

CLCH/01



CUSTOS LODGE, VICARS CHORAL, HEREFORD CATHEDRAL

ARCHAEOLOGICAL TRIAL PIT EVALUATION

commissioned by Robert Kilgour Architects Ltd
on behalf of Dean and Chapter, Hereford Cathedral

March 2017

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PROJECT SUMMARY

Headland Archaeology (UK) Ltd carried out an archaeological evaluation within the Custos Lodge Yard, Hereford Cathedral prior to the construction of a small building on the site. Floor surfaces and built structures are preserved below the current yard surface at a depth of c0.40m (56.42m AOD), and archaeological deposits continue to a depth of 2.19m (54.63m AOD) below ground level. The former southern wall of the 15th century Custos Lodge was identified in the south of the site and a former cellar sealed beneath a 19th century toilet block was recorded in the north of the site. A possible 12th century yard surface was identified at a depth of c1.00m below ground level, and archaeological deposits were shown to continue below this depth. Considering the significant archaeological deposits identified during previous excavations c20m to the northeast of the Custos Lodge (Boucher et al), the potential for the survival of significant archaeological deposits of medieval and Saxon date within the proposed development area is considered high.

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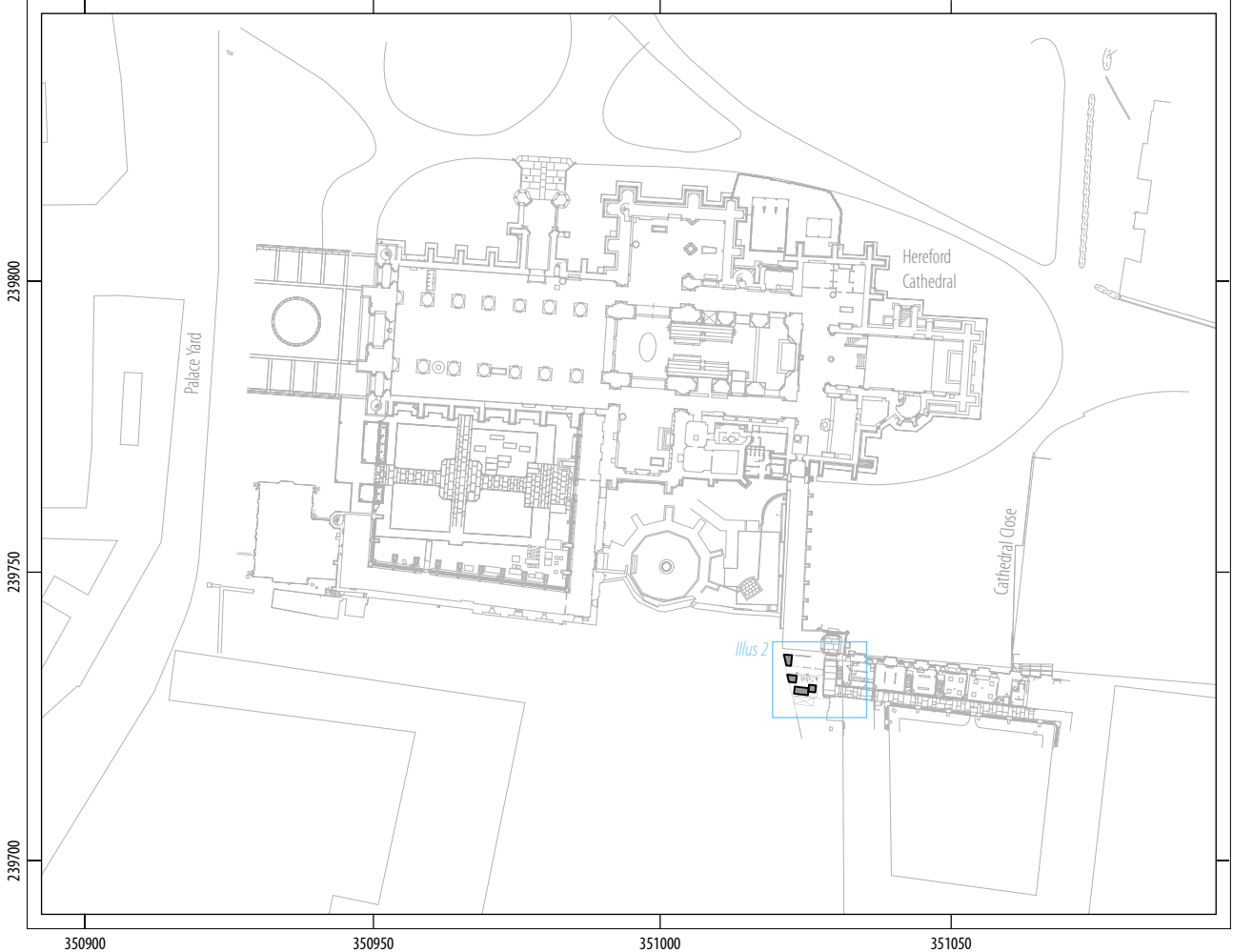
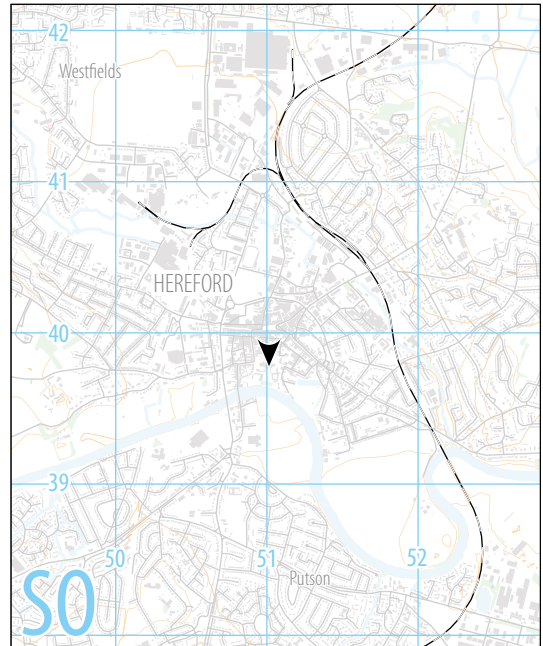
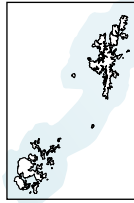
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CLCH/01

Hereford Cathedral
Cathedral Close
Hereford
Herefordshire

0 200km
1:10,000,000 @ A4

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0 25m
1:1,250 @ A4

KEY
■ trench location

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ILLUS 1 Site location

CUSTOS LODGE, VICARS CHORAL, HEREFORD CATHEDRAL

ARCHAEOLOGICAL TRIAL PIT EVALUATION

1 INTRODUCTION

Headland Archaeology Ltd was commissioned by the Dean and Chapter of Hereford Cathedral through their agent Robert Kilgour Architects Ltd to undertake a programme of archaeological works in connection with improvements to buildings and facilities in the Vicars Choral, Hereford Cathedral. The archaeological work was undertaken in order to evaluate the potential impact on any surviving archaeological deposits of constructing a small building in a yard (Custos Lodge yard), in the northwest corner of the Vicars Choral.

1.1 PLANNING BACKGROUND

Planning permission (App. No. 161083) and Listed Building Consent (App. No. 161084) were granted by The County of Herefordshire District Council to the Dean and Chapter of Hereford Cathedral for the provision of a new changing and robing area and office within the Vicars Choral at Hereford Cathedral. In accordance with Informative No. 4 of the planning permission, which relates to the sites location within an Area of Archaeological Importance, an Operations Notice and accompanying Certificate were served on Herefordshire Council on 2nd December 2016.

Due to the significance of the site and its importance to the understanding of the development of Hereford, an archaeological evaluation was commissioned.

A Written Scheme of Investigation (WSI) was prepared by Headland Archaeology (Boucher 2016) on behalf of the Dean and Chapter, setting out the proposed strategy for archaeological evaluation. This report details the results of the subsequent fieldwork.

1.2 SITE DESCRIPTION

The site is located at the far west of the north range of the Vicars Choral, Cathedral Church of St Mary & St Ethelbert, Hereford, Herefordshire,

NGR: SO 51026 39723 (Illus 1 and 2). It lies at a height of c60m AOD and is underlain by Raglan Mudstone Formation. The excavations were within an area that was earlier occupied by the 'Custos Lodge', a 15th century building which housed the caretaker of the Vicar's Choral. The area currently comprises an open yard with a Victorian brick built structure divided into three rooms to the north side; a short overhanging roofed walkway extends from its south side. This building is within, and partially utilises the north, west and east walls of the earlier medieval structure.

1.3 ARCHAEOLOGICAL BACKGROUND

Hereford traditionally became the centre of a new diocese around AD676 but little is known of the Saxon church or its claustral buildings. It is possible that the early wooden church was rebuilt in stone as early as the 9th century or, more probably, during the episcopacy of Bishop Aethelstan (1012–56). This church was burnt during a Welsh raid in 1055 but the extent of the damage is unclear and it may not have been completely destroyed.

During excavations by Headland Archaeology (UK) Ltd in 2009–11 (Boucher et al 2015), a substantial building dated to c AD850–950 was identified in St Johns Quad to the east of St Johns Walk. Coinciding with, or predating, the construction of the building was a child's burial at the base of the foundation trench. As the building was only partially excavated, its function is not fully understood. Also identified during the 2009–11 excavations was evidence of industrial activity dating to the 10th and early 11th centuries and a stone built structure which may represent Aethelstan's cathedral church.

No new Norman church appears to have been built until the episcopacy of Reynelm (1107–15), described as fundator ecclesie in his obituary; much of the early-12th century church survives despite later changes and additions to it, and both the nave and south aisle have late 11th century origins, though the latter had been radically rebuilt in the early 14th century.

The Vicars Choral lies to the southeast of the main cathedral, and was built in the 1470s. It comprises four ranges with cloisters and a central open quad. The complex is not even sided, the east range being angled inwards to the south. It is thought that the wall to the Bishop's Palace garden to the west of it was already standing and placed constraints on the new building layout.

The site under investigation is situated within the furthest western plot of the north range. This extends beyond the edge of the west range and is recognised as the site of the Custos Lodge (for use by the custodian, or 'caretaker' of the complex). This building comprised a ground and first floor. Documentary evidence states it was later used as a site for the Cathedral Songschool; as an office; and as a porters lodge. It was largely demolished by the mid-19th Century, at which time a brick built set of three covered WCs was constructed within the north end of its footprint. The covered rooms are now used as stores for the Cathedral Restaurant, kitchen and cleaners; the open yard is used for general storage. The original north wall remains extant as well as the ground level timber framing of the east wall; the extant masonry forming this wall is reconstructed – possibly utilising material from the demolished south, and partially demolished west walls. The west wall incorporated the Bishop's Palace garden wall, which is believed to predate the Vicar's Choral and may be contemporary with the earliest parts of the Bishop's Palace which date to the late 12th Century.

