

**Archaeological watching brief  
at the Rotunda  
Croome Court  
Worcestershire**

Martin Cook BA MCIfA

25th November 2019

Oasis ref martinco1- 374849

Sundowner  
Circus Field Basin  
Stocklake  
Aylesbury  
HP20 1 AP

07850 918755

# **Archaeological watching brief at the Rotunda, Croome Court, Worcestershire**

## **Introduction**

An archaeological watching brief was carried out at the Rotunda, Croome Court, Worcestershire (SO 88866 44557; Fig 1) at the request of Mr John Goom of John C Goom Architects and Historic Building Consultants on behalf of the National Trust. This work was undertaken in order to investigate the deposits underlying a circular paved area and steps surrounding the Rotunda which were showing signs of structural failure and specifically to address the following questions:

- are there any earlier structures beneath the paving and steps?
- could any reason for the movement of the paving and steps be ascertained?

This was in order to inform the design of any repairs. The archaeological watching brief was to comprise documentary research, minor excavation of certain areas of the paved area and steps and a report.

## **Summary**

An archaeological watching brief was carried out at the Rotunda, Croome Court, Worcestershire. It determined that a well-built brickwork 'dome' underlay the existing circular paving and steps around the circumference of the monument. A possible reason for the structural failure of the paving and steps was thought to be the effect of water pouring off of the roof and pooling upon the paving. It was thought that this water, percolating through the porous material underlying the paving and steps, had washed away finer components of the fill resulting in the appearance and collapse of voids. These voids presumably collapsed, resulting in the movement of the paving and steps.

A summary will be published in West Midlands Archaeology.

## **The documentary material**

Documentary research was restricted to consulting the results of previous archaeological projects undertaken at Croome Court. Only one of these, the recording of deposits underlying the floor of the Rotunda, was directly relevant to the current project. However, these excavations did not penetrate deeply enough to throw any light upon the current project:

Archaeological recording during the lifting of the floor inside the Rotunda demonstrated that the stone floor sat upon small dabs of lime mortar, bedded upon a layer of sand. This overlay a construction horizon composed of builder's rubble. Finds from this layer suggested that the floor was laid sometime after 1823 and was not part of the original design of the Rotunda. Some of the material from this layer does not appear to relate directly to the construction of the existing building and may be evidence for an earlier structure or for the use of the Rotunda site as a base for works elsewhere on the estate. Below the level of the internal plasterwork, recesses in the brick wall are assumed to be the position of supporting timbers for the base of the plaster, before the stone floor was laid or evidence for the structure of an earlier floor (Brooks and Laws 2008).

Other archaeological projects undertaken at Croome Court are briefly summarised in date order below.

An evaluation by the Oxford Archaeology Unit found no evidence in any of the trenches to indicate the existence of a church or burials and no medieval pottery was retrieved from any of the spoil heaps. There were, however, deep stratified deposits of uncertain date in all but one of the trenches in the area of the Kitchen garden which seemed to be related to an earlier garden layout. There is also some evidence of Roman activity in the way of residual finds (Bell 1993).

Archaeological investigations and recording exercises were undertaken intermittently during 2009 and 2010 in various areas at Croome Court, Worcestershire. Excavation of a number of narrow

trenches and cleaning around the anticipated periphery of a cobbled surface known to have existed, from photographs, to the north of the Court demonstrated its former extent. Its relationship with the Brownian pathways to the west and south of the Court was also recorded, as was the nature of these pathways. During the course of this work a small cistern to the north of the Court was also recorded.

Survey and excavations in the Home Shrubbery located the extent of the Brownian pathways, investigated the construction of the ha-ha and the nature of the area of triangular fencing adjacent to the roll-shade to the south-west of the Court.

Watching briefs at the Visitor Centre car park (RAF Defford) and during construction of a buggy route to the south-west of the Visitor Centre car park and between the church and the Court identified, respectively, the remains of a picket post or guard house and ridge and furrow cultivation and was able to infer the former presence of a headland and field boundary.

A fish weir and screen, carriage splash and drain at the southern end of the Croome River was recorded in advance and during restoration works.

