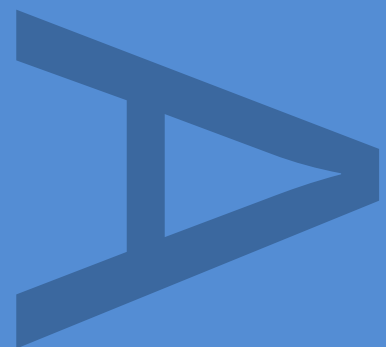


**The Old Library, Ely Cathedral,
Ely, Cambridgeshire:
Archaeological Monitoring**

March 2015



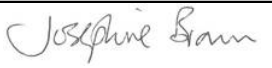
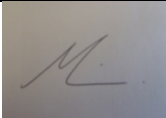
**PRE-CONSTRUCT ARCHAEOLOGY
R12004**

THE OLD LIBRARY, ELY CATHEDRAL, ELY, CAMBRIDGESHIRE

ARCHAEOLOGICAL MONITORING

Quality Control

Pre-Construct Archaeology Ltd	
Project Number	K3914
Report Number	R12004

	Name & Title	Signature	Date
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Revision No.	Date	Checked	Approved

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The Old Library, Ely Cathedral, Ely, Cambridgeshire: Archaeological Monitoring

Local Planning Authority: N/A (ecclesiastical land administered by Dean and Chapter of Ely Cathedral)

Central National Grid Reference: TL 54129 80230

Site Code: CECL15

Planning Reference: N/A

Report No. R12004

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March 2015

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ABSTRACT

This report describes the results of archaeological monitoring carried out by Pre-Construct Archaeology in The Old Library, Ely Cathedral, Ely, Cambridgeshire, CB7 4DL (centred on NGR TL 54129 80230) on 24th February 2015. The archaeological work was commissioned by Philip Dixon Associates prior to the construction of a mezzanine floor. The aim of the work was to monitor and record any archaeological remains which would be damaged or destroyed by the new development.

The archaeological monitoring identified mortar and stone foundation layers for the construction of the first two eastern bays for use as chapels in the 12th century. Two layers of made ground and a limewash screed appear to relate to the levelling and possible tiling of the floors in the later medieval or post-medieval periods. The last main phase of activity seen related to the conversion of the two chapels into one large cell by demolishing the dividing wall and constructing a new timber floor supported by brick dwarf sleeper walls. This is likely to have occurred in the late 19th or early 20th centuries.

1 INTRODUCTION

- 1.1 Archaeological monitoring was undertaken by Pre-Construct Archaeology Ltd (PCA) in The Old Library, Ely Cathedral, Ely, Cambridgeshire, CB7 4DL (centred on Ordnance Survey National Grid Reference (NGR) TL 54129 80230) on 24th February 2015 (Figure 1; Plate 1).
- 1.2 The Old Library is located in the first two eastern bays of the southern transept. Initially built as separate chapels, entered from the transept, the division between the two was demolished in the 19th century to create a large single cell.
- 1.3 The archaeological work was commissioned by Philip Dixon Associates prior to the construction of a mezzanine floor.
- 1.4 The aim of the monitoring was to characterise the nature, extent, date, state of preservation and significance of any archaeological features or deposits within the areas affected by the ground reduction for the new floor, to record any such remains prior to their destruction, and (after recording) to remove any chancel material for reburial elsewhere within the cathedral grounds.
- 1.5 The monitoring identified several phases of work within the Old Library, mainly relating to the construction of the chapels, the demolition of the dividing wall of the chapels and the 19th-20th century alterations to the room.
- 1.6 This report describes the results of the archaeological monitoring in The Old Library, Ely Cathedral. The site archive will be deposited at Ely Cathedral.

2 GEOLOGY AND TOPOGRAPHY

- 2.1 The geology of the site is Woburn Sands Formation Sandstone, a sedimentary bedrock formed approximately 100 to 125 million years ago in the Cretaceous Period (British Geological Survey 2015; Website 1).
- 2.2 The site is at an elevation of approximately 20m above Ordnance Datum. Ely occupies the highest land in the fens and, before fen drainage, was an 'island' surrounded by low-lying wetlands. The cathedral complex occupies some of the highest ground of the island, with land falling away fairly sharply to the east towards the River Ouse.

