 0.20m deeper than the main area of the café. The trench was narrower to the south, with it being dug out between the service ducts and the edge of the trench, a width of around 0.50m to the west getting steadily wider to the east and much wider when the service ducts turned to the northeast. A layer of sands was found at the base of this area which was associated with the backfill of these services (Photo 12). This sand was then removed onto underlying deposits as it was not a suitable base for the foundation, with much of the removal done by hand by the attending archaeologist. It transpired that the sand layer was very thin (around 0.04m) beneath which lay disturbed soils. To the west predominantly sands and mortar were exposed which were possibly associated with the former masonry works yard that stood in the walled garden during restoration works at the castle and as was recorded within the earlier evaluation trench. Just west of the centre lay the backfill of the area previously excavated in the 1990s. At the eastern end of the trench in a few places the sand overlay a mid-brown soil with a few angular stone inclusions, which is very likely to be the very top of one of the north to south aligned ditches known to cross the walled garden, and as identified within the evaluation trench.
- 4.2.4 The northern 'toe' trench was lowered by around 0.20m from the main stripped area at the western end and around 0.10m at the eastern end (Photos 13 & 14). The trench exposed sands and mortar at the eastern end, as noted along the southern 'toe' similar to that seen in the evaluation trench. The western 'toe' trench exposed similar material at the same depth, although with the service ducts at its southern end. The depth of the northern 'toe' trench was lessened to the east due to the presence of archaeological remains as identified during the evaluation. The depth of ground reduction was around 0.50m in total, the same depth exposed in the evaluation trench.
- 4.2.5 Where the backfilled area of the 1990s excavations were exposed within the northern 'toe' trench the rubble stone within its fill became dislodged making the trench wider than anticipated. Backfilled stones were also being pulled up from the base of the trench making it ragged and in places slightly deeper than had been intended. As the area had been previously excavated, no archaeological remains were disturbed.
- 4.2.6 The northeastern end of the 'northern toe' trench was machined carefully due to the identified presence of the previously identified north to south aligned rock cut ditch as confirmed in the evaluation. As this part of the trench was excavated a very dark silty soil was exposed which was friable and contained fragments of glass and modern detritus. It was evident that this corresponded with a service trench for a plastic service pipe that was recorded during the evaluation trench crossing in a roughly west-southwest to east-northeast direction (Photo 14). The edges of the near vertical sided service trench were visible truncating through a mid-brown soil to either side which was thought likely to represent the truncated remains of the north to south rock-cut ditch.



Photo 13: View east along northern 'toe' trench within footprint of café



Photo 14: View west along northern 'toe' trench within footprint of café, showing alignment of service trench

- 4.2.7 The eastern 'toe' trench was excavated in two parts. That to the south of the service ducts was hand excavated to the required level, mostly exposing ground already disturbed by the service trench and some bedrock. To the north of the service ducts bedrock was exposed at a depth of around 0.40 – 0.50m below ground surface. As the toothed bucket used to dig out the 'toe' trench began to snag on and rip up the bedrock it was agreed that no further machine excavation in the area was acceptable. The area was then reduced in level to the top of bedrock by the archaeologist, which also enabled the eastern edge of the north to south rock-cut ditch to be cleaned and recorded (Photos 15 & 16). No further depth of excavation was required in this area as the bedrock provided a suitable base for the slab foundation.

The north to south aligned rock-cut ditch

- 4.2.8 The north to south aligned rock-cut ditch corresponded with the feature recorded during the 2018 evaluation. The ditch corresponds with one of the north to south ditches which cross through the area of the walled garden, as recorded in the 1980s and 1990s. The ditch is thought to date from the early medieval period.
- 4.2.9 As noted above it was partially exposed in a few places in the southern 'toe' trench of the foundation, where it had been covered in sand from the service trench which was removed by hand by the attending archaeologist. The ditch fill in this area was much less stony than that detected in the evaluation, consisting of mid-brown silty clay with a few large stone inclusions.
- 4.2.10 The top of the ditch uncovered and trowelled at the eastern end of the previous evaluation trench was also exposed, confirming that they were indeed part of the same feature (Photos 15 & 16). The fill contained more stone than in the area to the south. This may be due to stone pushed into the surface from modern levelling and compaction of the area prior to the crushed gravel surface of the walled garden being laid. Alternatively it may represent two fills were exposed, one with more stone than the other. Austin (1994) has suggested that the ditches did provide evidence for a stone revetment on the adjacent banks having been present and backfilled into the ditch.
- 4.2.11 The area where the top of the ditch was exposed was not reduced in level any further. The remains were then covered with spoil removed from the 'toe' trenches to protect it, prior to the raft foundation being constructed over the area, leaving the ditch *in-situ*, which was a requirement of scheduled monument consent for the development.



Photo 15: View north along eastern end of café footprint showing bedrock exposed along 'toe' trench and edge of rock-cut ditch with service ducts in foreground



Photo 16: View south along eastern end of café footprint showing bedrock exposed along 'toe' trench and edge of rock-cut ditch with service ducts in background

Final works on the café footprint

- 4.2.12 Two further areas of excavation were also carried out within the footprint of the building once formation levels had been reached (Photo 17). A radon gas mitigation chamber was dug into an area just west of centre within the building footprint, with an additional plastic pipe vent heading south to the walled garden wall. It was agreed with the site contractors that this would be located within the backfilled trench from the 1993 excavations. The depth of excavation for the radon gas mitigation system was less than 0.30m, with the venting pipe necessarily above the level of the existing service ducting.
- 4.2.13 A service conduit was also inserted just east of centre within the building. Again excavation for this was quite minimal as the duct had to run over the top of the existing service ducts, being less than 0.30m below the central part of the footprint. The ducting also exited to the south of the building footprint adjacent to the southern walled garden wall but at a level that did not expose any archaeological remains.
- 4.2.14 A slight foundation proposed for an internal wall was originally planned to be located at the eastern end of the trench. As this could have impacted upon the north to south rock-cut ditch, it was agreed with the site contractor that this would not be dug out.
- 4.2.15 Spoil with large stones removed was then laid across the remainder of the central part of the building footprint (excluding the 'toe' trenches) and crushed stone then laid on-top before being compacted in readiness for the foundations.