Post-dating the Vicars Choral, but still thought to be late 15th Century, St John's Walk was constructed; it is a covered stone built structure which connects the Vicars Choral at the northwest corner to the southeast transept of the cathedral. Elements of the architecture of both the St Johns walk, and the Custos Lodge (which share a wall), suggest that this later build was anticipated at the time the Custos lodge was constructed.

2 OBJECTIVES

The general purpose of the investigation was to evaluate the impact of the development proposal on the archaeological resource through the acquisition of a full archaeological record and an interpretation of that record.

The archaeological investigations were carried out in order to:

- › assess extent, layout, structure and date of features and deposits of archaeological interest.
- › place, where possible, the identified features within their local and regional context.

The resulting archive (finds and records) will be organised and deposited with the local Museum to facilitate access for future research and interpretation for public benefit.

3 METHOD

Four trenches were excavated within the yard formerly occupied by the Custos Lodge. All works were undertaken between the 7th of

December 2016, and 17th of January 2017. Treasure & Son (the main site contractor) undertook the removal of paving slabs in advance of the evaluation and facilitated the removal of all spoil from the site.

The work was undertaken as specified in the WSI (Boucher 2016), although the dimensions of some trenches were altered due to on-site constraints. Three trenches were to measure 1.2m by 1m by up to 1m in depth, and one to measure 2.4m x 1.2m by up to 2m in depth. The nature of the concrete slabs covering the open yard and health and safety concerns meant that:

Trench 1 measured 1.2m x 1.2m by 1m deep.

Trench 2 measured 1.2-1.64m x 1.2m by 1m deep. A sondage was excavated at the west end to increase the depth of the trench to 1.3m.

Trench 3 measured 2.4m x 1.2m by 1m deep. A sondage was excavated at the western end of the trench to increase the excavation depth to 1.5m. The proposed excavation depth of 2m was not attempted due to access and safety concerns following a dynamic risk assessment.

Trench 4, located within a brick built room, measured the full dimensions of that space (1.9m x 1.74m by 0.55m deep), this was due to the loose nature of the fill deposit, and the discovery of a brick vault capping a void at the base.

The west half of the brick vault was removed by Treasure & Son under instruction from Robert Kilgour, and a further excavation measuring 0.83–1.30m x 1m by 0.96m deep was undertaken against the west wall below.

A second monitoring person was present at ground level throughout the deeper excavation, and a gas monitor was deployed in the void beneath the brick vault. No work was carried out in the enclosed space directly beneath the brick vault.

In addition to the specifications of the WSI, it was agreed to complete a photogrammetry survey, (generation of a 3D model from a series of photographs), of the void beneath Trench 4 in order to create a visual record that fully captures the character of the space, and to enable interrogation of the data to determine the phasing of the various walls.

Natural geology was not encountered in any of the trenches at their limit of excavation; an augur was used to bore holes through the remaining deposits in an attempt to record the level at which geological deposits were present.

An overall site plan was recorded digitally using a Total Station, and differential GPS, using standard Headland Archaeology methodology. The site plan was accurately linked to the National Grid.

Detailed recording of features and sections was undertaken on permatrace. Plans were drawn at a scale of 1:10, and sections at a scale of 1:20.



ILLUS 2 Site of the Custos Lodge Yard, Vickers Choral, Hereford Cathedral, and excavated areas within

All contexts, drawings, samples and small finds were given unique identifying numbers starting at 2001. Recording was undertaken on Headland Archaeology pro forma record sheets and a diary record was kept of the excavation.

A photographic record using a digital camera was created. The photographs record archaeological features encountered and the progress of the excavation.

Finds were collected and recorded by context; disarticulated human remains were collected and recorded by context and stored within the Cathedral Office. The artefacts retrieved during the investigation were cleaned using appropriate techniques and packaged and stored in accordance with First Aid for Finds (Watkinson & Neal 1998). All artefacts were cleaned, marked and catalogued.

The trenches were backfilled and the concrete paving slabs reinstated by Treasure and Son Ltd, after excavation and recording was completed.

Working practices followed the ClifA *Code of Conduct* (2014a) and all recording was in line with ClifA *Standards and Guidance for conducting archaeological excavations* (2014b) and the *Headland Manual*.

4 RESULTS

A register of excavated deposits listed by trench is included in Appendix 1. Finds and environmental assessments are included in Appendices 2-4.

4.1 TRENCH 1

The excavated trench measured 1.2m x 1.2m by 1m deep (Illus 3). The concrete paving slabs had been removed by the main contractor prior to excavation as specified in the WSI.

Underneath the concrete paving slabs and their associated levelling and bedding layer (2001), was the mixed backfill (2002), of a services trench [2014], which contained glass, roof tile fragments, ceramic



ILLUS 3 Trench 1 post-excavation facing north **ILLUS 4** Trench 2 post-excavation facing west including Bishop’s Palace garden wall **ILLUS 5** Trench 2 facing north. Path deposits against Bishop’s Palace garden wall

building materials (CBM) and fragments of disarticulated bone. Multiple services (2007), were identified within the trench between a depth of 0.25m and 0.49m. All were oriented N-S/NW-SE. One of the services, a ceramic soil pipe, was broken and no longer in use. The remaining three were unbroken, and potentially still live at the time of excavation; they included one ceramic soil pipe with a Y-split at the north edge of the trench, one repaired water pipe with a connector from metal to plastic, and one unidentified service (possibly also water). The western half of the trench was not excavated beyond the level of the services as the space was too confined, and because of the risk of disturbing a live service. The service trench [2014] was cut through a soft sandy, silty clay deposit (2003) which contained glass, disarticulated bone fragments, pottery and CBM, and is likely a make-up deposit as a result of building demolition or construction works.

Underlying deposit (2003) at a depth of 0.66m below ground level (BGL) a compacted sandy clay deposit (2008), with frequent water

rolled cobbles was identified. At the interface between deposits (2003) and (2008) a possible floor or yard surface was identified in the form of a level deposit of irregular, flat stones.

A burnt deposit (2012) containing disarticulated bone fragments was sealed by (2008), at a depth of 0.95m BGL. Only a small part of this deposit was visible between the continuing (2008), to the east, and the baulk supporting the services to the west. Finds recovered included a possible medieval horseshoe nail, and pottery dating between the 12th–15th Centuries. An environmental sample recovered from the deposit contained charred oat and barley seeds suggesting that the deposit is domestic in nature. The deposit remains unexcavated beyond the limit of excavation.

A hand augur was used to establish that deposit (2008) continued to a depth of 1.65m below ground level (BGL). A further deposit (2015), containing bone fragments, pottery and rare charcoal flecks was identified between 1.65–1.92m. Beyond this a yellowish grey

clay with gravels (2016), was noted from 1.92m to 2.25m. As this was devoid of any materials suggesting anthropogenic activity, no attempt was made to continue as it seems highly likely that this is natural geology.

4.2 TRENCH 2

The excavated trench measured between 1.2m and 1.64m in width (E-W) x 1.2m (N-S) x 1.0m in depth. A sondage extending to 1.3m in depth was excavated against the Bishops Palace garden wall [2023], which formed the western extent of the trench (Illus 4).

Immediately below the concrete paving slabs and their bedding deposit (2001), was a dark, silty clay levelling deposit (2005), 0.11m in depth, which contained disarticulated bone fragments and pieces of clay pipe. This sealed a lighter silty clay deposit (2004) which was 0.11m deep and contained a large amount of cultural material, including charcoal, fragments of soft mortar/render and shell. Finds collected from this context were pottery fragments, glass bottle fragments, and a decorated copper alloy mount, (Small find #2001). This deposit is probably a result of demolition activity on the site, with finds dating from the 14th–19th centuries.

Undisturbed archaeological deposits were observed from a depth of 0.44m BGL, sealed below the make-up and levelling deposits described (Illus 5). Four deposits were observed (2009), (2020), and (2017) being fills of a cut [2018] made through underlying deposit (2019). The primary fill (2017) of this cut was a soft greyish sandy clay. At the base of this fill, were stones that measured up to 0.35m x 0.20m x 0.15m and ran parallel to (and 1.0m to the east of) the Bishop's palace wall [2023]. They formed the base level of kerbing that retained a deposit to their west.

Deposit (2011) was retained between wall [2023] on the west, and the large stones within (2017) on the east. The upper surface of the deposit was compacted and continued beyond the extent of the trench to the north and south. This deposit was 0.30m deep, very stoney, and contained iron slag.

Above (2011), a thin burnt deposit (2010), containing iron slag, hammerscale, and late 11th–early 13th century pottery, also abutted wall [2023] and sloped down to the east. This deposit was 0.10m deep against the wall and thinned to nothing at its eastern extent, level with the top of the stones within (2017).

Deposit (2009) was above (2010), comprising reddish gravels 0.20m deep, and 1.2m wide, it abutted wall [2023], and thinned as it sloped down to the east where it merged with a diffused interface into (2017). It was seen to continue beyond the north and south extents of the trench. Above this a dark silty clay deposit (2020), with very coarse sand inclusions the same as is present in the render of the Bishop's Palace garden wall [2023], sat over context (2009), and diffused into context (2017) to the east in the same manner as (2010). It is likely that this was deposited as a result of standing water washed down from the wall onto the path surface. Both of these deposits had slumped eastwards into the soft primary fill of cut [2018], probably aided by water run-off from the Bishop's Palace garden wall to the west. As a whole the contexts within [2018] formed a well-constructed pathway which ran parallel with the wall and was 1.00m wide with a red gravel surface.

Context (2019), which was cut through by [2018], was a silty clay make-up deposit. Only a small area was visible in the northeast corner of the trench. This deposit was up to 0.38m deep and sat over (2022) a deposit with a similar matrix, but which had frequent water rolled stone inclusions up to 0.15m in size. The deposit was 0.14m deep at the LOE, and may have been a drainage layer associated with (2019) above.

A small sondage measuring 0.4m in width was excavated adjacent to wall [2023], in an attempt to determine the level of natural geology. A deposit (2013), containing occasional disarticulated bone fragments, and 0.28m deep was excavated. This overlay a sandy clay deposit (2026) with frequent angular stones up to 0.15m in size. This had a sharp horizontal interface, and represent a former ground surface abutting [2023].