3 ARCHAEOLOGICAL BACKGROUND

- 3.1 The following material has been derived from the Archaeological Implications of the Conversion of the Old Library, Ely (Dixon 2014), as well as from the report on the archaeological excavation on the site of an extension to the Almonry Restaurant (Boyer and Woolhouse 2013).
- 3.2 A monastery was established in Ely by St Æthelthryth in AD 673. It was destroyed by the Danes in the late 9th century and re-founded as a Benedictine Abbey for men in c. 970. Following the creation of the Diocese of Ely, it became a cathedral in AD 1109, with construction work continuing throughout the 12th century. Developments within the main cathedral building and elsewhere in the precinct continued throughout the medieval period. The cathedral suffered minor damage during the Dissolution in AD 1539, but was re-founded in AD 1541 and further modifications and additions were made during the 17th to 19th centuries, with major restoration work being carried out towards the end of the 20th.
- 3.3 The Old Library lies within the first two eastern bays of the southern transept. The bays were originally built as separate chapels, entered from the transept. In the late 13th century they were rebuilt with large two-light geometric windows. In the late 19th century or later, the division between the first two bays was removed, creating one large cell with two windows and a bipartite vault. The entrances from the transept were closed off and a new door inserted into the first bay of the south choir aisle. At a similar time, the floor of the Old Library was raised, with two steps above the tiles of the adjacent choir. Timber joists and boards were supported by dwarf sleeper walls, a type of construction seen during repairs to the floor at the edge of the Octagon and also under the mosaics in the Choir. The insertion of the dwarf walls in the Old Library may have been preceded by a stripping of the floor surface, which now display either soil or a screed of limewash, suggesting the floor may have been tiled.

4 METHODOLOGY

- 4.1 The archaeological monitoring observed the reduction of the Old Library floor, after the removal of the timber flooring, by c.0.16m, to a depth of 0.35m below the timber joists.
- 4.2 Ground reduction was manually carried out under archaeological supervision using a long chisel/tamper bar. Exposed surfaces were cleaned by trowel as appropriate and all further excavation was undertaken manually using hand tools.
- 4.3 Deposits or the removal of deposits judged by the excavating archaeologist to constitute individual events were each assigned a unique record number (often referred to within British archaeology as 'context numbers') and recorded on individual pre-printed forms (Taylor and Brown 2009). Archaeological processes recognised by the deposition of material are signified in this report by round brackets (thus), while events constituting the removal of deposits are referred to here as 'cuts' and signified by square brackets [thus]. The record numbers assigned to cuts and deposits are entirely arbitrary and in no way reflect the chronological order in which events took place. All features and deposits recorded during the evaluation are listed in Appendix 2. Artefacts recovered during excavation were assigned to the record number of the deposit from which they were retrieved.
- 4.4 High-resolution digital photographs were taken of all relevant features and deposits, and were used to keep a record of the excavation process. In addition, monochrome photographs were taken of significant features.

5 ARCHAEOLOGICAL SEQUENCE

5.1 Overview

5.1.1 Archaeological monitoring of the Old Library revealed the foundations, demolition layer and alterations to the floor associated with the construction and later 19th century changes to the building. Dating is tentative and based on a combination of stratigraphy and the known history of the site.

5.2 Medieval (12th - 13th Century?) (Structures 105, 114, 115, 116, 117 and Layers 106, 111 and 113) (Figures 3-5; Plates 2-4, 8)

5.2.1 This period was dominated by the construction of three eastern bays off the southern transept around the 12th century. Deposits of mortar and limestone foundations were seen running along the length of the west wall of the Old Library and large stone foundations for the columns were seen on the west and east walls.

5.2.2 Two layers of mortar (111) and (113) measuring 0.95m and 1.9m long and 1.3m and 0.33m wide were seen along the southern half of the west wall (Plate 2). The mortar consisted of a mid-whitish yellow chalky sand, which appeared to be an extremely compacted foundation layer for the limestone foundation for the building. This limestone foundation, Structure 105, extended c.10.4m along the length of the west wall and measured 1.15m wide and 0.07m (as seen) deep (Plates 2-4, 8). It was truncated in the area of the 19th/20th century hearth, Structure 102, presumably for the flue which extended east from the west wall (removed prior to monitoring). The stones forming Structure 105 were finished with flat, straight faces, and were bonded with mortar.

5.2.3 Another layer of mortar (106) was seen above Structure 105, measuring 1.35m long and 0.6m wide. The mortar consisted of a light brownish yellow chalky sand with chalk rubble inclusions and was very friable, suggesting it may have been associated with the construction of the chapel after the foundations, Structure 105, had been laid.