Photo 17: View northwest across café footprint following site strip and excavation of perimeter 'toe' trenches, prior to radon gas mitigation and service duct installation.



Photo 18: View east across the completed footprint for the new café building raft foundation, including radon mitigation system, service ducting and levelled material over central part of footprint

4.3 Trench B

- 4.3.1 Trench B comprised the service trench which ran from the northwestern corner of the proposed café heading northwest towards a soakaway area (Figure 6). This trench was excavated using a toothed bucket measuring 0.40m wide.
- 4.3.2 The service run was done in two parts: from the existing fence line through the middle of the walled garden to the footprint of the building heading southeast; and from the fence line to the soakaway area to the northwest.
- 4.3.3 The first part of the trench was dug mostly through levelling layers for the existing walled garden crushed stone surface, with some deeper soil deposits noted at the fence line and just to the northwest. This trench was approximately 0.30m deep at the edge of the building footprint, to around 0.50m depth at the fence. The run on the northwestern side of the fence line was excavated from around 0.50m to 0.70m deep at the soakaway (into clear bedrock).
- 4.3.5 Away from the previously excavated area the ground had been previously disturbed by existing service installations, which were identified in five places within this trench. The services included an electricity cable at the south-eastern end adjacent to Trench A, a plastic sewer pipe at the fence line (in an area recorded in 2013, see above) and three further redundant electricity cables between the fence and the soakaway (Photos 19 and 20).
- 4.3.4 At the north-western end of Trench B a soakaway measuring 5m x 1m was excavated. This lay directly north of an existing soak away presumably excavated for the visitor centre (Figure 7, Photo 21), but not archaeologically observed in 2013 as the area had been previously excavated. Bedrock was exposed across the whole soak away before being dug down to c.0.80m to create the fall needed for the drain. This area had been previously excavated and therefore there were no archaeological layers detected. The soakaway avoided the lines of the previously excavated north to south rock-cut ditches, although the existing soakaway noted on its southern side will have cut through the remains of the western rock-cut ditch.
- 4.3.5 At the south-eastern end of the trench a manhole measuring approximately 0.90m x 0.90m was excavated to a depth of 0.40m. At its base a mortar layer was exposed similar to that found in the western end of the footprint of the café building and the evaluation trench (Photo 22) (Figure 7).



Photo 19: Plastic drain pipe exposed at the base of the service Trench B at the fence line, installed and observed in 2013, viewing east.



Photo 20: Electricity cabling recorded crossing the line of service Trench B (highlighted in red) viewing southeast.
(Note the geotextile material in foreground associated with existing soakaway)



Photo 22: View northwest showing soakaway dug at the northwest end of service Trench B, with clean bedrock exposed at base.

4.4 Trench C

- 4.4.1 Trench C was excavated from the existing manhole adjacent to the fence line and ran southeast towards the northeastern corner of the footprint of the café building (Figure 6). The existing manhole which the drain was to be connected to was deeper than expected meaning that the south-eastern end of the trench had to be excavated to a depth of 0.70m, 0.2m deeper than anticipated (Photo 23). The area of the manhole had evidently been significantly disturbed and dug out in the past. This will have been inserted in 2013 during works for the new visitor centre.
- 4.4.2 Much of the trench line crossed through previous excavations undertaken in 1993 which had been backfilled and significantly compacted. The rubble within the fill and compaction made excavation difficult and the toothed bucket created a ripped up and messy trench base. It is presumed that as the area had been previously excavated that these works will not have affected any undisturbed archaeological remains. Beyond the mid-point of this trench the base of pipe rose above 0.50m and therefore was above archaeological layers.
- 4.4.3 At the southeastern end of the drainage trench adjacent to the café footprint an area for a new manhole was excavated to a depth of around 0.40m (Figure 6). This was excavated under archaeological control as it lay within the alignment of the early medieval ditch; however no archaeological horizons were exposed, presumably lying beneath the excavated level. A pipe trench was also inserted to connect into the café footprint, but this was at a very shallow level and also did not expose or damage any archaeological remains.



Photo 23: View northwest along drainage Trench C towards existing manhole



Photo 24: Southeastern end of drainage Trench C
in area of proposed new manhole following cleaning



Figure 8: Plan of walled garden showing all archaeological features excavated or identified during previous works in the 1980s, 1990s, 2013 and 2018

