

Rochester Cathedral

Cloister – Scheduled Monument no 1003405 (ME 294); Scheduled Monument Consent reference

National Grid Reference (NGR) TQ 7426 6847

Report on the excavation of three drainage test pits in the garth



Figure 1: The cloister garth test pit excavations in progress, July 2021

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Finds report by Cathy Keevill

Keevill Heritage Ltd, for the Dean and Chapter of Rochester

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Rochester Cathedral cloister – Report on the excavation of three drainage test pits in the Garth

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Figure 2: Extract from the National Heritage List mapping, showing the extent of the Scheduled Monument – here marked as ‘Cloisters (remains of)’. Ordnance Survey data Crown Copyright 2021. All rights reserved. Licence number 100051221.

Executive summary

Keevill Heritage Ltd undertook small-scale excavations in the Scheduled cloister garth at Rochester Cathedral on 19-20 July 2021 for the Dean and Chapter of Rochester. Three 0.6m-square test pits were excavated to a maximum depth of 0.9m on the western side of the garth so that the water percolation rate could be measured. This information was needed so that new drainage provision for the Cathedral could be designed. The pits encountered little more than rubble layers of the post-medieval period, although a few finds of floor and roof tile most probably came from late medieval buildings and surfaces around the cloister. A rubble layer at the bottom of pit 2 probably derived from the demolition of the west cloister range in c 1805. The soil immediately above this most likely represented the laying out of formal gardens around a new Prebendal House, built in the south-west corner of the cloister as soon as demolition of the west range had been completed. The same garden soil was also seen in pit 1. Further demolition rubble above these layers probably derived from the Prebendal House – it was demolished in 1937, after which the cloister and garth were re-landscaped. A rubble layer was also found in the third pit, but this was much thicker and unconsolidated. It might represent debris left when Sir George Gilbert Scott built a flying buttress in the north-west corner of the cloister to support the leaning outer wall of the South Quire Aisle. The excavations were not deep enough to expose significant archaeological remains (this was deliberate). A small assemblage of artefacts from the three pits includes a few pieces of late medieval or early post-medieval building rubble. A small amount of post-medieval pottery and clay pipe was also found. A flint flake, probably of earlier prehistoric date, was a surprising find: it must be residual.

1 Introduction

1.1 Background

Keevill Heritage Ltd undertook small-scale trial excavations in the cloister garth at Rochester Cathedral, Medway (Kent), on 19-20 July 2021. The work was carried out for the Dean and Chapter of Rochester as part of an ongoing study of rainwater flooding issues at the Cathedral, and how these might be mitigated in future. Torrential rain on 17 June 2016 had flooded the crypt of the cathedral, and inadequate existing drainage provision in the cloister area has been identified as one of the root causes for the flood.

The garth forms the greater part of a Scheduled Monument, described as the “Remains of Rochester Priory cloister”. It is National Heritage List number 1003405¹; its former old county number (OCN) is ME 294. Former OCN sites often do not have any online information on the National Heritage List: that is the case for the cloister. The cloister buildings are also listed (NHL No 1086461²), as is the Cloister Gate (NHL 1320354,³ also known as the Cellarer’s or Bishop’s Gate), both at Grade I.

The Dean and Chapter commissioned the Morton Partnership (MP) to study the causes of the 2016 flood. Their research showed that the drainage capacity in the Cloister was not sufficient to cope with major flood events like that in 2016, and that further capacity would be needed. Percolation testing, and thus the excavation of the three small test pits reported on here, was needed to inform the detailed design of the new drainage. The excavations were covered by Scheduled Monument Consent reference S00241335, granted on 25 June 2021. The finalised drainage scheme will require a separate application for Scheduled Monument Consent in due course.