5.2.4 Structure 105 supported the bases for columns 114, 115 and 116 in the west wall, the foundations for column 117 in the east wall were not seen during

monitoring (Plate 4).

5.3 Late Medieval/Post-Medieval (?): Layers (108), (110) and (112) (Figures 3-4; Plate 5)

5.3.1 After the construction of the chapels, the next 'phase' seen during monitoring consisted of two layers of made ground and a screed of limewash, which may be earlier floor levels or the base for a paved floor which was later removed when the timber floor was inserted in the late 19th century.

5.3.2 Made ground layer (110) was seen in the northern and southern halves of the Old Library and consisted of a mid-orangey brown clayey sand layer containing small fragments of chalk rubble. A fragment of window tracery matching the current 13th century windows, plain blue window glass with bubbles, 89.5 of disarticulated human bones and one oyster shell were found in this layer.

5.3.3 Made ground layer (108) was seen in the northern and southern halves of the Old Library and consisted of a compacted layer of mid-orangey brown clayey sand containing small fragments of chalk (Plate 5). Fragments of plain blue window glass were retrieved from this layer.

5.3.4 Patches of a thin layer of limewash (112) were observed towards the southern wall and in the northern half of the Old Library and consisted of a light yellowish white chalky layer, which may suggest that there was originally a paved or tiled floor which was removed prior to the insertion of the timber floor (118) in the later 19th century (Plate 5).

5.4 Late 19th-early 20th Century: Structures 101, 102, 103 and 118 and Layers (100), (104) and (109) (Figures 3-5: Plates 3, 6-8)

5.4.1 The late 19th and early 20th centuries saw a phase of major alterations to the first two eastern bays off the south transept. The partition dividing the two cells was demolished to create one large single celled room. Brick dwarf sleeper walls were built to support a new raised timber floor and a hearth structure was inserted into the west wall.

- 5.4.2 Layer (109) appeared to be one of the earliest phases of alterations within this period. It was seen in the centre of the room, aligned east-west, between the two central columns 115 and 117 and measured 3.15m+ long and 1.3m wide (Plate 6). (109) was a layer of rubble consisting of very large stone blocks mixed with light yellowish brown sandy mortar. The largest of the blocks measured 0.4m x 0.35m x 0.2m (Plate 7). This appears to be the demolition of the central division between the first two bays which is thought to have occurred in the late 19th or early 20th century.
- 5.4.3 Layer (104) was seen under the hearth in the west wall and appears to be a compacted surface for that structure. The layer measured 1.35m long, 0.35m wide and 0.16m deep and consisted of a mid-brownish yellow chalky sand.
- 5.4.4 Structure 103 consisted of a series of dwarf sleeper walls, constructed in brick, observed against the walls of the Old Library and inset from the two central columns 115 and 117 (Plates 3, 8). These varied in length and width and were built to support the raised timber joists and floor, Structure 118, which was built in the late 19th or early 20th century.
- 5.4.5 In the same phase of works a brick hearth, Structure 102, was constructed in the west wall, measuring 1.6m long, 0.1m wide and 0.12m deep (Plate 3, 8). It consisted of a single recessed course of bricks with a flue extending east (flue removed prior to monitoring). The hearth was capped with three courses of terracotta tiles, Structure 101. The full extent of these structures was not seen as they were mainly seen in section and were not excavated. Overlying the hearth was a layer of rubble (100) which consisted of light yellowish brown chalk dust and sand.

6 CONCLUSIONS

- 6.1 Archaeological monitoring of the Old Library identified three broad phases of activity. Dating of these phases is tentative, being based on the known history of Ely Cathedral and stratigraphic relationships seen during monitoring.
- 6.2 The earliest phase comprised two layers of very compacted mortar and limestone foundations along the west wall of the Old Library. These appear to be the original foundations for the construction of the eastern chapels off the southern transept in the 12th century. Another layer of looser rubbly mortar was seen above these foundations and may be related to the construction of the walls and columns of the chapels.
- 6.3 The next phase appears to be two layers of made ground and a screed of limewash, presumably to level the ground prior to floor slabs or tiles being laid. Excavation of these layers would be needed to obtain firmer dating evidence, but they may be of late medieval or post-medieval date.
- 6.4 There appears to be no major alterations to the Old Library until the 19th and 20th centuries, when the first two bays of the eastern chapels were converted into one large cell, with the dividing partition demolished. Brick dwarf sleeper walls were constructed to support a raised timber floor and a brick and tile hearth was constructed in the west wall.
- 6.5 These results are of local to regional significance.