5. CONCLUSIONS

- 5.1 An archaeological watching brief undertaken at Carew Castle Walled Garden during the groundworks for the proposed new café building as required by way of a condition on both Scheduled Monument Consent and planning permission for the development. The development area lies within the scheduled area of Carew Castle (PE001).
- 5.2 The walled garden has been subject to previous archaeological investigations during the 1980s, 1990s and most recently in 2013 when the new visitor centre was built. The work in the 1980s and 1990s fully excavated much of the interior of the walled garden, although only a small trench was located within the footprint of the proposed new café building, with the majority of then footprint never having been previously archaeologically investigated. The earlier excavations revealed that the area had been subject to some previous disturbance although a number of archaeological features were identified, but of most significance were a series of possibly six ditches which crossed the area from north to south. These ditches dated from the early medieval period (sometime after the 6th century AD) and may suggest a major fortification for an early royal centre. The ditches were backfilled in the Norman period as the castle was first built.
- 5.3 An initial archaeological evaluation was undertaken within the site of the new café building and on the site of a proposed new soakaway for the building in April 2018, under a Class 7 Consent issued by Cadw. The evaluation was undertaken to determine whether the 0.50m depth of the proposed groundworks required for the new foundation slab of the café building would impact upon archaeological remains. The evaluation trench determined that significant archaeology lay below 0.50m across the footprint of then new café, except at its eastern end where the probable remains of a continuation of one of the north to south aligned rock-cut ditches were revealed at around 0.45m depth. The evaluation trench in the soakaway area to the northwest was placed within an area which had been previously excavated. Natural undisturbed bedrock was revealed in the base of the trench. The soakaway was located to lie between two of the early medieval ditches that were previously excavated here to avoid disturbing their alignments.
- 5.4 The groundworks for the new café building comprised the reduction in ground level of between 0.275m at the western end to 0.40m at its eastern end, where the remains of the rock-cut ditch had been previously seen. A slightly deeper 'toe' trench was excavated around the perimeter of the footprint for stability of the slab. This was excavated to a further 0.20m depth at the western end of the footprint and a maximum of 0.10m at the eastern end to avoid disturbing the ditch remains.
- 5.5 At the western end of the trench mortar and sand layers were encountered within the deeper 'toe' trench, as had been seen in the evaluation. These have been interpreted as dump deposits associated with a former masons' compound which was located within the walled garden during modern restoration works at the castle.
- 5.6 The remains of the previous excavation area from 1993 which crossed through the footprint of the building were identified both during the evaluation and the watching brief. The excavation area had been backfilled with soil, rubble and modern detritus and then compacted. Whether this compaction was done following the excavations in 1993 or when the existing crushed stone ground surface within the walled garden was laid is uncertain.

- 5.7 The remains of the north to south aligned rock-cut ditch were revealed at the eastern end of the trench at a minimum depth of 0.45m below ground surface. The former cleaned surface of the evaluation trench was identified by the on-site archaeologist, enabling the depth of archaeology to be confirmed and made known to the site contractors. The western edge of this ditch was only partially visible, with most of it remaining unexposed by the groundworks.
- 5.8 Within the northern 'toe' trench, the majority of this ditch had been truncated by a modern drainage pipe trench (of uncertain date). This area was reduced in level slightly, without impacting upon the archaeological remains of the ditch. The eastern edge of the ditch was clearly visible where it cut through bedrock. This area was hand cleaned by the archaeologist partly to observe and record the ditch edge and also to confirm the presence of bedrock to the site contractors which would form a suitable base for the foundation slab without the need for the deeper 'toe'.
- 5.9 Within the southern 'toe' of the trench, the area of the ditch had been previously truncated by service trenches, including two plastic trunking pipes which were inserted in 2013 and also the remains of earlier electric and earthing cabling. Cleaning of the sand which had been laid at the base of the service trenches exposed areas of the surviving surface of the ditch.
- 5.10 Further intrusive groundworks within the building were not deep enough to expose underlying archaeological remains (service ducting) or were located within the former backfilled excavation area from the 1990s (radon gas mitigation).
- 5.11 Two service trenches were also excavated. The first ran from the northwestern corner of the footprint of the café to the soakaway location to the northwest. This trench was initially excavated to a depth of less than 0.40m and did not expose archaeology, although the tops of sand and mortar layers from the masons' yard may have just been visible beneath the location of a new manhole inserted at its southeastern end. An electricity cable was exposed in this area. A drain pipe was exposed mid-way along the new drain route which had been inserted in 2013. In the northwestern part of the trench three further electricity cables were exposed indicating that the ground had been significantly disturbed in recent years. No significant archaeology was exposed.
- 5.12 The soakaway was located between the lines of two of the rock-cut ditches excavated in the 1980s and 1990s. It was dug onto natural bedrock with no archaeological remains surviving. On its southern side the remains of an existing soakaway were revealed (dating to the 2013 construction of the visitor centre). This existing soakaway will have truncated the remains of the north-south rock-cut ditch to the west.
- 5.13 The second drainage trench ran from the northeastern corner of the footprint of the café to an existing manhole to the northwest, inserted in 2013. The trench was excavated to a slightly deeper depth than anticipated at its northwestern end to link into the existing manhole, although the area had been previously disturbed. The service trench ran through the backfilled area of the 1993 excavation. At its southeastern end the depth of excavation was too shallow to expose archaeological remains, even in the area where a manhole was inserted. The area was cleaned to confirm this.
- 5.14 Overall the watching brief achieved the aims laid out in the written scheme of investigation and as agreed by Cadw to fulfil the conditions on

scheduled monument consent. Through cooperation and assistance from Tree and Sons, the site contractors, it was possible to ensure that the groundworks for the new café footprint did not exceed 0.50m or cut into identified archaeological remains. This meant that the eastern side of the footprint was slightly shallower than proposed, in order that the eastern edge of the north to south rock-cut ditch could be left *in-situ* and undisturbed. It was partially exposed, but then was carefully levelled over with spoil and gravels to ensure it remained protected. The soakaway was located between the lines of the previously excavated rock-cut ditches and did not disturb their remains. The groundworks ensured that all archaeological remains were left undisturbed by the construction of the new café building.

- 5.15 The watching brief works have also enabled a brief summary report to be made of the archaeological watching brief works that were carried out by Pete Crane, the Pembrokeshire National Park Authority Archaeologist, during the construction of the new visitor centre in 2013 which have not previously been reported upon. The 2013 watching brief did not involve any monitoring in areas which had been previously excavated in the 1980s or 1990s or in the area below the former building which previously stood roughly on the site of the new visitor centre. These works monitored a drainage trench running to the north of the visitor centre and two small trenches possibly for manholes between the drainage trench and the building. The drainage trench did not appear to impact on any significant archaeological remains, although must have been deeper than 0.50m along most of its length. The western of the small trenches was located within a previously excavated area from the 1990s and again did not expose any previously unrecorded archaeological remains. The eastern small trench did appear to have exposed an east to west aligned small ditch or gully or around 1m width and possibly 0.50m depth cut into the underlying bedrock. There is no information available regarding whether any finds or dating evidence were found within this ditch.
- 5.16 The service trench for the two ducts that were revealed along the southern side of the footprint for the new café building was also installed in 2013. The information available on these would suggest they were dug through a similar sequence of deposits as noted during the evaluation and watching brief in 2018 (sand and mortar layers to the east, backfilled excavation area in the centre and possible area of the ditch to the east). From notes available for these works, it is possible that this service trench was located to follow the alignment of an existing electricity cable and earthing wire and so did not impact on any previously undisturbed ground.