¹ [Remains of Rochester Priory cloister, Medway - 1003405 | Historic England](#)

² [CATHEDRAL CLOISTER BUILDINGS, Medway - 1086461 | Historic England](#)

³ [CLOISTER GATE, Medway - 1320354 | Historic England](#)

Three 0.6m-square test pits were excavated to a maximum depth of 0.9m on the western side⁴ of the garth so that the water percolation rate could be measured, starting on 19 July 2021. Graham Keevill (Cathedral Archaeologist for the Dean and Chapter of Rochester since 2006) directed the excavations and was assisted by Cathy Keevill and Jacob Scott. Rob Slade of Shakespeare Pullen & Slade Ltd carried out the percolation measurements on 20 July 2021. The pits were then filled in. All excavation was done by hand, in accordance with the written scheme of investigation (WSI) which had been approved as part of the SMC application. The WSI provides detailed information on the archaeological potential of the cloister garth. This report therefore focusses on the archaeological results from the test pits, and discusses these in the context of the background described in the WSI.

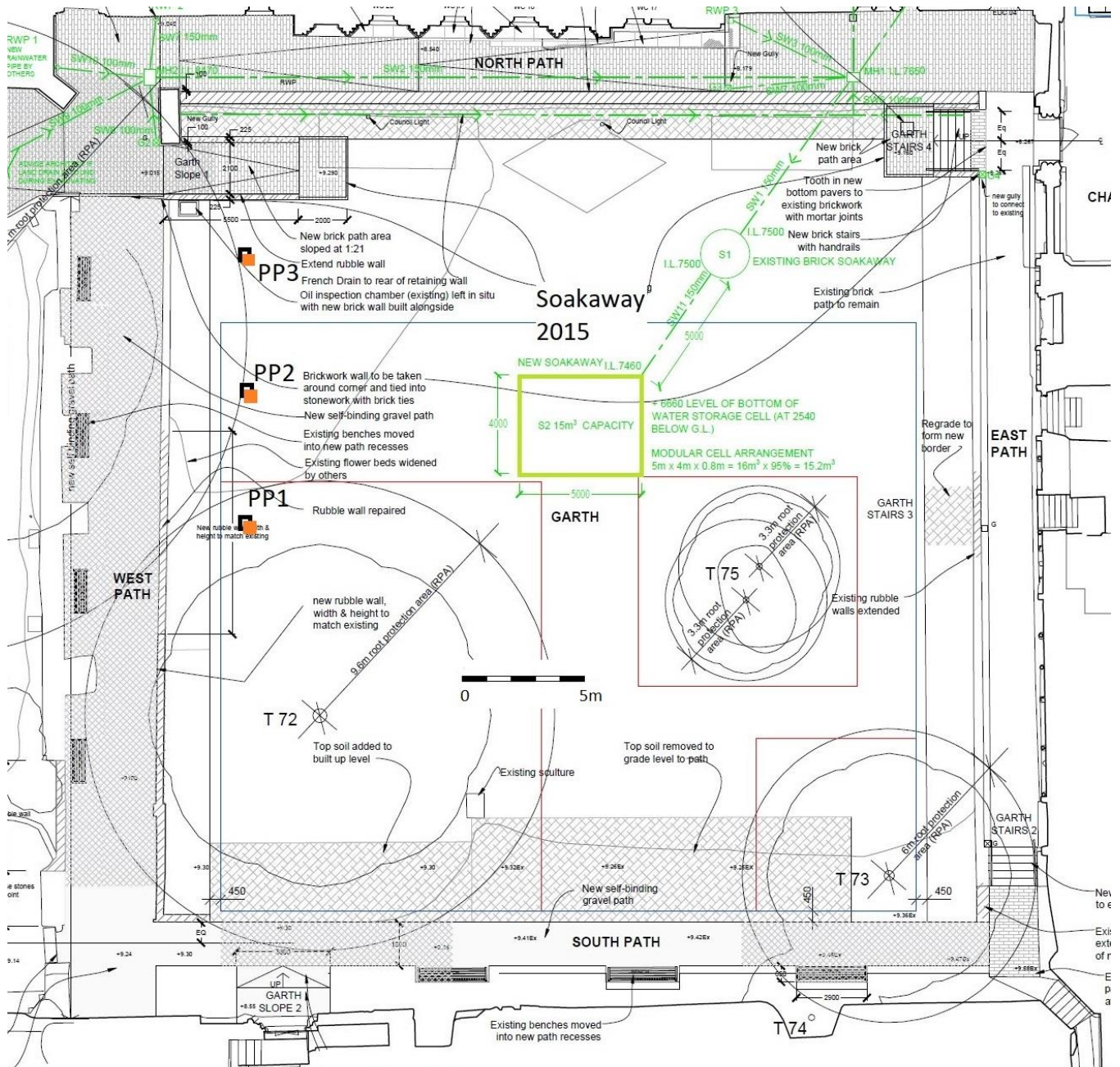


Figure 3: The pit locations – as planned in black, as dug in orange. Scale 1:250, based on C&G as-built survey.

⁴ Rochester Cathedral is oriented north-west to south-east. It can be helpful to describe such buildings and/or site using to 'standard' east-west orientation for simplicity. This convention - the ecclesiastical compass - is followed throughout this document.

1.2 The site's geology and topography

The bedrock geology at Rochester Cathedral is the Lewes Nodular Chalk Formation - sedimentary material formed approximately 86 to 94 million years ago in the Cretaceous Period, in a local environment dominated by warm chalk seas.⁵ The British Geological Survey does not record any superficial (drift) geological deposits in the garth, but Brickearth was found in our excavations in the cathedral's crypt and cloister. The garth is laid to lawn with flower borders on the west, south and east sides. The grassed area is largely flat, at around 9.3m above Ordnance Datum (aOD).

2 Results of the watching brief

2.1 Stratigraphy

The three pits were spaced at 5m intervals (edge to edge rather than from centre to centre). This was necessary to check whether there was any differential pattern to the drainage. The three pits were excavated in sequence, starting with the southernmost one (PP1 – percolation pit 1) and then working north. In each case the full 0.6m-square area was dug to a depth of 0.6m, at which point a smaller sondage (0.3m square) was dug down a further 0.2m-0.3m. The drainage test was carried out in the lower part by filling it with water and measuring the rate (time taken) for this to drain away. The tests worked well in PPs 1 and 2 but less so in pit 3. The reason for this is described below. The topsoil was the same dark grey-brown fine silty clay loam in each pit, with few inclusions of any kind. This was recorded as context **1** in PP1 (where it was 100mm thick), **4** in PP2 (120mm thick) and **9** in PP3 (80mm thick).