Finally, a cistern to the east of the Red Wing was recorded after its accidental discovery when a contractor's lorry broke through the ground surface (Cook 2012).

A watching brief during the laying of LAN cabling identified various brick and stone features. Many of these could have been surfaces of some description while others had a more distinct function, one being a stone base for a statue or gate post, and another potentially a drain covering. Some evidence was found for the site of a former structure. (Charles 2013)

An underground water chamber, located to the east of the Court and its contemporary 'Red Wing' service block, in an area formerly known as Laundry Green, was recorded. The chamber is rectangular in plan and is aligned approximately north-south, parallel to the east range of the Red Wing. It is of coursed lias and limestone ashlar construction with battered walls and a brick barrel-vault, the enclosed chamber having maximum dimensions of 11.75m (38½ft) long by 2.5m (8¼ft) wide and has an average depth of c.5.2m (17ft). The chamber is clearly of some antiquity and, given its location, alignment and method of construction, it seems reasonable to assume that it dates to the time of the 6th Earl's mid-18th century improvements, relating to the water supply to Brown's remodelled Court, Red Wing and adjacent laundry block. It would appear to be related to a bill dated 13th April 1764 from one William Chapman in respect of the installation of a substantial, hand-cranked pumping engine on a heavy oak frame to 'rise water out of a well fixt in the Old Servants Hall'. The recorded chamber clearly represents a feature of significant intrinsic interest, associated with the early servicing of the Court which, together with the many brick-lined culverts at Croome, forms part of a significant example of a mid-18th century water management system. This significance is enhanced by its assumed association either with Lancelot 'Capability' Brown or with Robert Adam, both of whom were working at Croome in the mid-late 18th century. (Tyler 2014).

Archaeological excavation of two 6m square trenches in advance of the installation of two LPG tanks on the North Lawn revealed a substantial culvert crossing the trench diagonally and probably forming part of the drainage system for the landscape parkland begun in 1751 by Lancelot 'Capability' Brown.

Another similar sized trench, 2m to the east, was opened. The trench was excavated to natural deposits and, with the exception of a layer of rubble and rubbish on the south side of the trench, no features or deposits of archaeological significance were seen. (Crooks 2015)

Archaeological observation of excavations relating to a new heating system impacted upon the lawn areas located north and south of the house. With the exception of a small brick-built drain or culvert, no features of

significance were present on the south side of the house. Close to the buildings, considerable disturbance was noted relating to drainage serving the converted Stable Block, which was probably installed at some point after the mid-1990s.

On the north side of the house, two walls on a northwest/southeast alignment were identified. The difference in alignment suggests these structures may represent an earlier phase, predating the present buildings at Croome. Additionally, wall foundations of local blue lias stone were interpreted as the remains of the building linking the Red Wing and Stable Block, which was demolished in the late 20th century. Three substantial brick culverts and a smaller stone drain were also recorded forming part of the drainage system installed by 'Capability' Brown in the mid-18th century. One of these sections of culvert appeared to represent a continuation of the substantial brick culvert previously identified and recorded by BAL during installation of the LPG tanks on the North Lawn.

Cobbles revealed beneath the existing driveway almost certainly formed part of the original surface of the North Courtyard. (Crooks 2016)

Observations during an eastern extension to the visitor car park were undertaken in anticipation that deposits relating to the infrastructure of RAF Defford might survive within the groundworks area. No clear evidence of any such structures was found (Bromage 2017)

## **The fieldwork**

### **General**

Fieldwork took place on the 23rd and 24th October 2019. It comprised lifting of some of the paving slabs and steps and investigation of the deposits underlying them (see Fig 3 for location of the lifted slabs and steps). A full description of the contexts is given in Appendix 1. Contexts are described by phase (earliest first) and in summary form below.

### **The sequence of events revealed by the excavation**

#### *Phase 1*

Construction of a brickwork 'dome' (context 007; Figs 2, 3 and 6) which abuts the stepped foundation of the Rotunda (context 008; Figs 2, 3 and 7).

#### *Phase 2*

Digging of a sub-rectangular hole through this dome (context 012; Figs 2 and 3). This was filled with a grey clay (context 013; Fig 3).