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Archaeological Evaluation 2018.

APPENDIX 1

**CAREW CASTLE WALLED GARDEN, PEMBROKESHIRE:
WRITTEN SCHEME OF INVESTIGATION
FOR ARCHAEOLOGICAL WATCHING BRIEF 2018**

1 INTRODUCTION

- 1.1 This written scheme of investigation presents a proposed methodology for an archaeological watching brief of the site of the proposed new café and associated services within the Walled Garden at Carew Castle, Pembrokeshire (SN06575 03775; Figures 1 and 2). Carew Castle is a Scheduled Monument (Reference PE001).
- 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. In April 2018 an archaeological evaluation was undertaken within the footprint of the proposed café building and associated soakaway (Jenkins and Meek 2018). The evaluation addressed the archaeological condition placed on the planning application for the development (NP/15/0509).
- 1.3 Being a Scheduled Monument PCNPA also applied to Cadw for Scheduled Monument Consent for the 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 undertaken 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'*.
- 1.4 The evaluation report has been submitted to and approved by Cadw. It addressed the requirements of the Class 7 consent and provided the information needed in order to be able to grant Scheduled Monument Consent, with a condition requiring an archaeological watching brief.
- 1.5 This written scheme of investigation (WSI) proposes a scheme of watching brief to ensure that if any further archaeological remains are exposed by the works, that they can be appropriately recorded. The watching brief will also ensure that any significant stratified archaeological remains are left undisturbed by the groundworks for the new café building and associated services.
- 1.6 This WSI will need to be approved by Cadw and the local planning authority prior to any works commencing on-site.
- 1.7 The specification is in accordance with the Chartered Institute for Archaeologists Standard and Guidance for an archaeological watching brief (CIfA 2014).
- 1.8 The Trust always operates to best professional practice. DAT Archaeological Services has its own Health and Safety Policy, and all works are covered by appropriate Employer's Liability and Public Liability Insurances. Copies of all are available on request.
- 1.9 Dyfed Archaeological Trust is a CIfA Registered Organisation.
- 1.10 All permanent staff members of DAT Archaeological Services are CSCS³ registered.

³ Construction Skills Certification Scheme (Health and Safety Tested)



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

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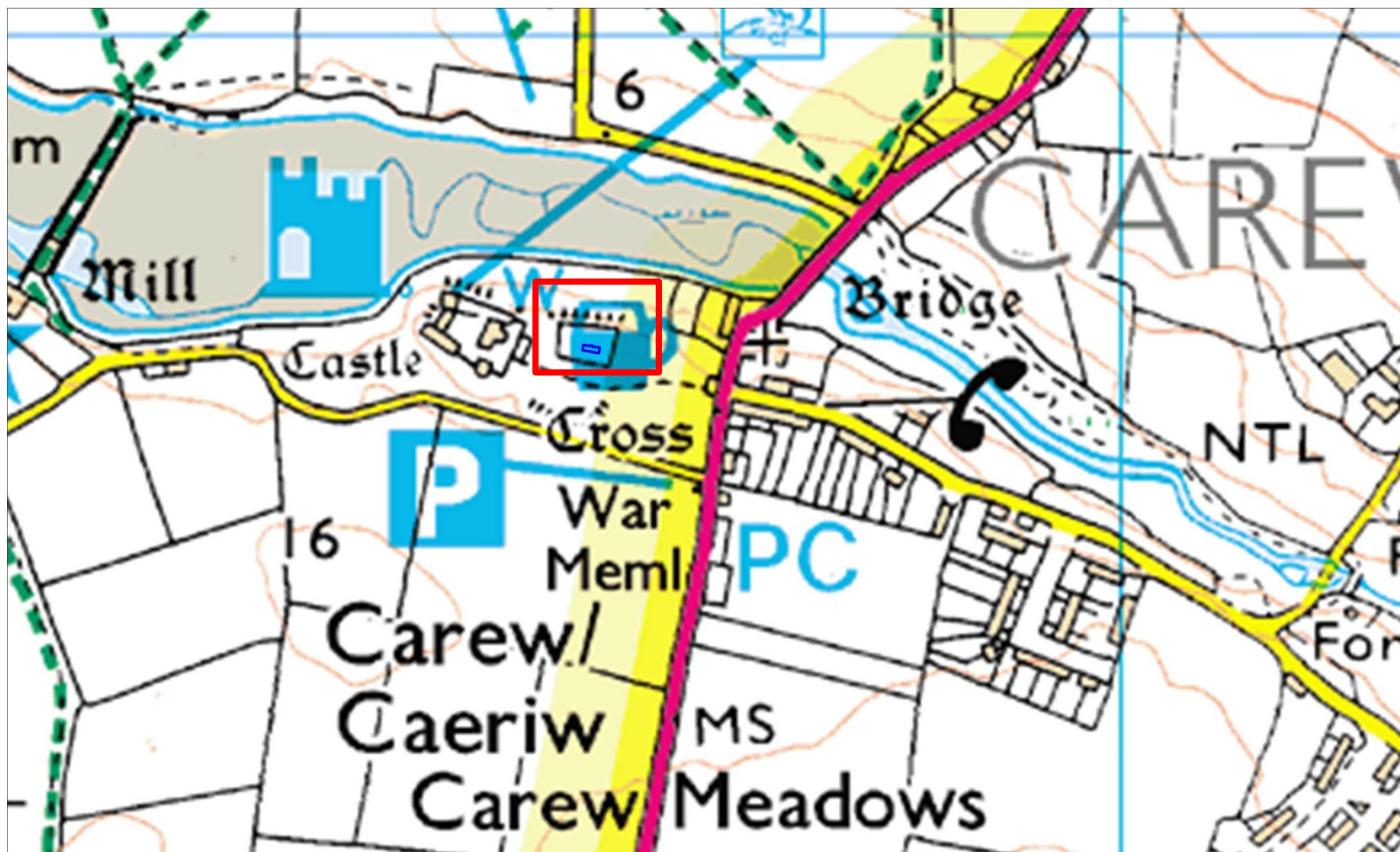


Figure 2: More detailed location map showing Carew Castle Walled Garden (red boundary)

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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 6th 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 11th 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 15th 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.