Figure 4: Pit 1 after excavation looking north, with rubble from layer 2 much in evidence.

⁵ Source: British Geological Survey, <http://mapapps.bgs.ac.uk/geologyofbritain/home.html?>

In PP1 the topsoil sealed a hard, compact 0.45m-thick layer of mid-brown silty clay (**2**) containing large amounts of coarse demolition rubble (stone, tile and brick). This filled all but the bottom 50mm of the initial 0.6m-deep excavation, but did not continue into the sondage at the bottom. Finds from this layer were largely of late medieval or early post-medieval date, but also included some modern material. The significance of this and rubble deposits found in the other two pits is discussed below. In PP1, the rubble layer sealed a mid-brown gritty silty clay (**3**) occupying the remaining 0.35m of the excavations (ie the base of the pit and all of the sondage). The bottom of this layer was not found, so its full thickness is not known. Finds were of post-medieval date except for a flint flake probably of earlier prehistoric date; the layer also contained much charcoal and oyster shell (a small sample of the shell was kept).

A similar sequence was observed in PP2, although discovery of electrical cable cover **6** in the east half of the pit constrained further excavation to the west half (the sondage was therefore dug in the north-west corner of the pit). No trench for the cable could be recognized, but it had been cut through a very similar rubble layer (**5**) to the one found in PP1. The soil matrix was exactly the same, as was the general character of the rubble. In this case no medieval or early post-medieval tile or stone was found, but one small piece of 18th/19th-century pottery was present along with a few very small clay pipe stem fragments. Layer **5** was only 0.28m-0.3m thick, but as in pit 1 it overlay a gritty mid-brown silty clay (**7**), 0.25m thick at the base of the pit and continuing into the sondage. Here the gritty soil sealed a second rubbly layer (**8**) with a very distinctive 'crust' (almost a surface) at the top of grey mortar containing small pieces and flecks of charcoal and chalk. 'Salt and pepper' mortar of this type is common in the Medway during the 18th century/very early 19th century. The rest of the layer comprised dark brown silty clay with abundant flint pebbles and occasional small pieces of brick. These were not diagnostic but were consistent with an 18th-century date.