An auger was used to bore through the remaining deposits to the east of the sondage (Illus 5), until natural geology could be identified. Deposit (2013) continued to a depth of 1.13m BGL and overlay a further archaeological deposit (2021), which was present between 1.13m and 2.12m BGL. Beyond this a yellowish grey clay with gravels (2080), was identified between 2.12m and 2.25m BGL.

4.3 TRENCH 3

The excavated trench measured 2.4m x 1.2m by 1m deep. A sondage excavated in the western corner of the trench extended to a depth of 1.5m (Illus 6).

Immediately below the concrete paving slabs and their bedding deposit (2027), was a dark levelling deposit (2028), equivalent to deposit (2005) in Trench 2. In the south east corner of the trench, a ditch feature [2030], filled by deposit (2031), was cut through (2028). It contained a broken metal service pipe visible in north facing section of the trench 0.45m below the surface.

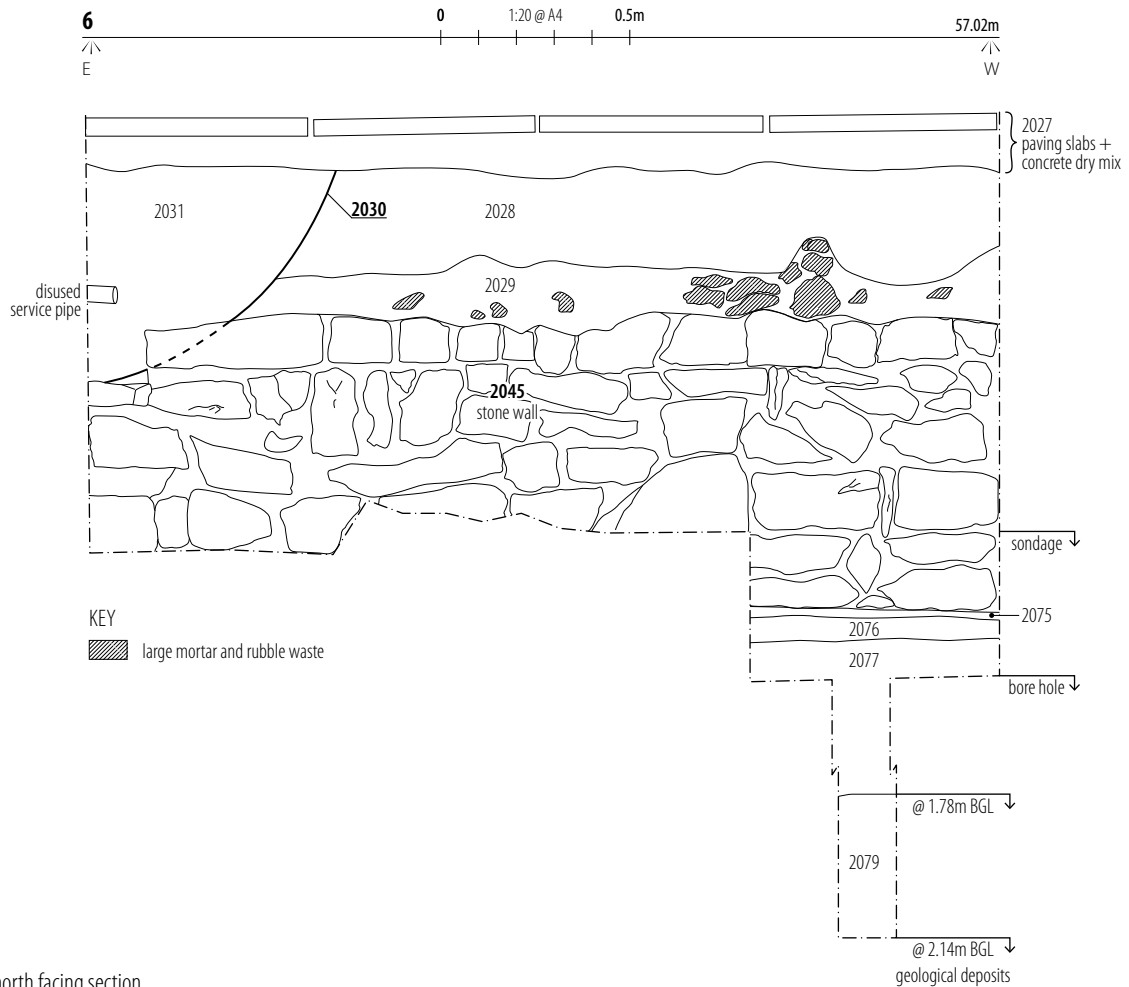
Beneath (2028), a light reddish brown deposit (2029), sealed a series of discrete archaeological features at 0.45/0.50m, marking the depth at which archaeological remains are preserved.

Deposit (2029) appeared to relate to a demolition event and included pottery sherds, clay pipe stems and bowls, CBM and fragments of mortar and render dating from the 14th-18th centuries.

A small dump of roof tile (2032) (not illustrated), dating from 14th-17th centuries was cut on the east side of the trench by [2035], the west side of the services trench identified in Trench 1 [2014].

Along the south side of the trench, a linear cut [2046], aligned east-west, with a single fill (2047), containing CBM and disarticulated bone fragments was cut against a wall on the same alignment [2045]. This feature was not cut to the base of the wall, and was therefore not associated with its construction.

A thin deposit of light brown loamy material (2037), was below the tile dump (2032), at a depth of 0.70m in the centre and east of trench. At the west end of the trench it was at a higher level c0.5m, where it was cut by a linear feature aligned north/north-west to south/south-west. This cut [2042], contained multiple fills. Excavation revealed the



ILLUS 6 Trench 3, north facing section

same series of deposits that made up the path in Trench 2 [2018], including the lower kerb stones at the same distance from (1.00m), and alignment to the Bishops Palace garden wall [2023] (Illus 7). This suggests that the path ran northwards from wall [2045] up to at least the northern extent of Trench 2. It does not survive beyond the south wall of the extant brick building (see Trench 4).

A mid reddish brown stoney deposit (2036), was identified below deposit (2037). Measuring 0.2-0.35m in depth, it was present throughout most of the trench, and was devoid of finds. This deposit was below the cuts for the services at the east of the trench. Immediately below this, and again across the full extent of the trench, context (2048) contained lime mortar, medieval ridge tile fragments, and disarticulated bone fragments. The depth of the deposit varied, but was a maximum of 0.15m at the west of the trench.

The east facing section highlighted a feature [2073], cutting (2048) at the south end of the trench. The cut was 0.65m wide, and 0.4m deep. The upper fill (2071) was level with, and probably truncated by the cut for the path [2042]. The base of the cut was against a compacted red gravel surface (2075), and was at the base of wall [2045]. It is possible that this was the construction cut for east-west aligned wall [2045], which is stone built with crudely faced blocks of various sizes (Illus 8). The courses are fairly regular. The wall is not mortared, but does have a soft earth bonding material with gravel

and small pebbles. The surviving wall is 0.75m high; the top being c0.5m BGL. The thickness cannot be measured as only c0.15m protrudes from the southern trench edge. The section of the wall directly in contact with the path make-up and surface deposits ((2038) (2039) (2040) (2044) (2041)), appears to have been disturbed. The extent of the disturbance and subsequent reinstatement of the stones could not be ascertained within the limits of the trial trench.

With deposit (2048) removed, two further deposits were exposed below at a depth of 0.80m BGL; Deposit (2049) on the east side of the trench, and (2050) on the west. Deposit (2050) lay over (2049), and was excavated to a depth of 1.00m BGL. It contained two pieces of iron – possible horse shoes, and iron slag. Several large stones were also removed with this deposit. Deposit (2049) had a high gravel content, was level to half way across the trench, where it then sloped down. This sealed another gravel rich deposit (2051), at 0.96m BGL, distinctly orange in colour, which took up the same eastern half of the trench and had the same downward profile at the centre, sloping to the west.

At the north east corner of the trench, the edge of a feature [2053] filled by a greasy burnt deposit (2052) was exposed cutting underlying deposit (2051). The context was sampled for environmental assessment and found to contain charcoal and charred cereal grain. Finds recovered from the deposit included iron items including a horseshoe nail type of the 11th-13th Century, and



ILLUS 7 Trench 3 facing west. Alignment and level of gravel path which runs along Bishop's Palace wall and through Trench 2 to northwest; runs up to wall visible in section to the south **ILLUS 8** Trench 3 mid-excavation facing southwest, showing path, walls and surface



ILLUS 9 Trench 4, brick vaulting exposed below floor of extant Victorian building, facing north **ILLUS 10** Trench 4, partially removed brick vaulting revealing void below prior to excavation, facing north **ILLUS 11** Trench 4 facing east. View along the void beneath brick vaulting

one sherd of late 11th–12th Century Cotswolds Ware pottery. The parity in levels, composition and finds, in addition to their proximity to one another suggest that this deposit and (2012) from Trench 1 are the same.

Removal of deposit (2051) exposed the heavily robbed away base of a stone built wall [2054] just east of centre in the trench. It was aligned north-south, with the south end butted up to the east-west aligned wall [2045]; it continued north beyond the north edge of the trench. Context (2050), containing large stones, iron objects etc., and the other gravel rich deposits (2049) and (2051) each represent the discarded remains of this wall i.e. rejected stone blocks, and the gravelly bonding that once held them in place. The south facing section of the trench shows a tipped line of stone that supports the idea that the wall debris was mainly cleared off to the west of the wall's standing position. Wall [2054] did not have a visible construction cut; it was built straight onto a stone cobbled surface (2059), which also formed the base of the burnt deposit cut [2053]. Surface (2059) continued east of the wall and beyond the trench edge. This formed the LOE for the east half of the trench.

A sondage measuring 0.60m x 0.60m was excavated in the south west corner of the trench which utilised [2045] as a revetment against collapse. Excavation continued to a depth of 1.50m BGL. The base of wall [2045] was exposed with a 0.04m deep layer of compacted red gravel (2075) beneath it. Two further deposits were recorded; (2076), below (2075), was 0.06m deep and contained frequent fragments of human and animal bone. Below that deposit (2077) contained

occasional bone fragments – possible human and animal. Each of these deposits continued to the north and east beyond the edges of the sondage, and were interpreted as make-up and levelling layers for the gravel surface above.

An augur was used to bore through the remaining deposits, in an attempt to identify natural geology. Deposit (2077) continued to a depth of 1.78m BGL. A further archaeological deposit (2079), was identified between 1.78–2.14m. No further progress could be made with the augur beyond 2.14m, possibly indicating the level of geological deposits.