7 ACKNOWLEDGEMENTS

- 7.1 Pre-Construct Archaeology Ltd would like to thank Philip Dixon Associates for commissioning the work. Further thanks are extended to Vicki Roulinson, Director of Works at Ely Cathedral, for her help in a number of aspects of the project. The project was managed for PCA by Mark Hinman. Figures accompanying this report were prepared by Hayley Baxter of PCA's CAD Department.

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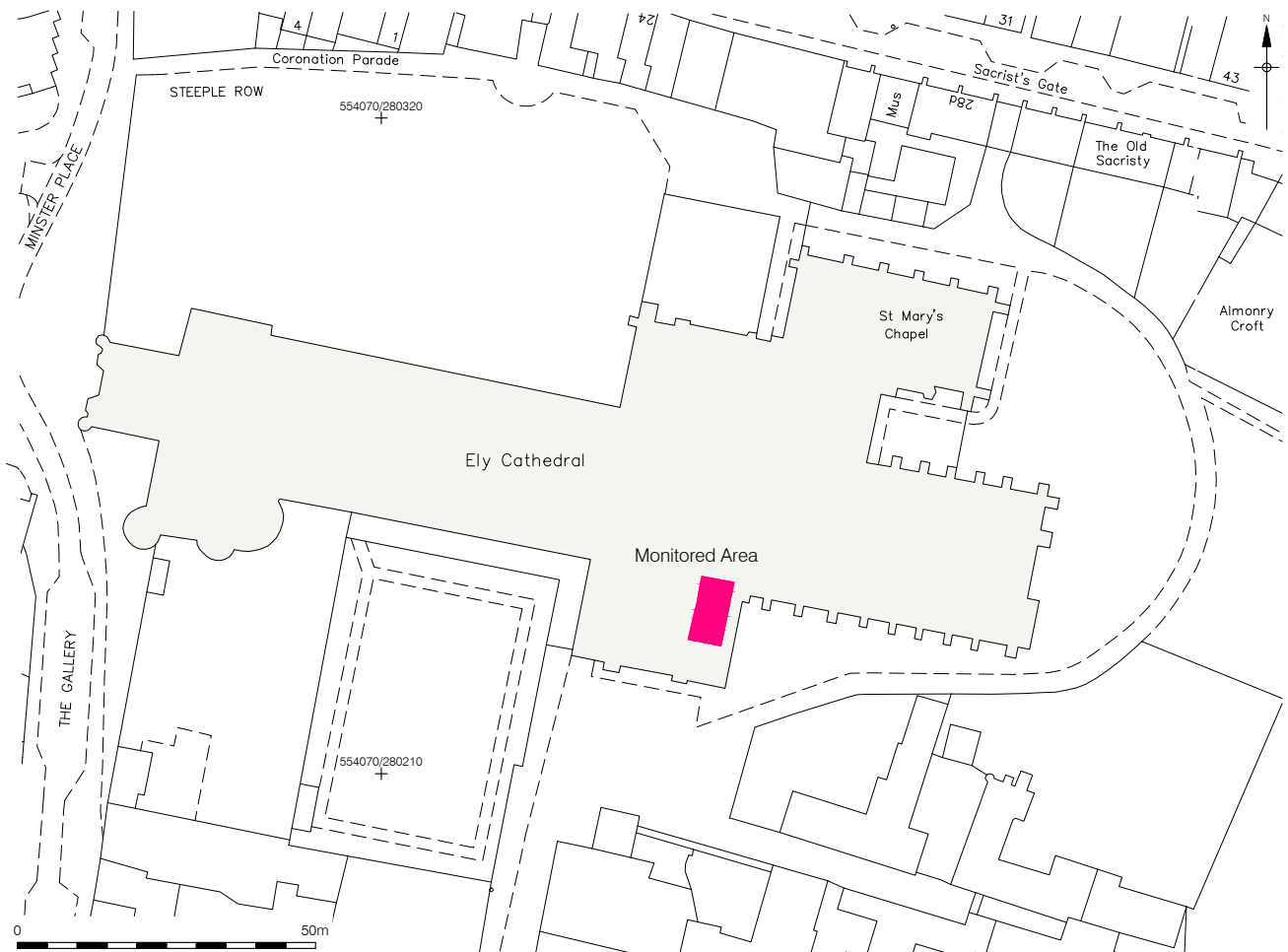
8.2 Online Sources