Figure 5: Pit 2 looking north on completion (left), with a detail of the sondage looking north-west during the first pour of water. Note the distinctive mortar lens just above the sondage, and the flint pebbles below this. The coarse rubble layer (**5**) is also clearly visible in both photographs.

The stratigraphy in PP3 initially looked similar to what had already been excavated in the other two pits, but it quickly became apparent that the sequence here was actually very different. Only one rubble layer (10) was found, and this occupied the entire depth of the pit (ie 0.85m except for the 80mm topsoil): it continued beyond the base of the excavation. The rubble here was very loose and poorly compacted, to the extent that it was not possible to excavate a clear sondage in the bottom of the pit – the sides were too loose, and rapidly collapsed. The fill was also very porous, and the percolation testing had to be abandoned because the lower part of the pit could not retain water long enough for it to fill up. It drained away as fast as more water could be poured in. The general character of the brickwork in the rubble suggested a somewhat later date than the material in layers 2 and 5, but the only finds were a single piece of late medieval or early post-medieval floor tile and a piece of 18th-century Staffordshire salt-glazed pottery.



Figure 6: Pit 3 looking south, with rubble layer 10 occupying all but the top 80mm of the excavation.

2.2 Finds

A very small assemblage of finds (25 objects, 775g total weight) was recovered from four layers in the three percolation pits within the cloister garth of Rochester Cathedral. All the pottery has been compared to fabric types from other Rochester assemblages and the fabric codes are those used by the Museum of London.⁶ Most material was within rubble layers from building demolitions, and this

⁶ Keevill G D and Underwood C 2010, *Rochester Cathedral: Report of an Archaeological Evaluation and Watching Brief in the cloister and south quire aisle shop store*; Keevill C, Pottery and finds, in Keevill G D and Ward A forthcoming, *Hidden Treasures, Fresh Expressions - Archaeological Surveys, Excavations and Watching Briefs at Rochester Cathedral 2011-2019*; MOLA 2014, *Medieval and post-medieval fabric codes*, [Medieval and post-medieval pottery codes | MOLA](#).

material will have been re-deposited or dumped. Indeed only such rubble deposits were found in pit 3 once the turf and topsoil had been removed. Despite this the assemblage suggests that the sources (presumably buildings) from which the floor tile, roof tile and moulded stone derived would be of considerable interest if excavated.

The flint flake, perhaps a Mesolithic blade, is an unusual find from the area. No prehistoric flint was found in the 2007-2016 cloister or crypt excavations. No Roman or Anglo-Saxon finds were present in the 2021 pits.

The pottery comprises only six sherds (87g total weight). They date from the 16th/17th, 18th and 19th centuries. Most of the pot (four sherds, 57g) is post-medieval red earthenware, including two early examples of the type (16th/17th-century). The other sherds are an 18th-century Staffordshire salt-glazed ware base and an 18th/19th-century creamware bowl sherd.

The floor tile consists of a square plain tile and part of a thick glazed tile. The floor tile types are known elsewhere in the cloister and assemblages held in the finds archive at Rochester Cathedral. These are late medieval to early post medieval, with a 15th-century date seeming most likely. A substantial area of in situ flooring of this type was found in the west cloister walk during a watching brief in 2009.⁷ The glazed roof tile may be the same date. The glass includes window glass from a building and vessel glass which may be early/mid post-medieval (17th-18th century). The stone moulding may be part of a 17th-century window or door.