4.4 TRENCH 4

Trench 4 was excavated within the 19th century toilet block located to the north of the yard. The excavated trench measured 1.9m x 1.74m by 0.55m deep.

Immediately below the floorboards, during the initial excavation of this trench, a 0.3–0.6m deep deposit (2024) made up of mixed fire ash and cinders, with broken and half bricks was excavated. Obviously dumped material, this also contained broken glass bottles and slate roof tile fragments. Buried within this deposit, against the north wall and centrally located, was a crudely constructed solid brick stack [2078]. The top of the stack was level with a blocked ceramic soil pipe which was to the east of it and continued through the east wall to the central room of the building. Removal of (2024), revealed the base of both the east and west brick built walls of the

extant structure, which were found to be constructed upon brick arched foundations [2090]. Underlying (2024) and [2078], was a deposit of sandy clay (2025), between large stones which filled the gap between the south wall and the sloping sides of an east-west aligned brick vault [2070]; the same sequence of deposits was evident against the north wall. These stones also ran north to south along both the east and west sides of the room, where they blocked voids between the brick vault [2070] and brick arches [2090] (Illus 9).

Brick arches [2090] are tied into element [2087], of wall [2065], to the north. On the south side they are tied into wall [2067]. The brick built 'toilet cubicle' walls are built directly upon the brick arches [2090] below.

The earlier brick vault [2070] was single skinned and utilised two types of bricks of the same size; most were mid orange, the remainder (mainly to the sloping sides), being dark red with a blueish band to one side. The vaulting was constructed from above – the mortar not pointed on the underside. The east and west edges were not finished to a straight line, but had broken bricks which appear to have been removed in order to fit brick arches [2090]. Against the north wall [2065], the vault is tied into element [2088]; to the south it is tied into wall [2067]. A void below [2070] measured 1.3m in depth, below which a deposit of loosely compacted backfill material was visible.

The western half of the brick vault [2070] was removed by the main contractor under instruction from the agent, revealing deposits below, as well as the continuation of the Bishops Palace garden wall [2066] to the west of the extant west toilet block wall (Illus 10). Wall [2066] could be seen to continue below the level of those deposits. The void was seen to form a tunnel like space extending the length of the building to the east.

In order to further understand the nature of the vaulted space beneath the toilet block, excavation of the deposits at the base of the void was undertaken to determine their date and extent.

The excavation that followed measured 0.83–1.30m (E-W) x 1m (N-S) x 0.96m deep between wall [2066] to the west, wall [2065] to the north and wall [2067] to the south. Illus 11 shows the void beneath the brick vault [2070] from the position of this trench.

The uppermost deposit (2055) was a thin layer of broken brick. Immediately below it was a deposit of ash and charcoal (2056), with mixed brick; probably Victorian in date. A dump of lime render (2060), lay beneath it with the main body of it dumped against the north, west and south walls. Fragments were also present at a consistent level within a loose silty clay matrix.

Below the lime render dump was another dump of demolition material (2061), 0.15m deep, with occasional pieces of wood, broken bottles and fragments of lime mortar. This and the deposit above may represent demolition material of the Custos Lodge at or earlier than the mid-19th Century, and the construction of the vault [2070].

At a depth of 2.26m beneath the brick vault apex and underlying deposit (2061) was a floor surface of pebbles 0.02-0.05m in size (2064), compacted into a reddish gravel concretion. The north, west and south walls of the structure forming the vaulted space were

built onto this surface with no surviving sign of a construction cut to suggest that they had buried foundations.

It was not possible to determine the presence of natural geology in this trench due to the enclosed working space and heavily compacted nature of the final floor surface deposit.

4.5 PHOTOGRAMMETRY SURVEY OF VOID BENEATH TRENCH 4

In order to create a record of the vaulted area beneath Trench 4 a photogrammetry survey was undertaken in order to create a 3D model of the space. The interactive model can be viewed by following the link below. A freeze frame image of the survey highlighting the various construction phases is provided as Illus 12.

<https://skfb.ly/ZEFL>

The void corresponds to the floorplan of the 19th century toilet block above (6.17m E-W x 1.74m N-S) and measures 2.26m in depth (from the underside of the brick vault apex).

Although appearing to correlate with the dimensions of the structure above, the subterranean void is of far earlier construction considering the materials used and the phasing within the component walls. It seems likely that the space once formed a cellar to the 15th century Custos Lodge above, however, the west wall may be of even earlier construction.

The west wall (Bishop's Palace boundary wall)

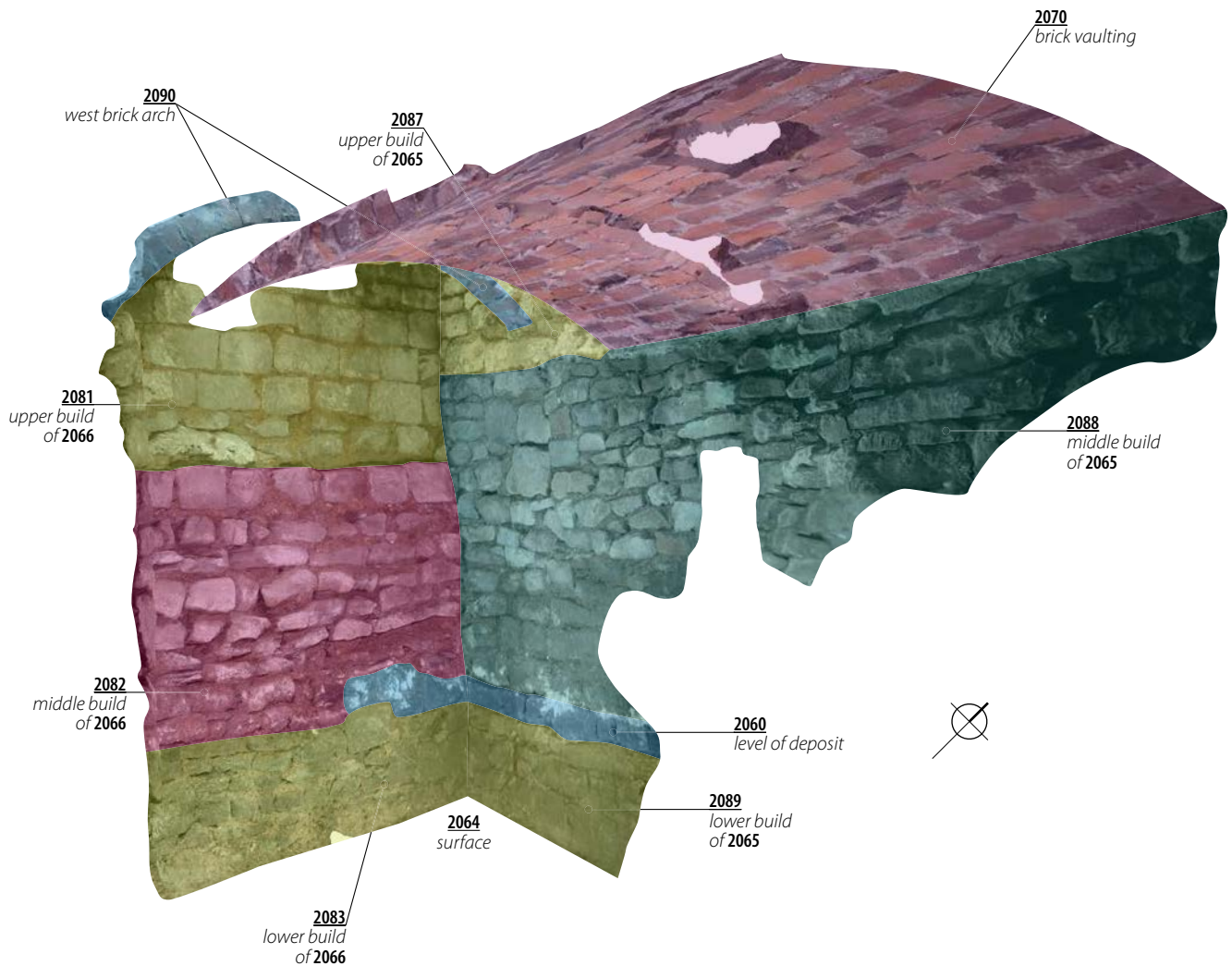
The west wall (Group [2066] – comprising [2081], [2082], and [2083]), is aligned north, northwest-south, southeast and based on documentary evidence is potentially of earlier construction than the other walls forming the void. It is of three phase construction and was built using sandstone during each phase. The lowest phase [2083] which measures approximately 0.50m in height, is tied into [2089] – the lowest phase of the north wall. The wall at this point appears to be randomly coursed, using smaller stones than the phases above.

The middle phase [2082], has irregular courses, narrower than those above. The south end is not faced, while there are some crudely faced blocks to the north. There is no pointing, and the blocks are bonded with a soft clay and gravel mix. This element is stepped out from the masonry above.

The upper phase [2081], has regular courses, and is well faced with smooth pointing.

The north wall (Custos Lodge)

The north wall (Group [2065] – comprising [2089], [2088], [2087]), is aligned east-west and is parallel to the south wall [2067]. Below ground level it is of three phase construction (Illus 13) and was built using sandstone during each phase. The lowest phase [2089] is tied into [2083] – the lowest phase of the north wall. Each remaining phase butts [2066].



ILLUS 12 Trench 4. Image taken from photogrammetric survey of the brick vaulted area below the extant victorian building, looking to northwest corner

The middle phase [2088], has random coursing and block sizes. The blocks are crudely faced with coarse bonding material and better quality pointing in the bottom three courses. The coursing is similar in nature to phase [2082] of the west wall, however the two walls are not tied together and instead butt up against each other.

The upper phase [2087], has irregular courses and block dimensions. The stones are very crudely faced with smooth pointing using a very coarse material. This element steps out from the masonry above. Brick arches [2090] are tied into this element (Illus 14).

The south wall

The south wall [2067] (not illustrated), is aligned east-west and is parallel to the north wall [2065]. It is of single phase construction, with the exception of a broken course of brick just below current ground level, which is directly associated with the extant Victorian brick built structure. It was built using roughly hewn sandstone, with uneven courses and butts the west wall [2066]. The total height of this wall is 2.75m.