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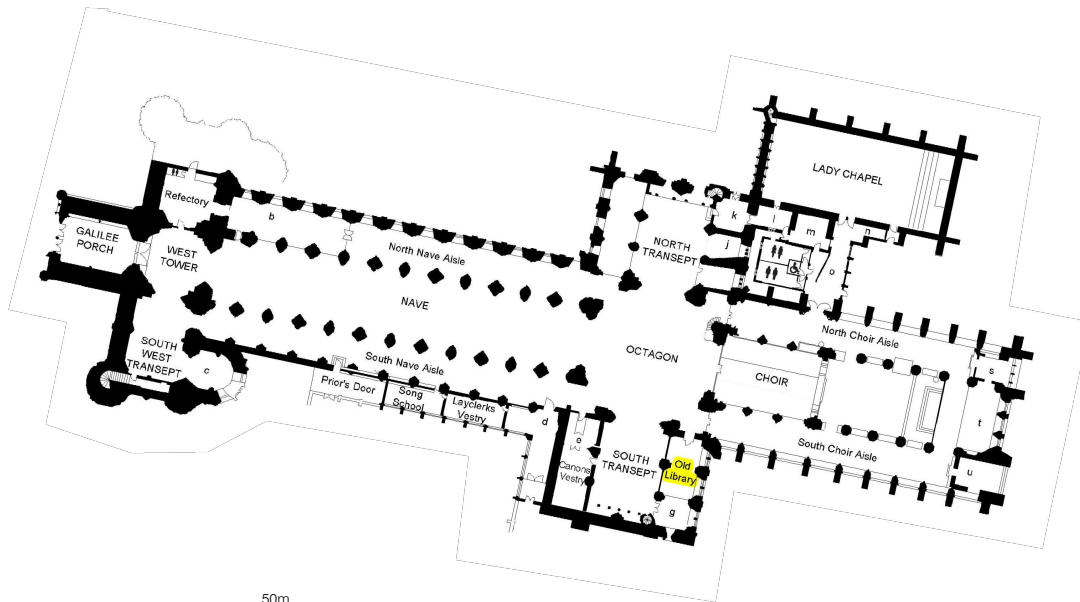


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 06/03/15

Figure 1
 Site Location
 1:2,000,000 and 25,000 at A4

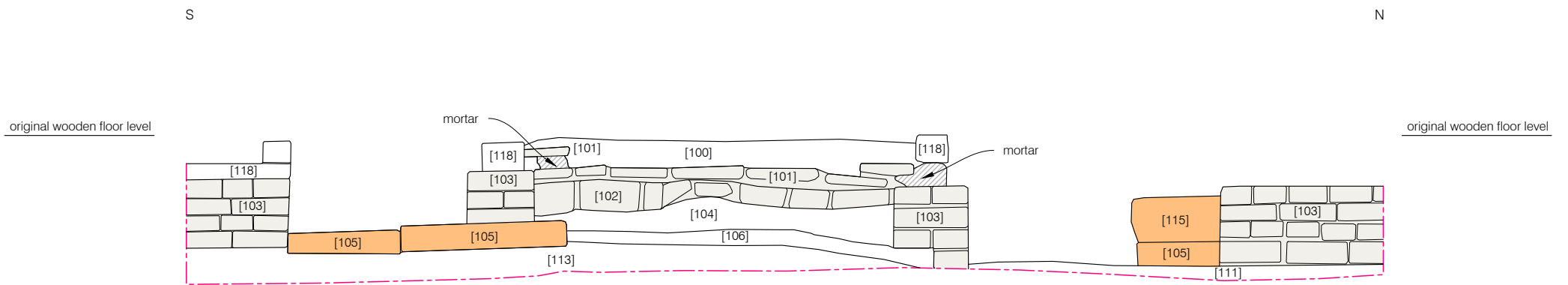


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Figure 2
Detailed Site Location
showing location of the Old Library
1:1,250 at A4



Section 1
South facing

- 19th Century bricks/tiles
- Medieval masonry



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Figure 5
Section along west wall of Old Library
1:20 at A4

9 APPENDIX 1: PLATES



Plate 1: The Old Library on arrival, view south



Plate 2: Foundations 113 and 105, view west



Plate 3: Foundation 105 showing relationship with dwarf sleeper wall 103 and hearth 102, view south



Plate 4: Foundation 105 and column base 115, view west



Plate 5: Limewash screed layer (112) above compacted floor (108), view south



Plate 6: Demolition rubble (109) of dividing partition, view west



Plate 7: The large stone blocks from (109), view east



Plate 8: Hearth 102, showing relationship with dwarf sleeper walls 103 and foundation 105, view west