Cxt	Material	Fabric/type	No	Wt	Date	Comment/description
Pit 1						
2	Pmpot	PMR	2	13	C19-C20	Flowerpot
2	Roof tile	Red sandy	1	11	C16-C17?	Green glaze roof tile mortar and mortar lines on glazed side - overlapping tiles
2	Floor tile	Sand chalk grog	1	362	C15-C16	Plain square 84mm x 84mm, 25mm thick specks of glaze.
2	Bone	Animal	1	6		Sheep/goat rib
2	Stone	Limestone	1	68		Moulded limestone building stone, 60mm wide and 52mm long, raised ridge 15mm depth of moulding
3	Iron	Object	1	29		Heavily concreted nail/screw? Sf no 1
3	Flint	Flake/blade	1	3		Flake micro blade reworked edge sf no 2
3	Glass	Vessel	1	46		Clear glass, base of phial?
3	Glass	Window	1	4		Clear blue green
3	Glass	Vessel	1	4	C18?	Fine dark green bottle glass
3	Wood		2	8		Burnt wood fragments
3	Pmpot	PMR	2	44	C16-C17	Co-join bodysherds smoothed ext glaze specks? Post-medieval red ware
3	Clay pipe		2	5		1 x burnt near bowl? 1 x fine white stem
3	Shell	Oyster	1	64		Large example oyster shell with ridged lines 90mm long
3	Shell	Oyster	1	13		Thin pearl like oyster shell
Pit 2						
5	Pmpot	CREA	1	4	C18-C19	Bowl side body sherd, creamware

⁷ Keevill and Underwood 2010 op cit, especially figures 1 and 5-7.

Cxt	Material	Fabric/type	No	Wt	Date	Comment/description
5	Clay pipe		3	5		3 stems 1 narrow near mouth of clay pipe.
Pit 3						
10	Pmpot	STSG	1	26	C18	Staffordshire salt-glazed ware ring base to cup or small bowl 40mm diameter. Early C18
10	Floor tile	Fine sandy	1	40	C15-C16	Small triangular fragment dark green glaze with brown flecks, 30mm thick 32 mm one side length other sides 42mm.
	Pot		6	87		
	Tile		3	413		
	Clay pipe		5	15		
	Glass		3	69		
	Iron		1	29		Object
	Shell		2	77		
	Bone		1	6		
	Stone		2	71		Includes flint flake
	Wood		2	8		
	TOTAL		25	775		

Table 1: Catalogue of finds from the percolation pits.

3 Discussion and conclusions

As expected, the excavations did not expose any significant archaeological levels. Three small test pits excavated on the south edge of the North Cloister Walk in 2007 showed that the garth there was covered with at least 1m of garden soil and similar overburden (all of late post-medieval to modern date), with medieval levels surviving more or less directly below these.⁸ A watching brief in the West Cloister Walk and the garth during 2009 revealed a late medieval tiled floor surviving at shallow depth along most of the West Walk.⁹ Further excavations during 2015-16 for the Hidden Treasures, Fresh Expressions project again confirmed that the current ground level in the garth is raised by 1m and more above archaeological horizons. In particular, excavation for a new soakaway close to the centre of the garth revealed a north-south wall/foundation probably of medieval date (although a Roman origin cannot be ruled out entirely) 1.1m below the grass level, with natural brickearth at 1.9m.¹⁰ The 2021 excavations therefore terminated around 100mm-200mm above the level at which archaeological remains might have been found. The pits were deliberately sited away from the early 19th-century Prebendal House which stood in the south-west corner of the cloister until 1937, so that this should not complicate the task of carrying out the percolation tests.

The stratigraphy in pits 1-3 was generally similar, with coarse rubble layers found in all three. The unconsolidated rubble in pit 3 appeared to be different to the more compacted material in the other two pits, and visual assessment on site suggested that the brickwork in pit 3 was later in date than in the other pits. The finds collections do not bear this out, however, with a similar range of materials and dates across all three pits. The presence of late medieval or early post-medieval floor tiles in both layers **2** (pit 1) and **10** (pit 3) is notable, although it does not prove any direct linkage between

⁸ Keevill G D 2007, *Rochester Cathedral, Medway, Kent: Report of an Archaeological Evaluation in Association with Access Proposals in the North Cloister Walk*.