#### *Phase 3.1*

Levelling-up of the upper surface of the dome with rough brickwork and a very hard mortar (context 005; Figs 2, 3 and 4).

#### *Phase 3.2*

Building-up of the outer rim of the dome (context 006; Figs 2, 3, 8 and 9) in the same brickwork and mortar as Phase 3.1, in preparation for installation of the three rings of stone steps (context 010; Figs 2 and 3).

#### *Phase 3.3*

The steps (context 010; Figs 2 and 3) were installed, starting with the outer, by placing them approximately in position and then adjusting their position by pushing stone and brick fragments and mortar underneath them from their inside faces. This is suggested by the deposits left on the underside of the steps (Fig 10).

#### *Phase 3.4*

Once the steps were installed, a mixed layer of rubble and sand (context 003; Fig 3) was laid across the levelling-up layer (context 005; Figs 2, 3 and 4). This was followed by a bedding layer of sand (context 002; Fig 3).

### *Phase 3.5*

The slabs (context 001; Figs 2 and 3) were laid upon this bedding layer.

### *Phase 4*

There seems to have been a problem with the inner ring, or rings, of slabs, adjacent to the wall of the Rotunda. There is some evidence for lifting of the inner-most slabs and the laying of supplementary bedding layers (contexts 016 and 017; Fig 3) and the excavation of a narrow strip immediately adjacent to the wall of the Rotunda (context 015; Fig 3).

## **Interpretation**

### **General**

It is now possible to provide answers to the two questions posed at the beginning of the project.

### **Are there any earlier structures beneath the paving and steps?**

A well-built brickwork 'dome' (context 007) was identified, closely abutting the stepped foundation of the Rotunda (context 008). This appeared to be in sound condition and showed no evidence of movement or displacement. A sub-rectangular hole, approximately 0.2m across, was cut through this dome and subsequently a 'levelling-up' layer of comparatively indifferently laid brickwork (context 005) was installed. The existing steps (context 010) were installed by placing the individual stones in position and then pushing fragments of stone, brick and mortar beneath them (context 006). The hollow thus created within the circle of the steps was then filled, first with a mixture of rubble and sand (context 003) and then with a layer of sand (context 002) which was to be the bedding layer for the paving slabs (context 001).

A small area of paving slabs on the opposite (north-east) side of the Rotunda were lifted and the underlying deposits excavated to determine if the layers and structures identified adjacent to the Rotunda entrance continued around the circumference of the circular paved area. This was found to be the case.

### **Could any reason for the movement of the paving and steps be ascertained?**

Since the brickwork 'dome', which underlies everything else, appears to be sound, the fault must lie elsewhere. The paving slabs (context 001) are bedded upon two layers: a mixed layer of rubble and sand (context 003) and a layer of sand (context 002). The second day of the excavation was quite wet and it was noted that water could pour straight off of the roof and onto the paving stones, pooling upon them for a while before soaking away through the underlying material. It cannot be proved but it is thought that this action, over an extended period of time, may have washed away finer elements of contexts 002 and 003, leaving multiple micro-voids. If these voids collapsed under the weight of the paving stones, some displacement of the stones would occur. Because of the manner in which the surrounding steps were laid, there is little or nothing to prevent them moving outwards. The impetus for this could have derived from the movement of the paving slabs above.

## **Bibliography**

Bell, C, 1993 *Croome Court, Croome D'Abitot, Worcestershire: archaeological evaluation*, Oxford Archaeology Unit

Bromage, L, 2017 *Archaeological observation at visitor car park extension at Croome Court, High Green, Worcestershire, WR8 9DW*, Border Archaeology, BA1723CCNT

Brooks, I P, and Laws, K, 2008 *Croome Rotund floor watching brief*, Engineering Archaeological Services Ltd, 2008/19

Charles, E, 2013 *Croome Court, Croome Park, Worcestershire: archaeological watching brief*, MFL Archaeology, Project No. MF-13-969-1

Cook, M, 2012 *Archaeological investigations at Croome Court, Worcestershire 2009-2010*