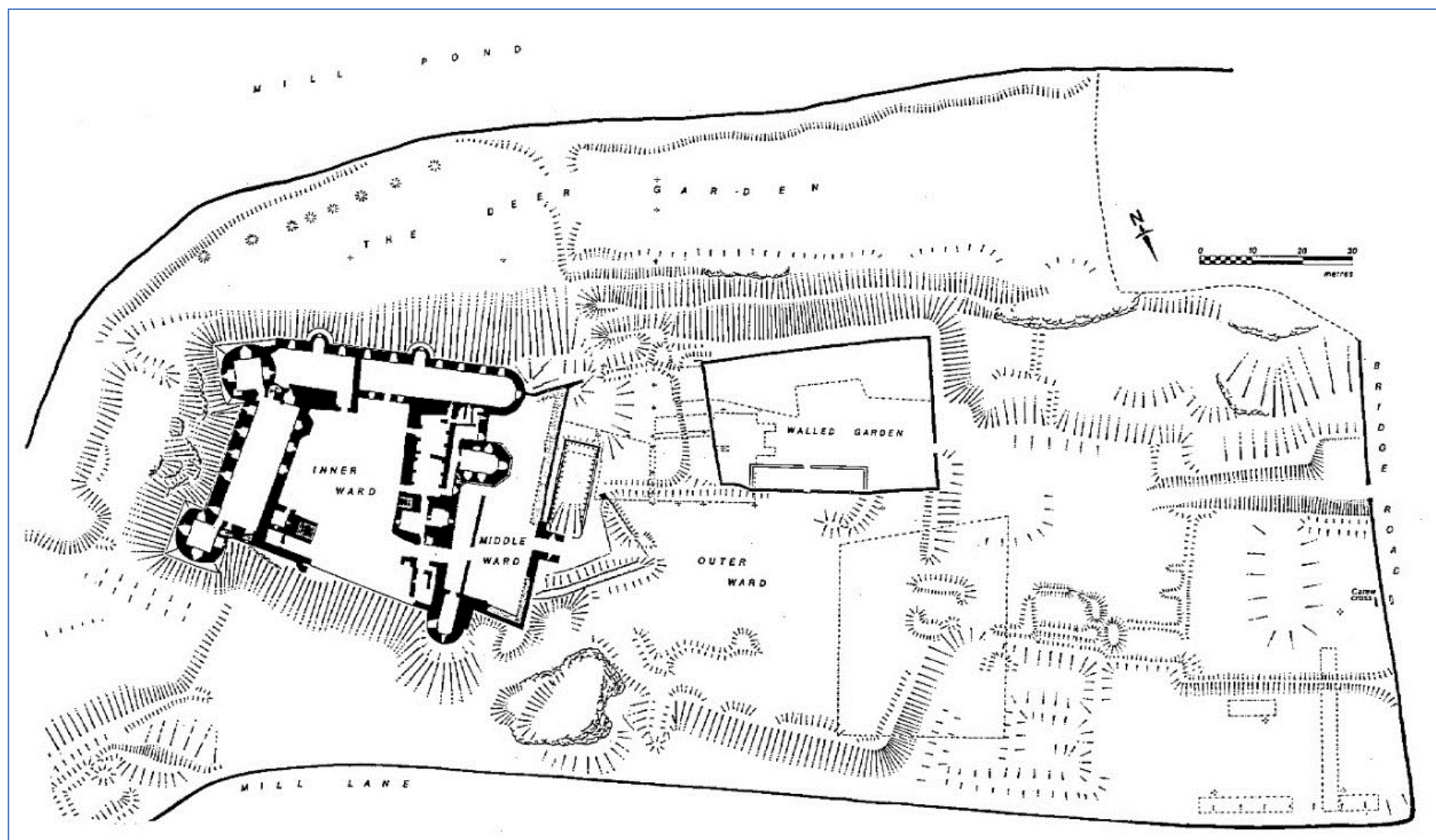


Figure 3: Survey of the castle and earthworks prior to the archaeological works begun in 1988
(D. Austin and Dyfed Archaeological Trust – used in the 1992, 1993 and 1994 interim reports and Austin 2015)

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 16th 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. 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).
- 2.2.6 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. The location of the soakaway has been moved from that originally proposed to the area of the blue line as shown on Figure 5 to avoid disturbing the rock cut ditches.
- 2.2.7 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.