10 APPENDIX 2: CONTEXT INDEX

Context	Cut	Type	Category	Date
100	N/A	Layer	Rubble	19th/20th century
101	N/A	Structure	Floor	19th/20th century
102	N/A	Structure	Hearth	19th/20th century
103	N/A	Structure	Hearth	19th/20th century
104	N/A	Layer	Floor	19th/20th century
105	N/A	Structure	Foundations	Medieval
106	N/A	Layer	Mortar	Medieval
107	N/A	Layer	Concrete	Modern
108	N/A	Layer	Floor	Late Medieval/Post-Medieval?
109	N/A	Layer	Rubble	19th/20th century
110	N/A	Layer	Made ground	Late Medieval/Post-Medieval?
111	N/A	Layer	Foundations	Medieval
112	N/A	Layer	Floor	Late Medieval/Post-Medieval?
113	N/A	Layer	Foundations	Medieval
114	N/A	Structure	Column base	Medieval
115	N/A	Structure	Column base	Medieval
116	N/A	Structure	Column base	Medieval
117	N/A	Structure	Column base	Medieval
118	N/A	Structure	Floor	19th/20th century

11 APPENDIX 3: OASIS FORM

OASIS ID: preconst1-204802

Project details

Project name	The Old Library, Ely Cathedral: Archaeological Monitoring
Short description of the project	This report describes the results of archaeological monitoring carried out by Pre-Construct Archaeology in The Old Library, Ely Cathedral, Ely, Cambridgeshire, CB7 4DL (centred on NGR TL 54129 80230) on 24th February 2015. The archaeological work was commissioned by Philip Dixon Associates prior to the construction of a mezzanine floor. The aim of the work was to monitor and record any archaeological remains which would be damaged or destroyed by the new development. The archaeological monitoring identified mortar and stone foundation layers for the construction of the first two eastern bays for use as chapels in the 12th century. Two layers of made ground and a limewash screed appear to relate to the levelling and possible tiling of the floors in the later medieval or post-medieval periods. The last main phase of activity seen related to the conversion of the two chapels into one large cell by demolishing the dividing wall and constructing a new timber floor supported by brick dwarf sleeper walls. This is likely to have occurred in the late 19th or early 20th centuries.
Project dates	Start: 24-02-2015 End: 24-02-2015
Previous/future work	Not known / Not known
Any associated project reference codes	CECL15 - Sitecode
Type of project	Field evaluation
Site status	Scheduled Monument (SM)
Current Land use	Other 2 - In use as a building
Monument type	CHAPEL Medieval

Monument type	FOUNDATIONS Medieval
Monument type	HEARTH Modern
Monument type	DEMOLITION RUBBLE Modern
Methods & techniques	"Survey/Recording Of Fabric/Structure"
Development type	Public building (e.g. school, church, hospital, medical centre, law courts etc.)
Position in the planning process	Not known / Not recorded

Project location

Country	England
Site location	CAMBRIDGESHIRE EAST CAMBRIDGESHIRE ELY The Old Library, Ely Cathedral
Postcode	CB7 4DL
Study area	0 Square metres
Site coordinates	TL 54129 80230 52.397941623 0.265636254399 52 23 52 N 000 15 56 E Point

Project creators

Name of Organisation	Pre-Construct Archaeology Ltd.
Project brief originator	Philip Dixon
Project design originator	Philip Dixon
Project director/manager	Mark Hinman
Project supervisor	Mary-Anne Slater

Type of sponsor/funding body	Church
<hr/>	
Project archives	
Physical Archive recipient	Ely Cathedral
Physical Archive ID	CECL15
Physical Contents	"Glass","Human Bones","Worked stone/lithics"
Digital Archive recipient	Ely Cathedral
Digital Archive ID	CECL15
Digital Contents	"none"
Digital Media available	"Images raster / digital photography","Text"
Paper Archive recipient	Ely Cathedral
Paper Archive ID	CECL15
Paper Contents	"none"
Paper Media available	"Context sheet","Plan","Report","Section"

Project bibliography

1

Grey literature (unpublished document/manuscript)

Publication type

Title The Old Library, Ely Cathedral, Ely, Cambridgeshire: Archaeological Monitoring

Author(s)/Editor(s) Slater, M.

Date 2015

Issuer or publisher Pre-Construct Archaeology Ltd

Place of issue or
publication Cambridge

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