Crooks, K, 2015 Archaeological excavation: installation of LPG tanks North Lawn, *Croome Court, High Green, Severn Stoke, Worcestershire, Border Archaeology*, BA1539CCPR

Crooks, K, 2016 *Archaeological observation concerning groundworks at Croome Court Severn Stoke, Worcestershire*, Border Archaeology, BA1539 CCPR

Tyler, R, 2014 *Croome Court Severn Stoke, Worcestershire Underground Water Chamber adjacent to Red Wing*, PN 2013 – 003(b)

### **Acknowledgements**

The author would particularly like to thank John Goom and Matthew Vaughan of Donald Insall Associates, Katherine Alker Garden and Outdoors Manager, National Trust, Croome Court and Graham O'Hare of O'Hare Stone Conservation for their kind cooperation.

### **Archive**

The physical archive consists of:

- 13 Context sheets
- 2 Drawings
- 1 Hard copy of the report
- 1 Hard copy of the report illustrations

It will be deposited at Worcestershire County Museum, Hartlebury upon approval of the report. It is anticipated that the finds will not be of interest to the museum. However, the museum will be consulted in this respect before disposal.

The digital archive consists of

- 1 Digital copy of the report (.doc format)
- 7 Illustrations (.bmp format)

It will be deposited with the Archaeology Data Service upon approval of the report.

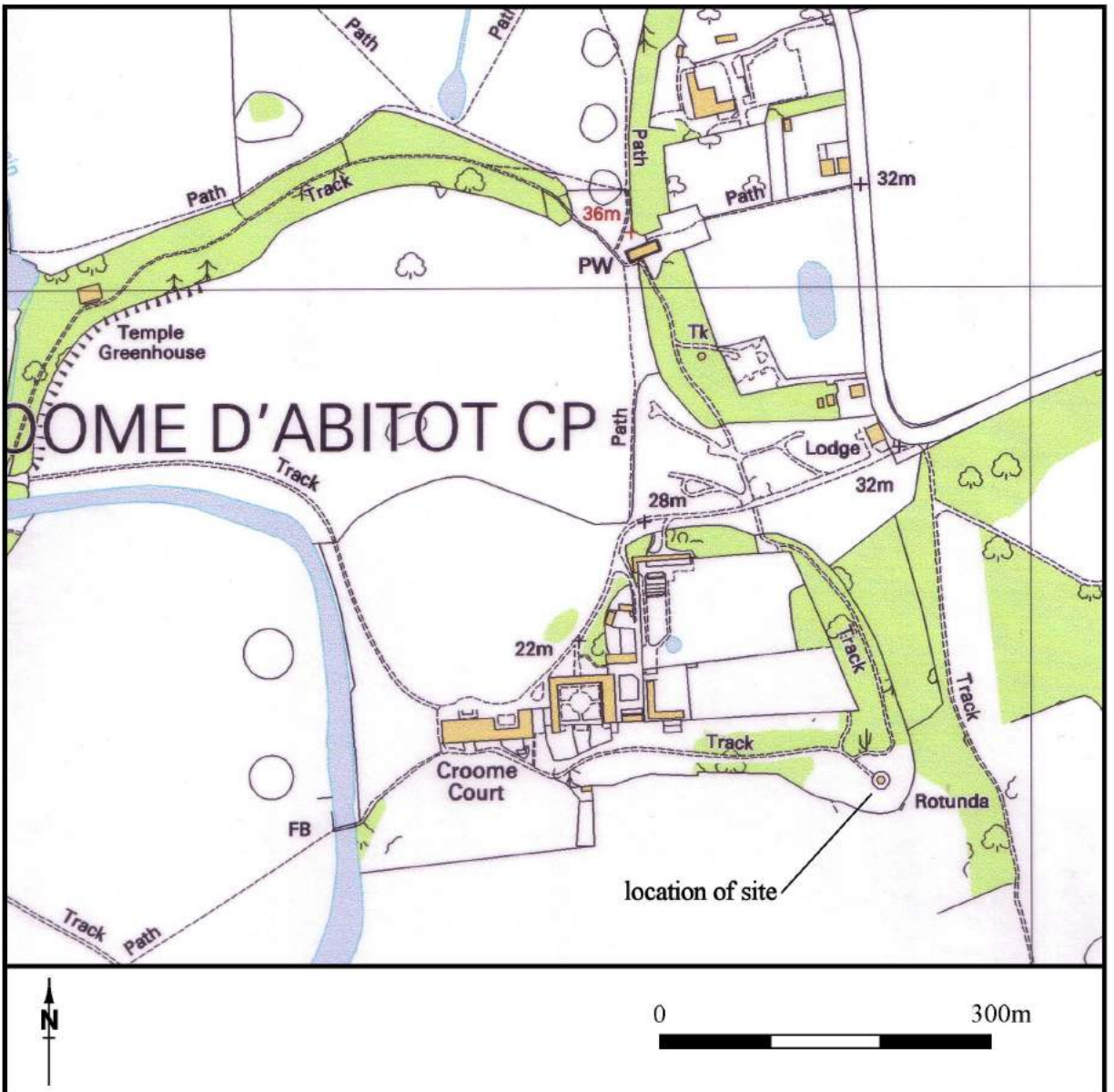
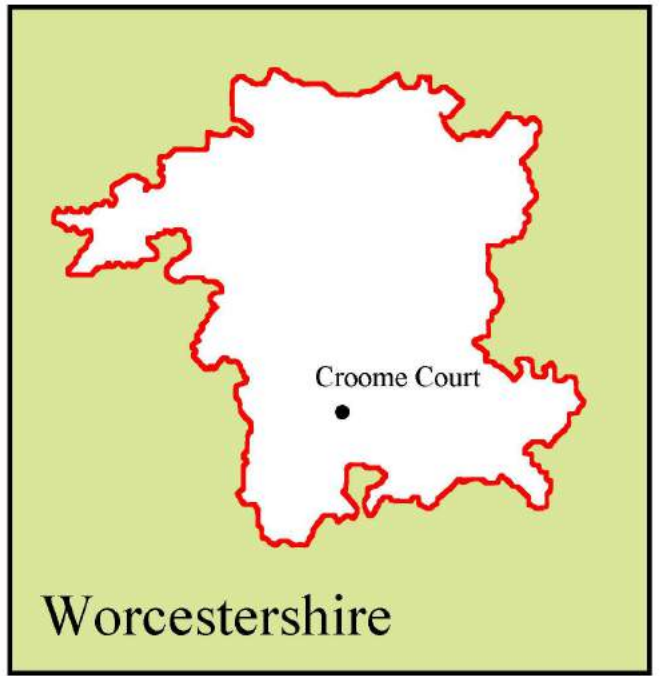