⁹ Keevill and Underwood 2010 op cit.

¹⁰ Keevill and Ward forthcoming, op cit, especially figures 63 and 64.

them. Both pits were within 4m of the in situ tiled floor found in the West Cloister Walk in 2009 (a similar floor had been found outside the door from the South Quire Aisle when a porch was erected in the early 1980s).¹¹ It is entirely possible that fragments from that pavement could have found their way into pits 1 and 3 by different routes/mechanisms.

Pit 2 contained arguably the most interesting sequence of layers, although the finds from the pit were inconsequential. Layer 8 would appear to be 18th or possibly very early 19th-century in date because of the 'salt and pepper' mortar layer or crust at its top - a characteristic material which is as datable as pottery or other finds of the same era. This might have been a poured layer or just an area of trampled material, but in either case it suggests a very definite horizon at which some activity was taking place. The most obvious context for this would be the demolition of the west cloister (cellarer's) range during the first decade of the 19th century, although it could be a little earlier and related to a smaller-scale demolition of other buildings around the cloister.

Layers 7 in pit 2 and 3 in pit 1 were very similar, and are regarded as the same. They probably represent landscaping of the cloister and garth after demolition of the west cloister range, when the new Prebendal House had new gardens laid out around it. These are shown on the 1867 1:500 Ordnance Survey town map of Rochester, and can also be seen in late 19th/early 20th-century photographs (Figures 7 and 8). If these layers do represent an early 19th-century garden soil, it follows that the overlying rubble layers (2 and 5) must be of later date. The demolition of the Prebendal House in 1937 again provides an obvious context for this. The presence of earlier finds is not problematic: the house had been built over and through earlier buildings and features (including the tiled pavement in the west cloister walk), and it is very likely that earlier material became mixed with more modern artefacts during its demolition.



Figure 7: Photograph of the Prebendal house and west side of the cloister in 1937, showing the very different landscaping created in c 1805 (see also Figure 8).

¹¹ Bacchus D 1986, Rochester Cathedral, south door porch excavations, *Archaeologia Cantiana* 102, 257-61.