5 DISCUSSION

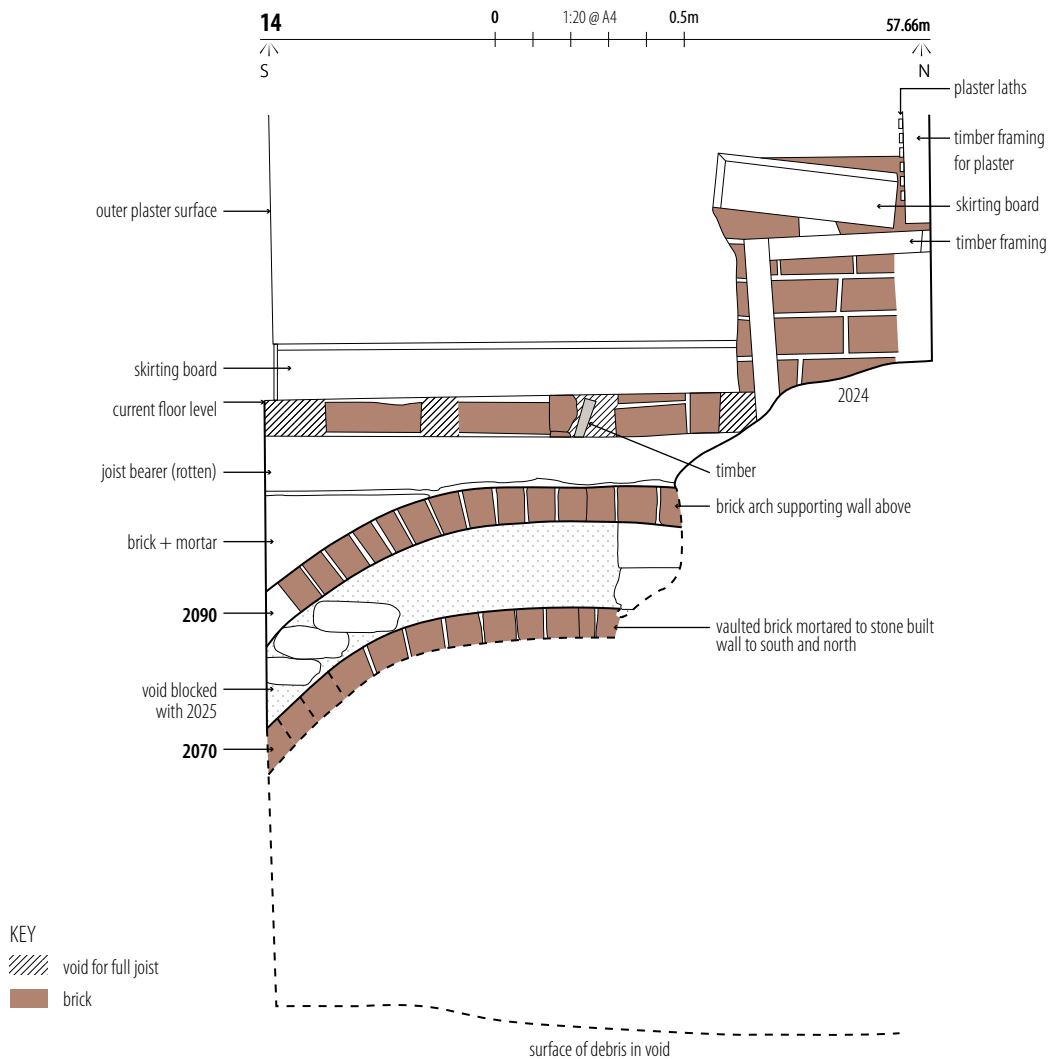
Deposits relating to the demolition of the Custos Lodge in the early-mid 19th century were identified immediately below the existing yard surface and continued to a depth of c0.4m. At this depth the remains of a substantial E-W wall [2045] were identified at the southern extent of Trench 3. The wall matches the orientation and location of the south wall of the 15th century Custos Lodge building as illustrated on 18th century maps of the site.

Wall [2045] truncated a sequence of deposits containing pottery dated to the 12th – 15th centuries, along with a gravel deposit (2009) which appeared to represent a kerbed path running adjacent to the Bishop’s Palace garden wall [2023]. These deposits pre-date the construction of the Custos Lodge in the late 15th century.

Cobbled surface (2059) which was located at a depth of 1.04m below ground level in Trench 3 appeared to represent a surface indicative of more intensive activity compared to the overlying layers. The height of this deposit at 55.78m AOD is comparable to the upper surface of Saxon deposits (55.70m) observed during excavations undertaken in St John’s quad c20m to the northeast (Boucher et al



ILLUS 13 Trench 4 **A)** Current ground level to base of walls, facing north **B)** Walls butting at higher levels, facing north **C)** Walls tied in together at base, facing northwest



ILLUS 14 East facing section through brick arch structures [2070 and 2090] (Trench 4)

2015). A robbed out wall [2054] on a parallel alignment to the extant Bishop's Palace boundary wall to the west suggests that the two features are contemporaneous.

Geological deposits were identified in Trench 1 at a depth of 54.90m AOD, compared to the geological level of 55.03m AOD observed during the excavations in St John's quad. The level of natural observed in Trenches 2 and 3 was slightly deeper (54.63m AOD and 54.68m AOD respectively), which could suggest the presence of archaeological intrusions into the surface of the geological deposits.

Although the nature of the archaeological deposits is poorly understood below a depth of 1.00m below ground level (56.72m AOD), excavation by means of sondage and hand auger has shown that manmade deposits continue to a depth of 54.63m (Trench 2) giving a total depth of 2.19m of archaeological deposits below the current yard surface. The upper 0.40m of this sequence is considered to be of low archaeological value.

The cellar identified during the excavation of Trench 4 appears to relate to the former Custos Lodge. It seems likely that the lower brick arch [2070] formed a roof to the cellar whilst the Custos lodge was still present on the site (although given the construction material it

is unlikely to be an original feature). Cellars are known to be present beneath other buildings within the Choral; Number 21, on the west range, and the hall on the south range are known to have access to cellar spaces. The hall on the south having a brick vaulted roof, and a blocked passage which runs under the walkway and into direction of the central quad.

As part of the mid-late 19th century redevelopment of the Custos Lodge site when the upper floor and internal parts of the building were demolished, the earlier cellar roof [2070] was truncated so that partition walls, also supported on arches [2090] could be built as part of the toilet block construction above.

The relationship between the walls forming the cellar raises a number of questions regarding the relative date of the masonry elements. If it is accepted that the Bishop's Palace wall [2066] is of earlier construction than the Custos Lodge, then the obvious question is why the Bishop's Palace wall (a presumed plot boundary) extends to such a depth below ground level. The answer would appear to be that the original boundary wall extended to the base of [2081] (upper build) and was subsequently underbuilt with the construction of [2082] and [2083] when the Custos Lodge and its cellar were built in the 15th century. Also of interest is the apparent

tying in of the lower phases of the north-south and east-west walls, whereas above this level, the Custos Lodge north wall [2088 and 2087] appears to abut the Bishop's Palace wall. The answer may be that by tying in the lower levels, enough strength had been incorporated into the structure, to allow the far easier technique of abutting the structures to proceed with the construction of wall elements [2088] and [2087].

6 CONCLUSION

The archaeological excavation has succeeded in assessing the potential for archaeological remains in the area of the proposed development. Floor surfaces and built structures are preserved below the current yard surface at a depth of c0.40m (56.42m AOD), and continue to a depth of 2.19m (54.63m AOD) below ground level. Excluding the east-west aligned wall towards the south of the proposed development area and the cellar identified to the north, the deposits below a depth of 0.40m pre-date the 15th Century Custos Lodge that once occupied the site. Considering the significant archaeological deposits identified during previous excavations c20m to the northeast of the Custos Lodge (Boucher et al), the potential for survival of significant archaeological deposits of medieval and Saxon date within the proposed development area is considered high.

7 REFERENCES

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8 APPENDICES

APPENDIX 1 SITE REGISTERS

Appendix 1.1 CONTEXT REGISTER

TR1	L (M)	W (M)	MIN. D (M)	MAX. D (M)
	1.20	1.20	0.35	1.00
CONTEXT	DESCRIPTION			DBGL (M)
2001	Concrete flag stones and dry mix bedding			0–0.15
2002	Mixed backfill deposits from services			0.10–0.69
2003	Mid pinkish brown ground make-up layer with demolition rubble inclusions – same as (2004) and (2029)			0.34–0.69
2006	Surface water run-off drain N-S			0.00–0.15
2007	4 x services including one broken soil pipe			0.25–0.48
2008	Remnant yard/floor surface with make-up/levelling deposit			0.69–L.O.E. Further augured to 1.65
2012	Charcoal rich deposit			0.95–L.O.E.
2014	Cut for services trench			0.20–0.69
2015	AUGURED – Orangeish brown silty sand with material culture present.			1.65–1.92
2016	AUGURED – Yellowish grey clay and gravel. Natural geology.			1.92–2.25+

SUMMARY

Located on east side of Custos Yard. Services running through only allowed excavation of east side of trench. Archaeological deposits begin at base of services trench with possible old yard surface. Excavated to 1.00m. Augured to 2.25m. Natural geology from 1.92m.

TR2	L (M)	W (M)	MIN. D (M)	MAX. D (M)
	1.64	1.22	1.00	1.26
CONTEXT	DESCRIPTION			DBGL (M)
2001	Concrete flag stones and dry mix bedding			0–0.17
2004	Mid reddish brown ground make-up layer with demolition rubble inclusions – same as (2003) and (2029)			0.29–0.54
2005	Blackish brown make-up deposit – same as (2028)			0.54–0.70
2006	Surface water run-off drain E-W			0.00–0.17
2009	Red path gravel – same as (2039)			0.46–0.68
2010	Burnt deposit – same as (2040)			0.60–0.66
2011	Path make up deposit – same as (2044)			0.67–0.98
2013	Silty loam deposit – same as (2072)?			0.98–1.13/1.25
2017	Fill of path cut [2018] – same as (2041)			0.45–0.98
2018	Cut for NNW-SSE path – same as [2042]			0.45–0.98
2019	Silty clay make-up deposit			0.44–0.84

2020	Silty clay with coarse inclusions – run-off from wall [2023] over path surface (2009)	0.48–0.59
2021	AUGURED – sandy clay similar to (2005)	1.13–2.12
2022	Silty clay make-up/drainage deposit	0.83–0.96
2023	Bishop's Palace wall / west wall of tunnel – same as [2066]	0–1.28+
2026	Stoney deposit/surface mortared to Bishops wall [2023]	1.28+
2080	Natural geology	2.12+

SUMMARY

Trench located against Bishops Palace wall in northwest corner of Custos Yard. 2 make-up deposits (2005) and (2004) overlay 1m wide path [2018] which ran along east face of wall [2023]. Northeast corner of trench exposed outer edge of the construction cut for the path. Sondage placed against wall and excavated a further 0.28m at client request; this exposed deposit (2026) which is bonded to the wall.