Fig 1: Location of site



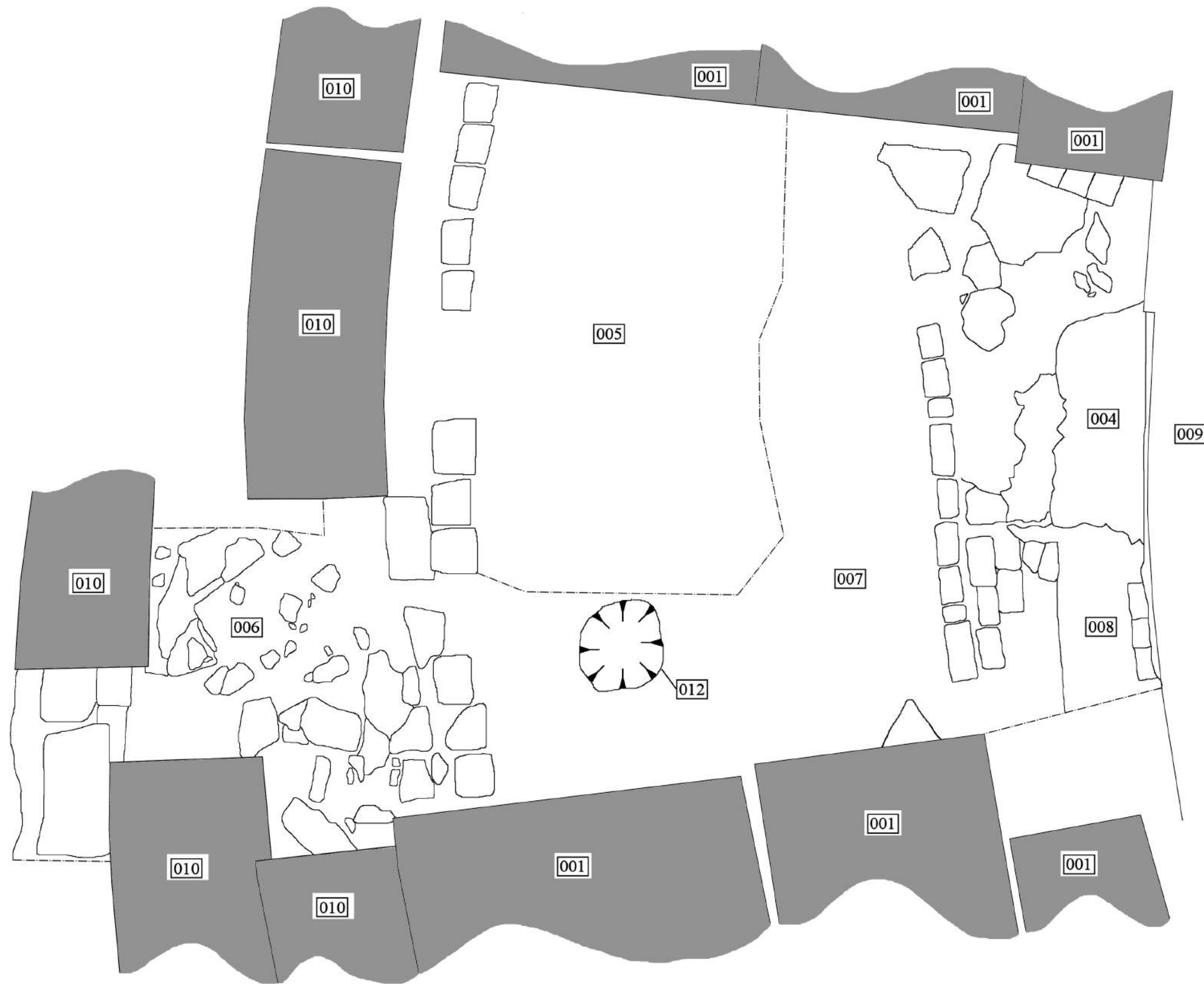
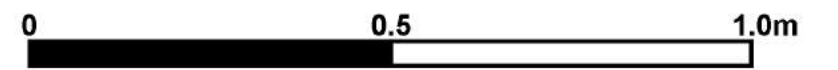
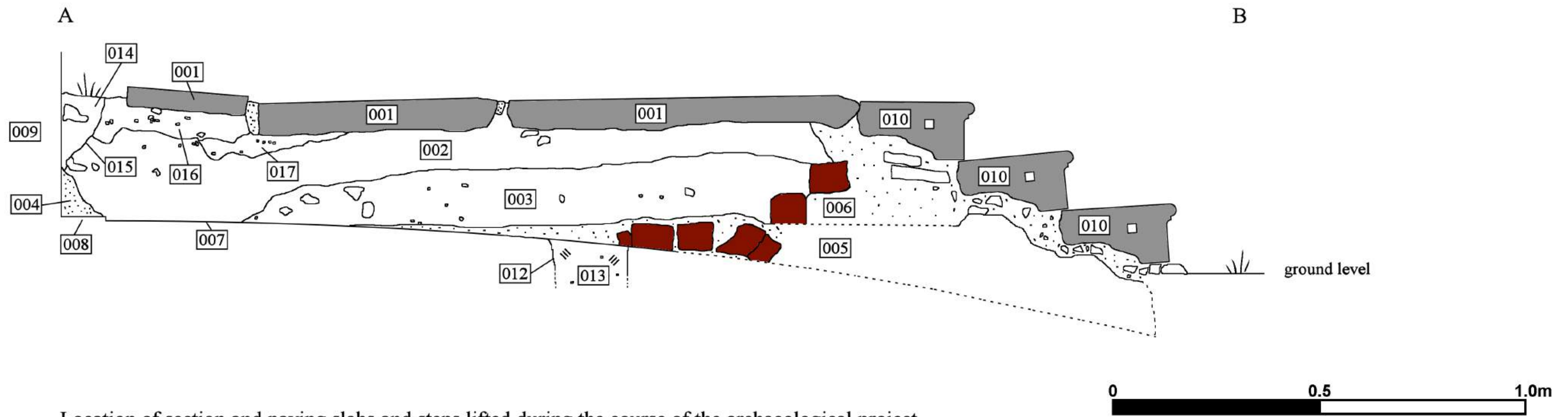