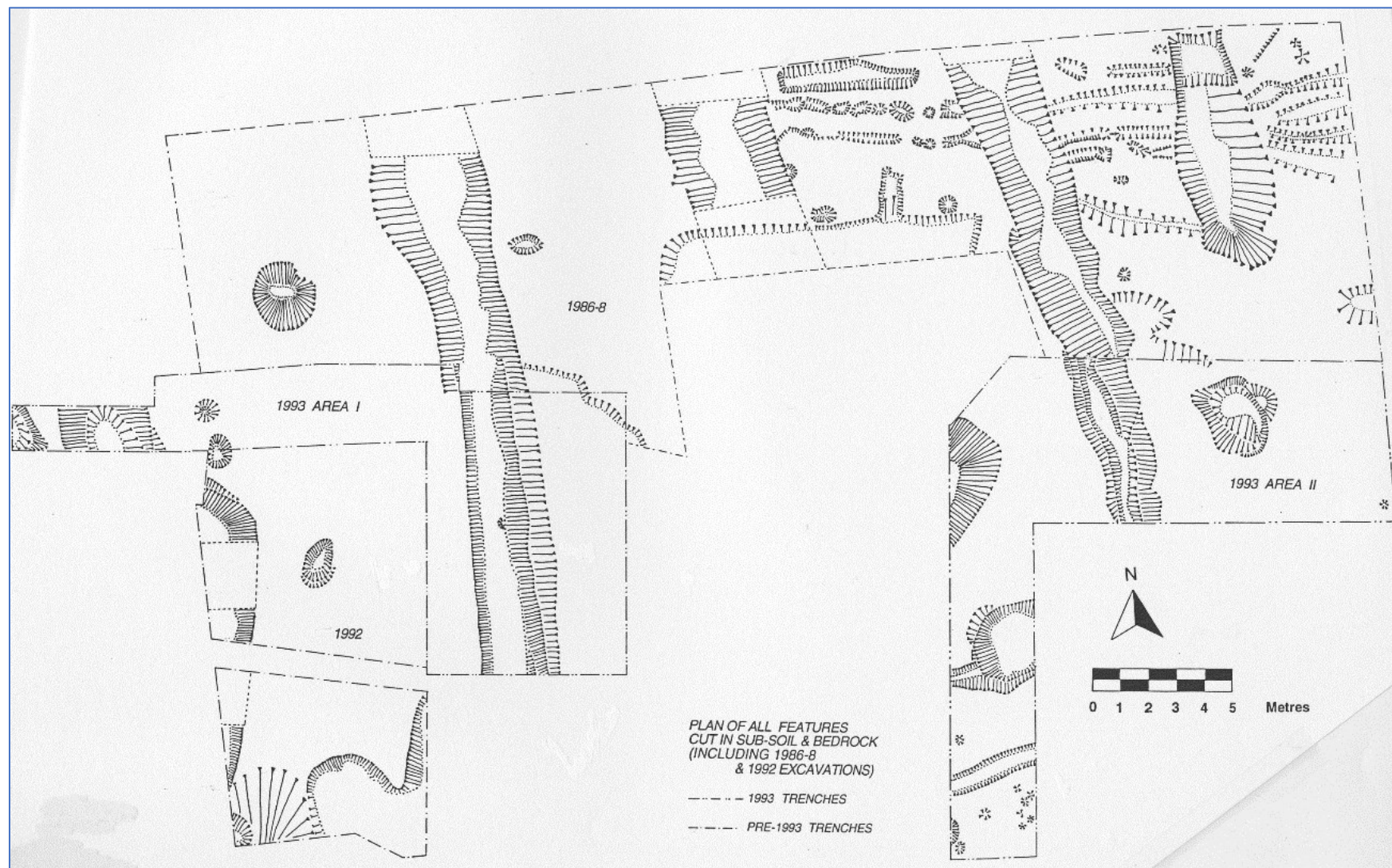


Figure 4: Plans of all features cut in sub-soil and bedrock (including 1986-1988 and 1992 - 3 Excavations)
Taken from Carew Castle Interim reports for 1993 and 1994 (Austin 1994, 1995 & 2015)