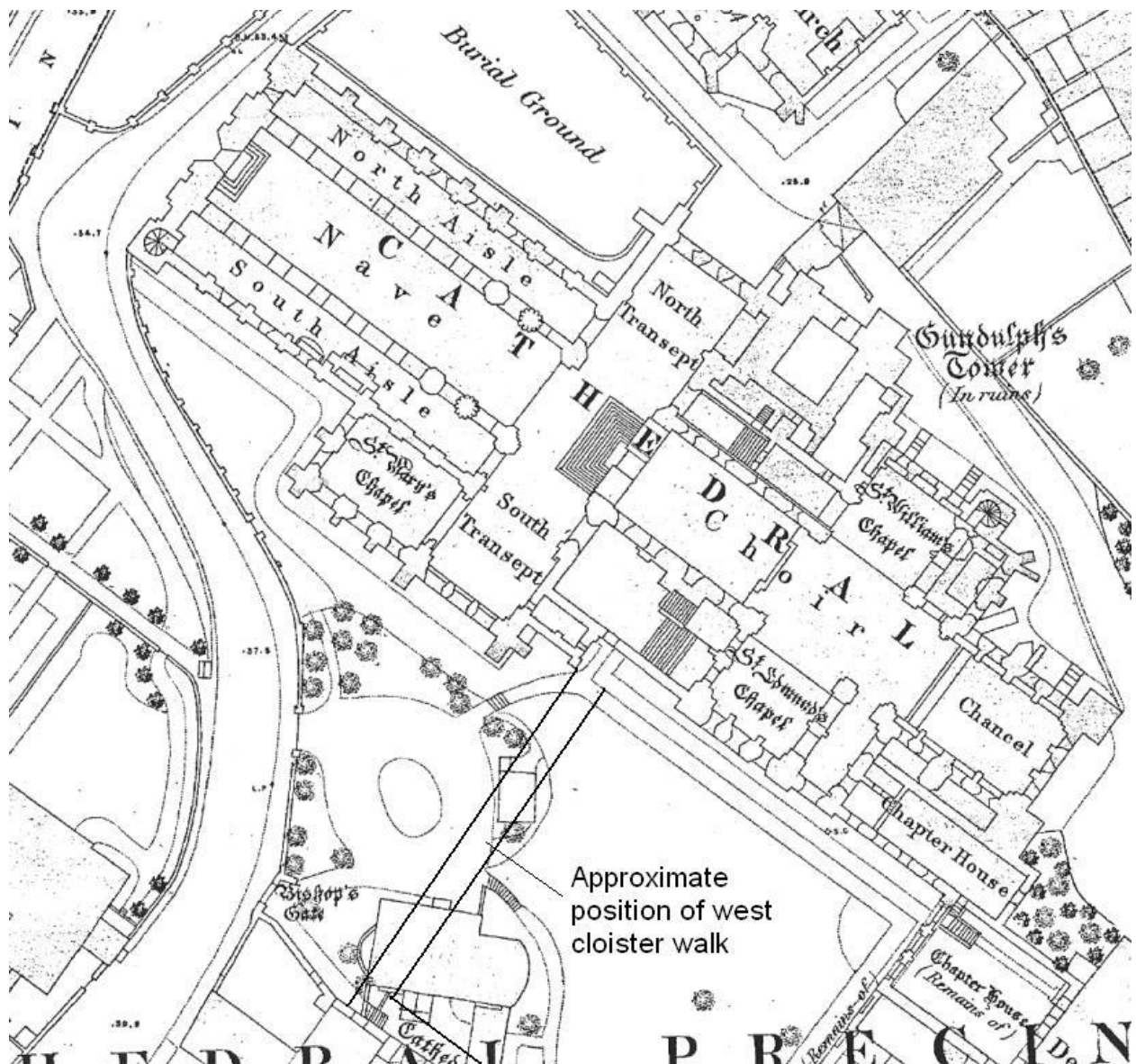


Figure 8: Extract from the 1867 Ordnance Survey map showing the Prebendal house in the cloister, with the approximate outline of the current west walk indicated. Base map copyright © and/or Database Rights Old-Maps and Ordnance Survey Crown Copyright and/or Database Rights 2010.

The looseness of the rubble in pit 3 is perhaps something of a conundrum. It contrasted sharply with the rubble layers in pits 1 and 2. The latter can certainly be regarded as one and the same deposit, but was layer 10 different? As Figure 3 shows, pit 3 is only 5m south-east of Sir George Gilbert Scott's late 19th-century flying buttress, erected to provide support for the outward-leaning wall of the South Quire Aisle (the buttress can also be seen in Figure 1 but is not on Figure 8). Excavations in this area for the HTFE project in 2015 showed that an extensive area around the buttress had been disturbed when it had been built (including substantial foundation works). This would have damaged the late medieval tile pavement in the west cloister walk as well. The tile from pit 3, and the rubble generally, could therefore derive from Scott's operations rather than demolition of either the west cloister range or the Prebendal House.

A flint flake, probably of earlier prehistoric date, was a surprising find. It must be residual, but perhaps hints at a previously unsuspected episode in the past development of the cathedral precinct.

Though limited in extent and scope, the cloister garth pits have provided helpful insights into the later post-medieval use of this space and its immediate surroundings. No earlier archaeological remains were exposed, although previous excavations and a ground radar survey in 2017 suggest that earlier buildings survive in parts of the cloister garth. The design of any new drainage solutions here will therefore take full account of the site's archaeological sensitivity.

Acknowledgements

We are very grateful to the Dean and Chapter for commissioning this work – especially Dean Philip Hesketh and Simon Lace (Chapter Clerk - Executive Director). Jacob Scott and Graham Huckstepp also provided invaluable support. We are also very grateful to John Bailey (Surveyor of the Fabric; Thomas Ford & Partners), Ed Morton (the Morton Partnership) and Rob Slade (Shakespeare Pullen & Slade) for their help before and during the fieldwork. Last but not least, the staff of Historic England (notably Paul Roberts, Maria Buczak and Dr Tom Wilson) were very helpful with the Scheduled Monument Consent, while Tom Ashley at the Cathedrals Fabric Commission for England was very supportive.