Fig 2: Plan showing deposits after lifting of the Rotunda paving (context 001), steps (context 010) and contexts 002 and 003







Location of section and paving slabs and steps lifted during the course of the archaeological project  
 Based upon drawing number 262h/G2a by John C Goom Architects and historic building consultants

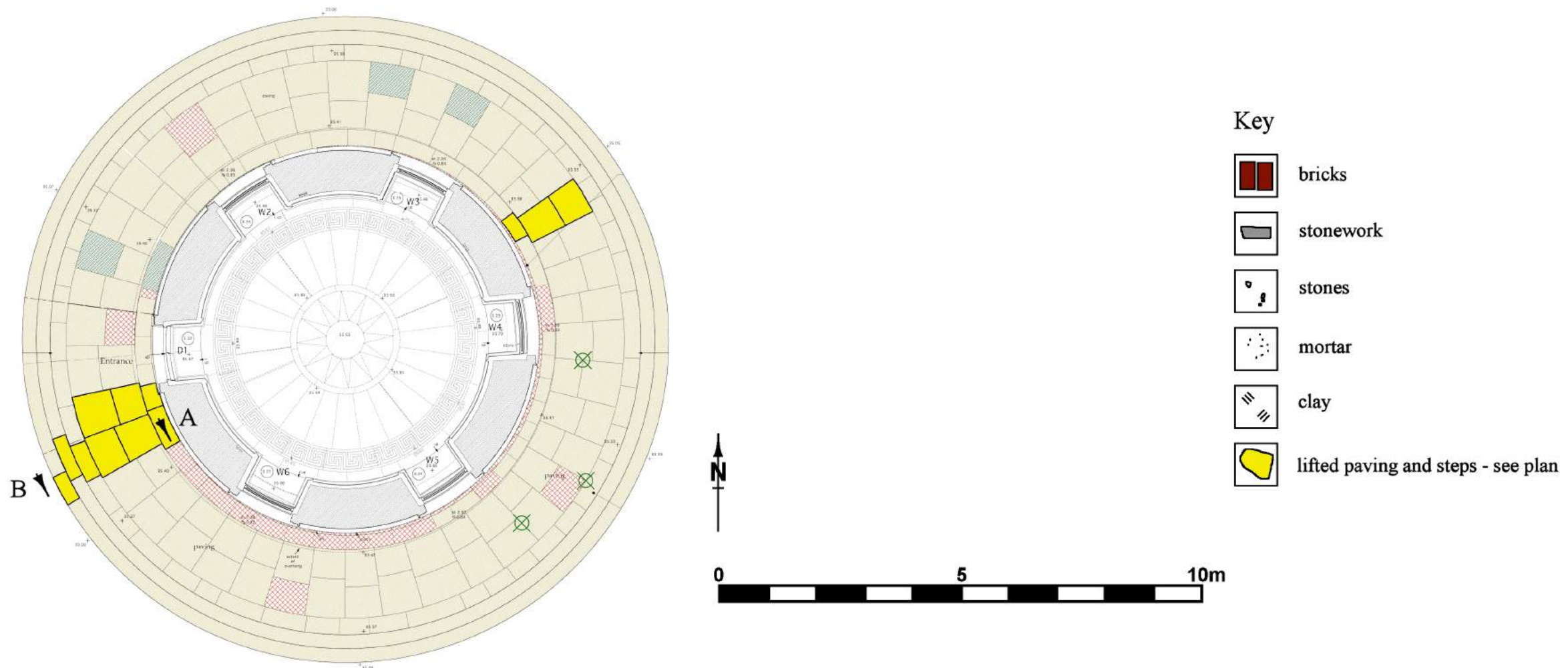


Fig 3: Section through Rotunda paving and underlying deposits (some deposits have been projected onto the line of the section)