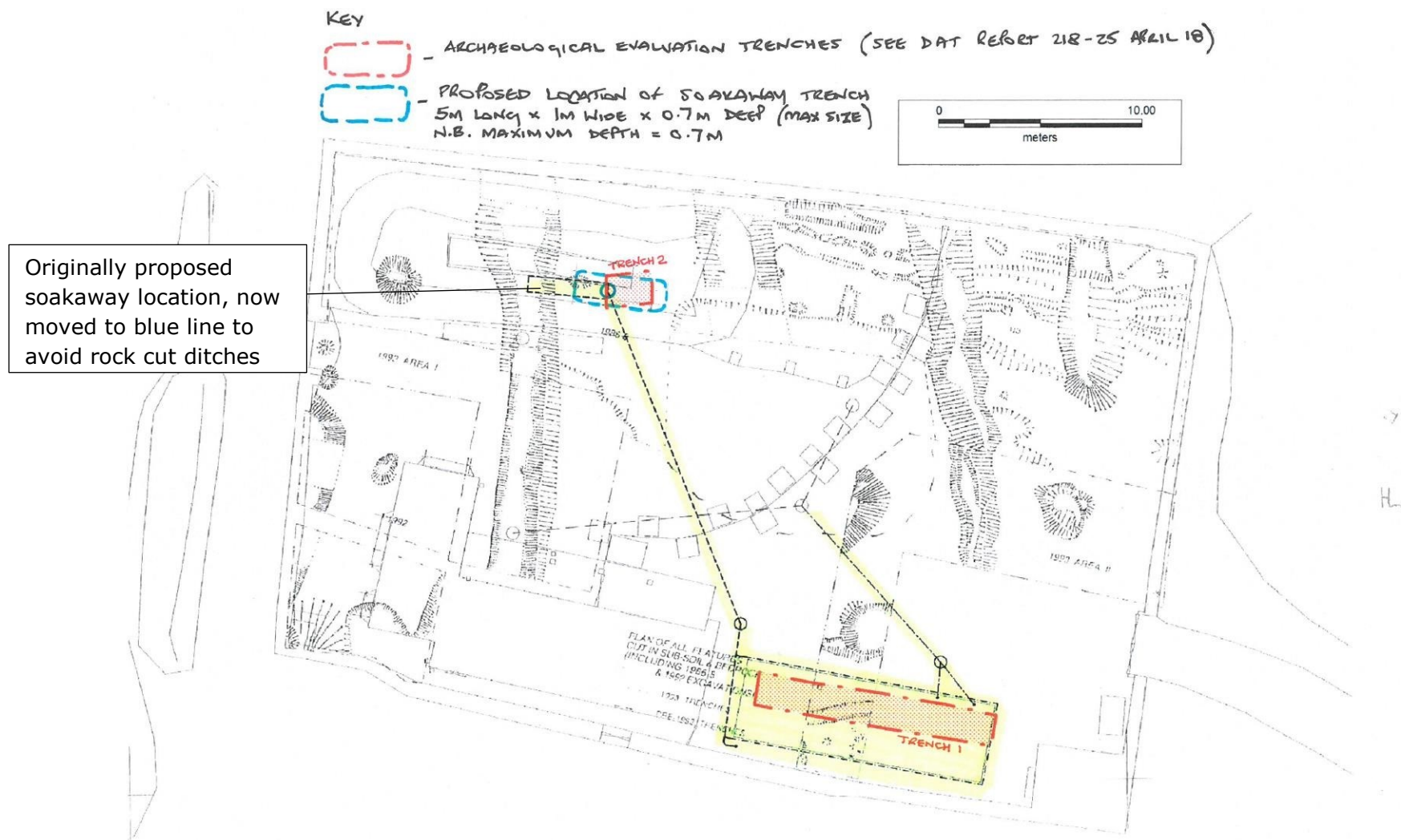


Figure 5: Plans of all features cut in sub-soil and bedrock (including 1986-1988 and 1992 - 3 Excavations) with the present development proposals superimposed (yellow). Taken from Carew Castle Interim reports for 1993 and 1994 (Austin 1994, 1995 & 2015) and DAT evaluation 2018. Plan prepared and supplied by Andrew Muskett of PCNPA (North to top).

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 2018)

3. WATCHING BRIEF

3.1 The definition of archaeological watching brief, taken from the Chartered Institute for Archaeologists Standards and Guidance: for Archaeological Watching Briefs (CIfA S&G: AWB 2014) is a formal programme of observation and investigation conducted during any operation carried out for non-archaeological reasons. This will be within a specified area or site on land, inter-tidal zone or underwater, where there is a possibility that archaeological deposits may be disturbed or destroyed. The programme will result in the preparation of a report and ordered archive.

3.2 The purpose of a watching brief, as laid down in the CIfA S&G AWB is:

to allow, within the resources available, the preservation by record of archaeological deposits, the presence and nature of which could not be established (or established with sufficient accuracy) in advance of development or other potentially disruptive works;

to provide an opportunity, if needed, for the watching archaeologist to signal to all interested parties, before the destruction of the material in question, that an archaeological find has been made for which the resources allocated to the watching brief itself are not sufficient to support treatment.

3.3 This document provides a scheme of works for:

Archaeological attendance and recording during groundworks associated with the construction of the proposed new café building and associated services within the Walled Garden at Carew Castle, Pembrokeshire. The works will entail further recording of remains in the event they are exposed and ensure that any such remains are not further disturbed by the development proposals. The works will also include the production of a report and archive of the results.

4 PROJECT OBJECTIVES

4.1 Provision of a written scheme of investigation to outline the methodology by which DAT Archaeological Services will undertake the archaeological watching brief.

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

5. FIELDWORK

5.1 The watching brief would entail an archaeologist being present during all groundworks for which there is a potential for archaeological remains to be exposed. This will involve the observation of ground reduction within the footprint of the proposed café building to the formation level of 500mm below present ground surface across the majority of the site area. At the eastern end of the trench the archaeological evaluation has indicated that significant stratified archaeological remains survive at around 450mm below ground level and the attending archaeologist will ensure that groundworks do not go below this level to

preserve the remains *in-situ* below the formation levels for the raft foundation for the proposed building.

- 5.2 Observation will also be undertaken during the excavation of drainage trenches and the soakaway for the new building to ensure that no archaeological remains are exposed by the works. If any such remains are exposed they shall be appropriately recorded and again should not be further disturbed by the ground works.
- 5.3 It is essential coordination between the site contractor's and archaeologist is established at the outset to avoid any potential exposure of the archaeology without an archaeologist being present, or unnecessary visits to the site when works are being carried out that do not require the presence of an archaeologist.
- 5.4 The on-site contractors must be fully aware of the following:
- The proposed development lies within the Scheduled Monument of Carew Castle (PE001) and the importance of the archaeology of the site and the site contractor's responsibilities in respect of this;
 - The maximum depths of ground disturbance must be adhered to;
 - That the attending archaeologist has the authority to stop groundworks in the event that significant archaeology is exposed;
 - If significant archaeology is exposed, that it must be left undisturbed prior to its archaeological recording and implementation of any further mitigation measures required;
 - Adequate time must be made available to the visiting archaeologist to ensure that appropriate recording can be undertaken of any archaeological features or deposits exposed during ground works, even if this causes delays to the work programme.
- 5.5 Archaeological observation will entail an archaeologist being present on-site during all stages of the groundworks as identified above. The archaeologist will observe the stripped surfaces and identify any archaeological remains which may be exposed.
- 5.6 The proposed works should not theoretically expose archaeological remains across most of the footprint of the proposed building, excluding an area on its eastern side. Where remains are exposed they will need to be appropriately recorded prior to them being covered over by the levelling materials which shall be laid for the proposed raft foundation.
- 5.7 In the unlikely event that archaeological remains are exposed at a level or in a location where the groundworks for the proposed new café will require their partial removal, the attending archaeologist will need to halt further groundworks in that area until such a time as the client, Cadw, the site contractors and DAT Archaeological Services can determine the best way of dealing with the remains. This could include more detailed excavation prior to removal, with a team or archaeologists in a programme of work additional to the watching brief.
- 5.8 Recording of all archaeological features or deposits will conform to best current professional practice and be carried out in accordance with the Recording Manual⁴ used by DAT Archaeological Services. Significant archaeological features or deposits will be drawn at a suitable scale (no less than 1:20) and Photographed in an appropriate format.
- 5.9 All archaeologically significant finds will be retained and, where possible, related to the contexts from which they derived. Finds will be temporarily stored by DAT

⁴ DAT Archaeological Services have adopted the Recording Manual developed by English Heritage Centre for Archaeology. A copy will be available on-site for inspection if required.