Appendix 1: Photographs before and after the excavations

The following two photographs are included in accordance with condition 3 (d) of Scheduled Monument Consent S00241335: “photographs shall be prepared of the monument before the start and after completion of the works”.



Figure A1: The garth on 19 July 2021, immediately before the start of the excavations.



Figure A2: The same view on the afternoon of 20 July 2021 after the three pits had been backfilled and the turf replaced.

Appendix 2: OASIS summary form

OASIS ID: keevillh1-427837

Project details

Project name	Rochester Cathedral cloister garth percolation pits
Short description of the project	<p>Keevill Heritage Ltd undertook small-scale excavations in the Scheduled cloister garth at Rochester Cathedral on 19-20 July 2021 for the Dean and Chapter of Rochester. Three 0.6m-square test pits were excavated to a maximum depth of 0.9m on the western side of the garth so that the water percolation rate could be measured. The pits encountered little more than rubble layers of the post-medieval period, although a few finds of floor and roof tile most probably derived from late medieval buildings and surfaces around the cloister. A rubble layer at the bottom of pit 2 was probably from demolition of the west cloister range in c 1805. The soil immediately above this is interpreted as from laying out formal gardens around a new Prebendal House, built in the south-west corner of the cloister as soon as the west range had been demolished. The garden soil was also seen in pit 1. Further demolition rubble above these layers probably derived from the Prebendal House - demolished in 1937. A rubble layer was also found in the third pit, but this was much thicker and unconsolidated. It might represent debris left when Sir George Gilbert Scott built a flying buttress in the north-west corner of the cloister to support the leaning outer wall of the South Quire Aisle. The excavations were (deliberately) not deep enough to expose significant archaeological remains. The small assemblage of artefacts from the three pits includes a few pieces of late medieval or early post-medieval building rubble. A small amount of post-medieval pottery and clay pipe was also found. A flint flake, probably of earlier prehistoric date, was a surprising find: it must be residual.</p>
Project dates	Start: 01-07-2021 End: 10-08-2021
Previous/future work	Yes / Not known
Any associated project ref codes	RCCLG21 EV - Contracting Unit No.
Type of project	Field evaluation
Site status	Scheduled Monument (SM)
Current Land use	Other 5 - Garden
Monument type	CLOISTER Medieval
Significant Finds	TILE Medieval
Methods & techniques	"Test Pits"

Development type	Drainage testing
Prompt	Scheduled Monument Consent

Project location

Country	England
Site location	KENT MEDWAY ROCHESTER Rochester Cathedral cloister garth
Postcode	ME1 1SX
Study area	10 Square metres
Site coordinates	TQ 7426 6847

Project creators

Name of Organisation	Keevill Heritage Ltd
Project brief originator	Brief prepared by Graham Keevill in role as Cathedral Archaeologist
Project design originator	Keevill Heritage Ltd
Project director/manager	Graham Keevill
Project supervisor	n/a
Type of sponsor/funding body	Dean and Chapter
Name of sponsor/funding body	Dean and Chapter of Rochester

Project archives

Physical Archive recipient	Rochester Cathedral
Physical Archive ID	RCCLG21 EV
Physical Contents	"Glass","Worked stone/lithics","Ceramics"
Digital Archive recipient	Rochester Cathedral
Digital Archive ID	RCCLG21 EV
Digital Contents	"Stratigraphic","Survey"
Digital Media available	"Images raster / digital photography","Survey"
Paper Archive recipient	Rochester Cathedral

Paper Archive ID	RCCLG21 EV
Paper Contents	"Ceramics","Glass","Stratigraphic","Survey","Worked stone/lithics"
Paper Media available	"Context sheet","Notebook - Excavation',' Research',' General Notes","Photograph","Plan","Report","Survey "

Project bibliography 1

Publication type	Grey literature (unpublished document/manuscript)
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Entered by	Graham Keevill (g.keevill@btinternet.com)
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