Augured to depth of 2.12m and reached natural geology.

TR3	L (M)	W (M)	MIN. D (M)	MAX. D (M)
	2.44	1.22	1.00	1.48
CONTEXT	DESCRIPTION			DBGL (M)
2027	Concrete flag stones and dry mix bedding – same as (2001)			0–0.13
2028	Dark brown make-up deposit – same as (2005)			0.13–0.29/0.60
2029	Light reddish brown make-up layer with demolition rubble inclusions – same as (2003) and (2004)			
2030	Cut of services trench in SE corner			
2031	Mixed fill of [2030]			
2032	Dumped stone roof tiles			0.50–0.71
2033	Top fill of services trench [2035]			
2034	Basal fill of services trench [2035]			
2035	Cut of services trench			
2036	Stoney deposit			
2037	Mid brown loamy deposit			0.51–
2038	Dark grey – top gravel of path			0.51–0.52
2039	Red path gravel – same as (2009)			0.52–
2040	Burnt deposit – same as (2010)			0.69–
2041	Fill of path cut [2042] same as [2017]			
2042	Cut for NNW-SSE path – same as [2018]			
2043	2 courses of stone in (2039) across path			0.51–0.69
2044	Path make up deposit – same as (2011)			
2045	Wall E-W in south section			0.51–
2046	Linear cut against [2045]			
2047	Fill of [2046]			
2048	Brown clay and stone deposit			
2049	Sandy clay and gravels deposit			

2050	Greyish brown sandy clay deposit	
2051	Sandy loam and orange gravels	
2052	Fill of [2053]	
2053	Shallow sub angular cut – extends beyond N and E of trench.	
2054	Wall, N-S Heavily robbed	
2057	Mixed red gravel and burnt deposit E of [2054]	
2058	Gravel deposit below [2054]	
2059	Surface/floor below and E. of [2054]	
2062	Cut between (2063) + (2050) function undetermined	
2063	Gravel and small stone deposit W of [2054]	
2071	Top fill of [2073]	
2072	Sandy clay deposit	
2073	Construction cut for [2045]	
2074	Basal fill of [2073]	
2075	Compacted red gravel surface	1.29–1.32
2076	Grey brown sandy silt. Possible levelling for (2075)	1.32–1.38
2077	Reddish brown silty clay deposit	1.38–1.78
2079	AUGURED – Silty clay deposit ¹	1.78–2.14

SUMMARY

Trench parallel to south wall of Custos Yard. Cuts [2030] + [2035] for service trenches on east side. Wall [2045] in south section continues beyond limits of trench to east and west. N-S Wall [2054] butts [2045] and continues beyond limit of trench to the north; possible material from this wall to the west. Path [2042] runs along east face of Bishop's wall [2066] and butts north face of [2045]. Possible demolition (2032) from Custos lodge between path and wall [2045]. Various make up and surfaces at and below wall levels. Natural geology not confirmed after digging sondage in SW corner, and then auguring to 2.14m.

2068	Compacted floor surface – same as (2064)	2.81= LOE
2069	Demolition deposit – same as (2055)	2.46–2.81 LOE
2070	Brick vaulting – single skin	0.56
2078	Brick stack for toilet	0.10–0.50
2081	Upper build of [2066]	
2082	Middle build of [2066]	
2083	Lower / basal build of [2066]	
2084	Brick element behind plaster on south face of [2065]	
2085	Faced and tooled upper build of [2065] as seen on its north face	
2086	2nd from top element of [2065]	
2087	Middle build of [2065]	
2088	2nd from bottom build of [2065]	
2089	Bottom/basal build of [2065]	
2090	West supporting brick arch and wall of extant building	
2091	East supporting brick arch and wall of extant building	

SUMMARY

Western room of brick built toilet block. Two deposits beneath floor boards which sit on brick vaulting. A void below the vaulting extends the length of the brick toilet building with multi-phase stone built walls comprising the north, south and west elements. East wall is also stone built but not examined closely due to health and safety limitations. Full room excavated 1.65m x 1.73m.

Brick vault cut through to allow brick arches to be installed which support the north-south brick wall elements of extant toilet block.

0.90m of vaulting removed by main contractor under direction from agent to provide access beneath. Excavation 0.83–1.30m x 1.73m carried out against wall [2066] to west. Deposits of rubble and dumping over floor surface (2068) which was too compacted to excavate. This level is also the wall base level.

TR4	L (M)	W (M)	MIN. D (M)	MAX. D (M)
	<1.65	<1.73	0.86	2.81

CONTEXT	DESCRIPTION	DBGL (M)
2024	Detritus beneath floorboards. Ash, cinders and brick	0–0.60
2025	Deposit with stone block voids between [2070] and brick arches supporting extant brick walls	0.50–0.86
2055	Demolition deposit – same as (2069)	2.46–2.81
2056	Silty ash deposit	1.85–2.31
2060	Dump of lime and wood	1.70–2.02
2061	Silty clay make-up deposit	2.31–2.46
2064	Possible floor surface with pebbles same (2068)	2.81 = LOE
2065	North wall of tunnel/ North Custos Lodge wall	0–2.81
2066	Bishop's Palace wall / west wall of tunnel – same as [2023]	0–2.81
2067	South wall of tunnel / foundation of toilet block south wall	0–2.81

APPENDIX 2 FINDS ASSESSMENT

The finds assemblage numbered 44 sherds (353g) of pottery, 28 sherds (2.654kg) of ceramic building material, 268g of mortar and plaster, 2.574kg of industrial waste, eight finds (1.247kg) of stone, and various finds of clay pipe, glass and metalwork. These were found in Trenches 1–3. The finds dated from the medieval, post-medieval and modern periods. The finds are summarised by trench in the Table A2.1 and a complete catalogue is given at the end.

Medieval to modern pottery

The pottery assemblage comprised 44 sherds with a total weight of 353g. It consisted of a mixture of medieval, post-medieval and modern wares. Where possible, it was recorded using the conventions of the Hereford type-series (Vince 1985) (Table A2.2).

The range of pottery types is typical of sites in the region. Most of the sherds apart from the modern material are quite small, and doubtless the product of secondary deposition.

Metalwork

The metalwork includes one find of copper alloy, two of lead and 12 of iron. The single copper alloy find is a modern decorative mount in

thin pressed brass (layer (2004)). The lead finds are a piece of riveted lead sheet and a short strip of window came. Both were found in post-medieval deposits (layer (2029); deposit (2037)) and both probably relate to Cathedral maintenance and repairs.

The ironwork includes two horseshoe nails both of a type known as fiddle-key (Clark 1995, 86) which were commonly in use between the 11th and 13th centuries. Both were associated with medieval pottery in deposit (2012), and sub-angular feature [2053] (2052). Two pieces of horseshoe were found in deposit (2050), though any diagnostic detail was obscured by corrosion products. A further piece of possible horseshoe was found in post-medieval deposit (2037). The only other iron find of apparent medieval date was a roughly lozenge-shaped piece of sheet (sub-angular feature [2053] (2052)) of uncertain function. Other finds include nails and a large strap, again, probably related to Cathedral repairs.

Clay pipe

There were 21 sherds of clay pipe, including three near complete bowls. The bowls (deposit (2028), layer (2004)) were of forms dated to the second half of the 17th century (Peacey 1985, M8.A8, Types E–G). Two bore the wheel heel stamp, commonly used by Hereford makers at that time (Peacey 1985, M8.A14–B8). The wide bore of most

TR	FEATURE	POTTERY (MEDI)		POTTERY (PM)		POTTERY (MOD)		METAL- WORK	CLAY PIPE	GLASS	STONE			CBM		BUILDING MATERIAL		IND WASTE	SPOT DATING
		Count	Wgt	Count	Wgt	Count	Wgt				Count	Count	Count	Count	Wgt	Count	Wgt		
1	deposit 2002	–	–	1	14g	5	140g	–	1	2	–	–	–	–	–	–	–	–	19th–20th
1	layer 2003	2	10g	1	4g	2	13g	1	3	–	–	–	3	39g	2g	–	–	–	PM–Mod
1	deposit 2008	4	46g	–	–	–	–	–	1	3	5	372g	10	334g	2g	2g	–	–	PM with residual Medi
1	deposit 2012	3	8g	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	12th–13th
2	layer 2004	1	5g	2	11g	–	–	3	5	1	–	–	1	42g	–	–	–	–	Mod
2	deposit 2010	1	1g	–	–	–	–	–	–	–	–	–	–	–	–	–	2,493g	–	L11th–E13th
2	deposit 2011	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	43	–	?
3	deposit 2028	–	–	4	12g	4	15g	1	10	1	–	–	2	57g	–	–	<0.5g	–	Mod
3	layer 2029	1	4g	8	42g	–	–	1	–	–	1	38g	1	31g	203g	–	–	–	PM
3	service trench 2030	–	–	–	–	–	–	–	–	–	–	–	1	37g	–	–	–	–	L Medi/E PM
3	deposit 2032	1	12g	–	–	–	–	–	–	–	1	182g	9	2,070g	–	–	–	–	L Medi/E PM
3	deposit 2037	2	14g	1	1g	–	–	4	1	1	1	655g	–	–	–	–	–	–	PM
3	linear 2046	–	–	–	–	–	–	–	–	–	–	–	–	–	–	58g	–	–	?
3	deposit 2048	–	–	–	–	–	–	–	–	–	–	–	1	44g	3g	–	–	–	M13th–15th
3	deposit 2050	–	–	–	–	–	–	2	–	–	–	–	–	–	–	–	36g	–	?
3	sub-angular 2053	1	1g	–	–	–	–	2	–	–	–	–	–	–	–	–	–	–	12th–13th
Total		16	101g	17	84g	11	168g	15	21	8	8	1,247g	28	2,654g	268g	–	2,574g	–	–

TABLE A2.1 Summary of finds assemblage by trench and feature with spot dating

CODE	FABRIC	DATING	SHERDS	WGT
A7b	Hereford Medieval Glazed Ware	mid 13th–early 15th century	4	33g
B1	Malvernian Ware	12th–14th century	2	7
B2	Malvernian Glazed Ware	12th century	1	1
B4	Malvernian Oxidized Glazed Wares	14th–17th century	4	19
C1	Worcester Sandy Ware	late 11th–early 13th century	1	1
D2	Cotswolds Ware	late 11th–12th century	4	40
A7d	Black-glazed Earthenwares	17th century	5	30
A7e	Newent and Whitney slipwares	late 17th – 18th century	1	14g
E6	Staffordshire Slipware	mid 17th – 18th century	1	4g
G5	Tin-glazed Wares	17th – 18th century	9	32g
G8	Black-glazed Cups	late 16th – 17th century	1	4g
MOD	All 19th – 20th century Wares	–	11	168g
Total			44	353g

TABLE A2.2 Medieval to modern pottery type series

of the stems indicates they are also of probable 17th century date. While most of the pipe sherds are 17th century, most were found in mixed modern deposits.