Archaeological Services in stable conditions. All finds, except those deemed to be Treasure, will remain the property of the landowner.

5.10 Under the 1996 Treasure Act, "treasure" can be summarised as:

- Any object other than a coin containing at least 10% gold or silver and at least 300 years old;
- Any prehistoric assemblage of base metal;
- Coins found together which contain 10% gold or silver (but no single coins) and groups of at least 10 coins of other metals, provided they are at least 300 years old;
- Any object found associated with treasure except unworked natural objects; and
- Any object which would have been Treasure Trove before the 1996 Act but not covered above.

5.11 In the event that unforeseen archaeological discoveries are made during the works, or that archaeological remains of significance are exposed, DAT Archaeological Services shall have the power to halt any ground works in these areas and shall inform the client, site contractors and Cadw, and prepare a written statement with plan detailing the archaeological evidence. The area will be demarcated and further archaeological mitigation may need to be implemented additional to the watching brief.

5.12 In the unlikely event that human remains are encountered, the District Coroner's Office and the Police will be notified immediately. All human remains will, where possible, be left *in situ*. If preservation *in situ* is not possible all statutory permissions will be obtained in writing before removal begins.

6 POST-FIELDWORK REPORTING AND ARCHIVING

6.1 The Dyfed Archaeological Trust archive retention policy will be adhered to in the first instance. Where a site archive is required all data recovered during the archaeological works will be collated into the site archive structured in accordance with the 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. The *National Standards for Wales for Collecting and Depositing Archaeological Archives* produced by the Federation of Museums and Art Galleries of Wales will also be adhered to. Digital archives will be collated using the Royal Commission on the Ancient and Historical Monuments of Wales systems (2015) and deposited with the RCAHMW.

6.2 The results of the fieldwork will be assessed in local, regional and wider contexts.

6.3 The results will be used to inform subsequent design considerations of the proposed development so that they will aim to avoid impacts upon any archaeological remains or that mitigation can be implemented before such remains are disturbed.

6.4 The project archive, including all significant artefacts and ecofacts (excepting those which may be deemed to be Treasure) will be deposited with an appropriate body following agreement with the landowner.

6.5 DAT Archaeological Services will arrange for the deposition of finds, and ascertain the costs of storage and deposition, with an approved body before the project commences and inform the curator of the arrangement which has been made (it is anticipated that the archive will be deposited with RCAHMW and any finds to Scolton Manor Museum or Carew Castle itself).

- 6.6 A summary of the project results, excluding any confidential information, may be prepared for wider dissemination (e.g. Archaeology in Wales and special interest and period-specific journals).
- 6.7 The report will be prepared to follow the *Standard and Guidance for an Archaeological Watching Brief* (CIfA 2014).
- 6.8 Digital copies of the report in pdf format will be supplied. Digital copies will be also provided to Cadw, for the Development Management section of Dyfed Archaeological Trust and the Dyfed Historic Environment Record.

7 STAFF

- 7.1 The project will be managed by James Meek MCIfA.
- 7.2 The on-site works will be undertaken by experienced archaeologists from DAT Archaeological Services.

8 MONITORING

- 8.1 Advance notice should be given to both Cadw and the Development Management section of Dyfed Archaeological Trust prior to the start of the evaluation in order that they may have the opportunity to visit the site and monitor the archaeological work.

9 HEALTH AND SAFETY

- 9.1 All permanent members of DAT Archaeological Services staff are CSCS⁵ registered.
- 9.2 DAT Archaeological Services will carry out a health and safety risk assessment to ensure that all potential risks are minimised.
- 9.3 All relevant health and safety regulations must be followed.
- 9.4 All information relating to services or other constraints within the site area must be made known to the archaeological contractor prior to the start of the works. All relevant permissions from the landowner/s must also be given.
- 9.5 All site inductions, H&S procedures, H&S constraints and site rules of the client will be made known to DAT Archaeological Services staff at the start of the works.
- 9.6 DAT Archaeological Services staff must ensure that their presence on site is communicated to all relevant site staff.
- 9.7 Safety helmets, high visibility vests and boots are to be used by all site personnel as necessary. The developer will make all site staff aware of any other PPE⁶ that may be required.
- 9.8 The archaeological contractor's staff must ensure that their presence on site is communicated to all relevant site staff, especially the machine operator. The archaeologist observing the excavation of trenches by machine will establish a safe working procedure with the machine operator at the start of work.

⁵ Construction Skills Certification Scheme (Health and Safety Tested)

⁶ Personal Protection Equipment

10 REFERENCES

- Austin, D. (ed.) 1993, Carew Castle Archaeological Project: Interim Report 1992
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CAREW CASTLE CAFÉ, CAREW, PEMBROKESHIRE 2018: WATCHING BRIEF

RHIF YR ADRODDIAD / REPORT NO. 2018/010

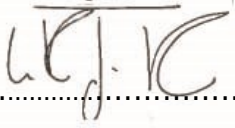
RHIF Y PROSIECT / PROJECT RECORD NO. 112372

Mai 2018
May 2018

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

Luke Jenkins

Swydd / Position: **Archaeologist**

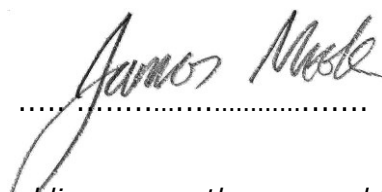
Llofnod / Signature  Date 24/05/2018

Mae'r adroddiad hwn wedi ei gael yn gywir a derbyn sêl bendith
This report has been checked and approved by

James Meek

ar ran Ymddiriedolaeth Archaeolegol Dyfed Cyf.
on behalf of Dyfed Archaeological Trust Ltd.

Swydd / Position: **Project Manager DAT Archaeological Services**

Llofnod / Signature  Date 05/06/2018

*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*