Fig 4: Levelling-up of the 'dome' with rough brickwork and very hard mortar (context 005)



Fig 5: Triangular fillet of mortar (context 004) between the stone skin of the Rotunda (context 009) and the stepped foundation (context 008)





Fig 6: Brick 'dome' (context 007)



Fig 7: Stepped footing of Rotunda (context 008)





Fig 8: Material pushed under the steps to align and support them (context 006)



Fig 9: Material pushed under the steps to align and support them (context 006)



Fig 10: Underside of a step showing how mortar pushed underneath from the front and the back has left a gap near the middle



## Appendix 1: List of the contexts

<b>Context number</b>	<b>Description</b>	<b>Interpretation</b>
001	Stone slabs	Plinth/surface around Rotunda
002	Reddy brown sand	Levelling layer for 001
003	Building rubble including bricks, tiles and stone fragments	Layer to build-up height
004	White/cream layer of mortar	Fillet, abuts structure of Rotunda
005	Brick surface composed of irregular and roughly cut bricks	Surface levelling-up 'dome' 007
006	Brick 'ring' off centre from plinth and rough stone/brick/mortar supporting steps	Associated with 005
007	Curved brick surface	Brick 'dome'
008	Stone	Stepped footing for Rotunda
009	Stone wall	Exterior cladding of Rotunda
010	Stone	Steps to Rotunda
011	Stone	Step to entrance of Rotunda
012	Sub-circular cut in 007	Hole hacked through brickwork of 'dome' 007
013	Loose grey brown friable sandy clay	Fill of 012

## **Appendix 2: The OASIS form**



# OASIS DATA COLLECTION FORM: England

[List of Projects](#) | [Manage Projects](#) | [Search Projects](#) | [New project](#) | [Change your details](#) | [HER coverage](#) | [Change country](#) | [Log out](#)

## Printable version

**OASIS ID: martinco1-374849**

### Project details

Project name	The Rotunda, Croome Court
Short description of the project	Minor excavation at The Rotunda, Croome Court
Project dates	Start: 23-10-2019 End: 25-11-2019
Previous/future work	Yes / Not known
Type of project	Recording project
Site status	English Heritage List of Parks and Gardens of Special Historic Interest
Current Land use	Other 2 - In use as a building
Monument type	ROTUNDA Post Medieval
Significant Finds	NONE None
Investigation type	"Part Excavation"
Prompt	Research

### Project location

Country	England
Site location	WORCESTERSHIRE MALVERN HILLS CROOME DABITOT The Rotunda, Croome Court
Study area	100 Square metres
Site coordinates	SO 88866 44557 52.098825639698 -2.162557557593 52 05 55 N 002 09 45 W Point
Height OD / Depth	Min: 0m Max: 0m

### Project creators

Name of Organisation	Martin Cook BA MCIfA
Project brief originator	National Trust
Project design originator	Martin Cook BA MCIfA
Project director/manager	Martin Cook BA MCIfA
Project supervisor	Martin Cook BA MCIfA
Type of sponsor/funding body	National Trust

### Project archives

Physical Archive Exists?	No
Digital Archive recipient	ADS
Digital Contents	"none"
Digital Media available	"Text", "Images raster / digital photography"
Paper Archive recipient	Worcestershire County Museum
Paper Contents	"none"
Paper Media available	"Report"

---

### Project bibliography 1

Publication type	Grey literature (unpublished document/manuscript)
Title	Archaeological watching brief at the Rotunda, Croome Court, Worcestershire
Author(s)/Editor(s)	Cook, M.
Date	2019
Issuer or publisher	Martin Cook MClfA
Place of issue or publication	Aylesbury
Description	A4, blue card cover with transparent front cover

---

Entered by	Martin Cook (office@martinjcook.com)
Entered on	23 November 2019