Glass

The glass amounts to seven sherds of window glass and one bottle sherd. The bottle sherd represents the neck and flared rim of a hand finished phial in green glass. It was found in deposit (2037) associated with post-medieval pottery and clay pipe and probably dates to the later 17th or early 18th century. The window glass includes several laminating sherds of possible early post-medieval date. The earliest stratified are three sherds found in deposit (2008), associated with finds of 17th century date or earlier.

Stone

The stone finds mostly represent stone roof tiles. There are two larger sherds, including dressed edges, a drilled peg hole and adhering mortar. These are of a medium-grained micaceous grey sandstone 12–20mm thick. There are also several smaller sherds of the same stone, possibly broken sherds or offcuts. One sherd (deposit (2008)) shows signs of having been reworked into a rough disc-shape. Most were associated with late medieval or early post-medieval ceramic roof tile and may represent roofing repairs or alterations.

Ceramic building material

Twenty-eight fragments of tile occurred, weighing 2654g. They were classified using the conventions of the Herefordshire type-series (Vince 1985) (Table A2.3).

CODE	FABRIC	DATING	SHERDS	WGT
A7	Herefordshire Tile	late 13th – 17th century	1	44g
B4	Malvernian Tile	late 14th–17th century	26	2,568g
TOTAL			27	2,612G

TABLE A2.3 Medieval roof tile type series

Eight refitting fragments of a glazed Malvernian ridge-tile occurred in deposit (2032). It is a 'coxcorn' type, with a clear green glaze on and around the crests, although many of the latter had broken off. The tile has retained traces of mortar at both ends, and one peg-hole has survived at each end. Both are c 8mm in diameter. The tile is 12mm thick, and has survived to its full length, 405mm. Otherwise, the assemblage consisted of small fragments which were either residual or the product of secondary deposition. Two further fragments of ridge-tile of Malvernian type were noted in context (2008). Both were small, but of a similar thickness, with one retaining traces of glaze and the other a scar where a coxcorn crest had broken off. A single fragment of a coxcorn in the same fabric occurred in layer (2003), and a single small unglazed fragment of a ridge-tile in fabric A7 occurred in deposit (2048).

Other fragments of Malvernian tile, both glazed and unglazed, also occurred. As noted by Vince (1977, 275), it is difficult to distinguish between small fragments of flat roof-tiles and the non-curved areas of ridge-tiles, and so it seems likely that as Malvernian ridge-tiles are far more common than flat tiles in Hereford (ibid.), some, if not all these fragments may be from ridge-tiles. Given the large proportion of Malvernian tile from this site, it is entirely possible that the dating of some of them is later than the bare terminus post quem would suggest. Malvernian tiles are known in Hereford as early as the late 14th century, but did not become common until the mid 16th–17th century (Vince 1985, 69).

A fragment of an encaustic floor-tile occurred in layer 2004. The fabric and quality of the glaze suggest very strongly that it is a modern, probably 19th century imitation of a medieval example.

Other building materials

Several lumps of lime mortar and plaster were recovered including a mortar fragment (3g) associated with a medieval roof tile in deposit (2048). Other finds are from post-medieval and modern contexts.

Industrial waste

A collection of 2.574kg of ironworking waste was recovered, concentrated particularly in deposit (2010), which contained 97% of the assemblage (2.493kg). It was associated with one small sherd of medieval pottery which potentially dates the deposit. The material includes fragments of slag with a runned appearance as well as a collection of hammerscale, suggesting smithing and smelting in the vicinity.

There was also a small piece of blue possible glass waste attached to a fragment of charcoal in modern deposit (2028)

Discussion

The assemblage was small but varied in terms of materials and dating. The spot dating of the individual deposits also suggests a reasonably undisturbed stratigraphy in the three trenches containing finds. The earliest deposits in all three trenches appear to be of 12th–13th century date (deposit (2012), (2010) and sub-angular cut [2053]), and are dated by pottery and iron horseshoe nails. There is also evidence for ironworking at this early date. The ironworking waste and evidence for horseshoes might be connected, suggesting a forge in the vicinity. Evidence for late Saxon and early Norman ironworking was uncovered during previous excavations around the Cathedral (Boucher et al 2015, 172–4).

Later deposits are characterised by finds of building materials relating to the fabric of the Cathedral. These include ceramic ridge tiles, stone roof tiles, lime mortar and plaster, window glass, lead window comes, lead sheeting and iron nails. These seem to relate to later medieval and post-medieval alterations and repairs. Various other finds are associated with these deposits including clay pipes, pottery and a glass phial. These probably represent a mixture of residual midden material and products consumed by workmen during these building works.

Modern layers contain pottery, a modern encaustic floor tile and much residual earlier material.

Archive recommendations

The assemblage is small but contains material of medieval and post-medieval interest, including a number of finds relating to the fabric of the historic cathedral. The finds should be retained, though the modern pottery is of little further archaeological value and could be discarded.

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Appendix 2.1 Finds catalogue

TR	CONTEXT	FEATURE	SAMPLE	QTY	WGT (G)	MATERIAL	OBJECT	DESCRIPTION	SPOT DATE
1	2002	deposit 2002	—	1	14	Pottery (PM)	A7e	Newent and Whitney slipware	17th–18th
1	2002	deposit 2002	—	1	1	Clay Pipe	Bowl	rim sherd, open ended bowl	L18th–E20th
1	2002	deposit 2002	—	5	140	Pottery (Mod)	MOD	modern wares	19th–20th
1	2002	deposit 2002	—	2	5	Glass	Window	good condition	Mod
1	2003	layer 2003	—	2	10	Pottery (Medi)	B4	Malvernian oxidized glazed wares	14th–17th
1	2003	layer 2003	—	3	4	Clay Pipe	Bowl & stem	bowl rim sherd, bulbous bowl; two stems, one wide bore, one narrow bore	PM–Mod
1	2003	layer 2003	—	1	4	Pottery (PM)	G8	Black-glazed cup	L16th–17th
1	2003	layer 2003	—	2	13	Pottery (Mod)	MOD	modern wares	19th–20th
1	2003	layer 2003	—	1	11	Iron	Nail	wrought woodworking nail with flat head	—
1	2003	layer 2003	—	2	2	Building Material	Plaster	fragment of white-washed lime plaster	—
1	2003	layer 2003	—	1	17	CBM	Ridge tile	Fabric B4, Malvernian Tile, ridge-tile	L14th–17th
1	2003	layer 2003	—	2	22	CBM	Roof tile?	Fabric B4, Malvernian Tile, ?roof tile	L14th–17th
2	2004	layer 2004	—	2	11	Pottery (PM)	A7d	Black-glazed Earthenwares	17th
2	2004	layer 2004	—	1	5	Pottery (Medi)	B4	Malvernian oxidized glazed wares	14th–17th
2	2004	layer 2004	—	5	28	Clay Pipe	Bowl & stem	two bowls bulbous bowl, one complete, one missing rim, both with wheel stamp on heel and rouletting around the edge of the bowl, c 1650–1700 (Peacey 1985 Type E-G); two wide bore and one narrow bore stems	L17th, 19th
2	2004	layer 2004	—	1	1	Copper Alloy	Decorative mount	decorative mount or disc, with pressed decoration; decoration includes a hatched design as well as raised dots; diameter 25mm	—
2	2004	layer 2004	—	1	42	CBM	Floor tile	Modern Floor Tile	19th
2	2004	layer 2004	—	2	224	Iron	Strap	two joining pieces from same flat wide strap, possibly a hinge strap or similar	—
2	2004	layer 2004	—	1	2	Glass	Window	laminating, straight cut edge	PM
1	2008	deposit 2008	—	2	19	Pottery (Medi)	A7b	Hereford Medieval Glazed Ware	M13th–E15th
1	2008	deposit 2008	2002	1	1	Clay Pipe	Bowl	small sherd from bulbous bowl	17th–e18th
1	2008	deposit 2008	—	2	27	Pottery (Medi)	D2	Cotswolds Ware	L11th–12th
1	2008	deposit 2008	2002	1	131	Stone	Disc	Piece of apparent stone roof tile possibly worked into rough disc shape, pot lid?, diam c 73mm	—
1	2008	deposit 2008	2002	—	1	Industrial Waste	Iron slag	undiagnostic slag fragments	—
1	2008	deposit 2008	2002	—	1	Industrial Waste	Mag res	hammerscale	—
1	2008	deposit 2008	—	3	2	Building Material	Plaster	fragments of lime plaster	—
1	2008	deposit 2008	—	2	139	CBM	Ridge tile	Fabric B4, Malvernian Tile, ridge-tile	L14th–17th
1	2008	deposit 2008	—	8	195	CBM	Roof tile?	Fabric B4, Malvernian Tile, ?roof tile	L14th–17th
1	2008	deposit 2008	2002	4	241	Stone	Roof tile?	fragments of possible sandstone roof tiles, very abraded	
1	2008	deposit 2008	—	3	0	Glass	Window	laminating	PM
2	2010	deposit 2010	—	1	1	Pottery (Medi)	C1	Worcester Sandy Ware	L11th–e13th
2	2010	deposit 2010	2003	—	2401	Industrial Waste	Iron slag	mostly undiagnostic slag fragments but some have a runned appearance	—

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2	2010	deposit 2010	2003	—	92	IndustrialWaste	Mag res	hammerscale	—
2	2011	deposit 2011	—	—	43	IndustrialWaste	Iron slag	undiagnostic slag fragments	—
1	2012	deposit 2012	—	2	7	Pottery (Medi)	B1	Malvernian Ware	M13th–E15th
1	2012	deposit 2012	—	1	1	Pottery (Medi)	B2	Malvernian Glazed Ware	12th
1	2012	deposit 2012	2005	1	4	Iron	Horseshoe nail	possible fiddle-head horseshoe nail, clenched shaft	Medi
3	2028	deposit 2028	—	10	32	Clay Pipe	Bowl & stem	lower part of bowl with flat heel, M-L 17th; wide bore stems, one narrow bore	17th, 19th
3	2028	deposit 2028	—	4	12	Pottery (PM)	G5	Tin-glazed Ware	17th–18th
3	2028	deposit 2028	—	1	0	IndustrialWaste	Glass/enamel?	lump of bright blue ?glass/enamel attached to piece of charcoal	—
3	2028	deposit 2028	—	4	15	Pottery (Mod)	MOD	modern wares	19th–20th
3	2028	deposit 2028	—	1	5	Iron	Nail	shaft	—
3	2028	deposit 2028	—	2	57	CBM	Roof tile?	Fabric B4, Malvernian Tile, ?roof tile	L14th–17th
3	2028	deposit 2028	—	1	9	Glass	Window	laminating	PM
3	2029	layer 2029	—	3	19	Pottery (PM)	A7d	Black-glazed Earthenwares	17th
3	2029	layer 2029	—	1	4	Pottery (Medi)	B4	Malvernian oxidized glazed wares	14th–17th
3	2029	layer 2029	—	1	4	Pottery (PM)	E6	Staffordshire Slipware	M17th–18th
3	2029	layer 2029	—	4	19	Pottery (PM)	G5	Tin-glazed Ware	17th–18th
3	2029	layer 2029	—	1	200	Building Material	Mortar	amorphous lump of lime mortar	—
3	2029	layer 2029	—	1	3	Building Material	Plaster	fragment of white-washed lime plaster	—
3	2029	layer 2029	—	1	31	CBM	Roof tile?	Fabric B4, Malvernian Tile, ?roof tile	L14th–17th
3	2029	layer 2029	—	1	16	Lead	Sheet	small piece of sheet or strip with large circular lead rivet trough one end	—
3	2029	layer 2029	—	1	38	Stone	Stone	vitrified stone with salt-glazed exterior on one side	—
3	2031	service trench 2030	—	1	37	CBM	Roof tile?	Fabric B4, Malvernian Tile, ?roof tile	L14th–17th
3	2032	deposit 2032	—	1	12	Pottery (Medi)	D2	Cotswolds Ware	L11th–12th
3	2032	deposit 2032	—	8	1710	CBM	Ridge tile	Fabric B4, Malvernian Tile, ridge-tile	L14th–17th
3	2032	deposit 2032	—	1	182	Stone	Roof tile	sandstone roof tile, peg hole present	—
3	2032	deposit 2032	—	1	360	CBM	Roof tile?	Fabric B4, Malvernian Tile, ?roof tile	L14th–17th
3	2037	deposit 2037	—	2	14	Pottery (Medi)	A7b	Hereford Medieval Glazed Ware	M13th–E15th
3	2037	deposit 2037	—	1	6	Lead	Came	short length, folded over itself	—
3	2037	deposit 2037	—	1	1	Pottery (PM)	G5	Tin-glazed Ware	17th–18th
3	2037	deposit 2037	—	1	67	Iron	Horseshoe?	possible horseshoe fragment, detail obscured by corrosion products	—
3	2037	deposit 2037	—	2	18	Iron	Nails	covered in thick corrosion products	—
3	2037	deposit 2037	—	1	6	Glass	Phial	neck and top of body present, green, hand finished flared rim	17th–18th
3	2037	deposit 2037	—	1	655	Stone	Roof tile	stone roof tile, lime-mortar present on both sides	—
3	2037	deposit 2037	—	1	1	Clay Pipe	Stem	fragment, intermediate bore size	17th–19th
3	2047	linear 2046	—	3	58	Building Material	Mortar	amorphous lumps of lime mortar	—
3	2048	deposit 2048	—	1	3	Building Material	Mortar	amorphous lump of lime mortar	—
3	2048	deposit 2048	—	1	44	CBM	Ridge tile	Fabric A7, Herefordshire ridge-tile	M13th–E15th

3	2050	deposit 2050	—	1	46	Iron	Horseshoe	length of curving web, detail obscured by corrosion products	—
3	2050	deposit 2050	—	1	79	Iron	Horseshoe?	length of possible horseshoe, narrow web, detail obscured by corrosion products	—
3	2050	deposit 2050	—	—	36	Industrial Waste	Iron slag	undiagnostic slag fragments	—
3	2052	sub-angular 2053	—	1	1	Pottery (Medi)	D2	Cotswolds Ware	L11th–12th
3	2052	sub-angular 2053	2012	1	4	Iron	Horseshoe nail	fiddle key head (Clark 1995, 86), clenched shaft	11th–13th
3	2052	sub-angular 2053	2012	1	15	Iron	Sheet/Rove plate	roughly lozenge-shaped though relatively thin, possibly a door stud or rove plate	—

APPENDIX 3 ENVIRONMENTAL ASSESSMENT

Introduction

Four soil samples, ranging in size from 10 to 20 litres, were recovered during archaeological evaluation work within the area of the Custos Lodge, Vicars Choral, Hereford Cathedral. In addition to the bulk samples two further contexts were sampled for hand collected bone. The aims of the assessment were to assess the presence, preservation and abundance of any environmental remains and to determine the potential of the material in indicating the character and significance of the deposit.

Method

Bulk samples were subjected to flotation and wet sieving in a Siraf-style flotation machine. The floating debris (the flot) was collected in a 250 µm sieve and once dry, scanned using a binocular microscope. Any material remaining in the flotation tank (retent) was wet-sieved through a 1mm mesh and air-dried. All samples were scanned using a stereomicroscope at magnifications of x10 and up to x100. Identifications, where provided, were confirmed using modern reference material and seed atlases including Cappers et al. (2006) and Zohary et al. (2012) nomenclature for wild taxa follows Stace (1997).

Faunal remains were examined under low magnification and, as far as possible, identified to species and skeletal element, using modern reference material and with reference to Schmid 1972), and Hillson (1992). Measurements are taken as per von den Dreisch (1976). Ageing criteria were recorded using various methods outlined in Amorosi (1989). Fragments were recorded together with their weight and level of preservation and included any signs of butchery or modification.

Results

Results of the assessment are presented in Tables A3.1 (Retent samples), 2 (Flot samples) and 3 (Hand collected bone). Material sufficient for AMS (Accelerated Mass Spectrometry) radiocarbon dating is shown in the tables. All plant remains found were preserved through charring.

Charred plant remains

Preservation of charred plant remains was generally good. Charcoal fragments are present in all four samples of which only one context (2052) contained fragments of a size sufficient for identification and/or Accelerated Mass Spectrometry (AMS) dating (see Tables 1 and 2).

Charred cereal grain is present in only two contexts; (2012) and (2052) with oat (*Avena* sp.), hulled barley (*Hordeum vulgare*) and bread wheat (*Triticum aestivo-compactum*) represented. Poorly preserved grains lacking key diagnostic features were classified as cereal indet. (Table A3.2).

The small weed seed assemblage comprised rare numbers of 'seeds' in contexts (2012) and (2052) (see Table A3.2). Weed seeds recorded included; grasses (*Poaceae*), sedges (*Carex* sp.) and docks (*Rumex* sp.) which may represent material brought on site as contaminants

of the cereals.

A small number of charred hazel (*Corylus avellana*) nutshell fragments were recovered from contexts (2008) and (2012).

Animal bone

Animal bone was recovered from five contexts (Tables A3.1 and 3). The majority of the bone present was from the three major domestic food species; cattle, sheep and pig.

The fragments of pig bone suggest animals not fully grown (<1year old). The sheep remains indicate high meat-value bones from young animals with marks of paring on lower leg bone suggesting the skinning of the carcass. The cattle remains were mostly high meat-value parts of the carcass.

Wild species: Fish bones have not been fully analyzed, but definite herring bone was identified. One of the bird bones derived from a small duck, almost certainly a wildfowl, rather than domestic, species. The small mammal and amphibian (probably frog) bones are likely to be incidental inclusions.

Human bone

A left first distal phalanx (last joint of the left thumb) was recovered from context (2008). Levelling deposit (2076) yielded a fragment of a male left pubis, the form of the pubic symphysis surface suggests an age of around 45–50 years at death.

It is not unusual for stray fragments of human bone to be found in deposits excavated in the vicinity of medieval graveyards, where spoil from intercut graves may become incorporated.

Discussion

The small cereal grain assemblage does not offer any significant information relating to site economy other than possible crop choices. The presence of both cereal grain and charcoal fragments in the charred plant assemblage suggests the disposal of domestic rubbish generated via conflagration activities (eg cooking).

The domestic animal bone assemblage suggests a consumption site comprising kitchen and meal waste, rather than butchery and slaughter. The consumption of the higher meat parts of younger animals may indicate high status.

The paucity of remains precludes any further analysis.

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TABLE A3.2 Flot sample results

CONTEXT	SAMPLE	FEATURE	TOTAL FLOT VOL (ML)	OAT	BARLEY	WHEAT	INDET. CEREAL	HAZELNUT SHELL	OTHER CHARRED PLANT REMAINS	CHARCOAL		MATERIAL SUFFICIENT FOR AMS DATING	COMMENTS
										Qty	Max size (mm)		
2008	2002	floor/yard surface layer	15	-	-	-	-	+	-	++++	5	-	
2010	2003	burnt/charred deposit with slag	10	-	-	-	-	-	-	++++	10	-	Oak and non-oak charcoal
2012	2005	charcoal rich deposit	15	+	+	-	-	-	Grass sp.+, fungal sclerotia +	++++	5	-	
2052	2012	Burnt deposit with charcoal or bone	50	+++	+	+	+	-	Grass sp.+, Dock sp.+, Carex sp. +	++++	23	Charred oat, charcoal	Oak and non-oak charcoal

Key: += rare (0-5), ++ = occasional (6-15), +++ = common (15-50) and ++++ = abundant (>50)

NB charcoal over 10mm is sufficient for identification and AMS dating

TABLE A3.3 Hand Collected Animal Bone

CONTEXT	FEATURE	SPECIES	COUNT	WGT (G)	BONE	FUSED	UNFUSED	BUTCHERY	NOTES
2028	Deposit	BOS	1	6	dP4	-	-	-	dP4 @ b, <6mo
2028	Deposit	OVC	1	5	upper molar	-	-	-	upper molar of sheep
2076	Levelling deposit	BOS	1	119	R HUMp	-	1	-	unfused R HUMp of cattle
2076	Levelling deposit	BOS	1	11	SCP(blade)	-	-	-	Scapula blade of cattle
2076	Levelling deposit	BOS	1	68	RTIBd	1	-	CUT (joint)	fused RTIBd of cattle with evidence for butchery cut
2076	Levelling deposit	BOS	1	22	upper molar	-	-	-	upper molar of cattle
2076	Levelling deposit	NID	2	19	-	-	-	-	-
2076	Levelling deposit	HUMAN	1	11	R PUBIS	-	-	-	MALE, Todd IX, 45 - 50yo

NID=Non-identifiable

OVC= Sheep/Goat

BOS= Cattle

SUS=Pig



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