Peterborough Cathedral

Interpretation Boards and Signs

A Report on a Programme of Archaeological Observation and Recording.

Scheduled Monument No: SM PE 140
SMC application Ref: S00160009
Associated Planning Reference Number: 15/00429/ADV
Archaeological contractor's Site Code: PCS17

Prepared by Caroline Atkins
for Peterborough Cathedral

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Peterborough Cathedral: Interpretation Boards and Signs

A Report on a Programme of Archaeological Observation and Recording.

1 Introduction

1.1 Summary

The programme of works which focused upon the installation of new interpretation boards and other signs within, and on the periphery of, Minster Precincts was supported by the Heritage Lottery Fund and aimed to inform and enhance the experience of visitors to the cathedral. This aim has been achieved by replacing some of the existing wall-mounted welcome and directional signs and adding ground-fixed information and interpretation boards. By design, these latter installations have provided only limited opportunities for archaeological investigation and recording of parts of the cloister, cemetery and the approach to Norman Gate and consequently have added little to our knowledge of the Minster Precincts.

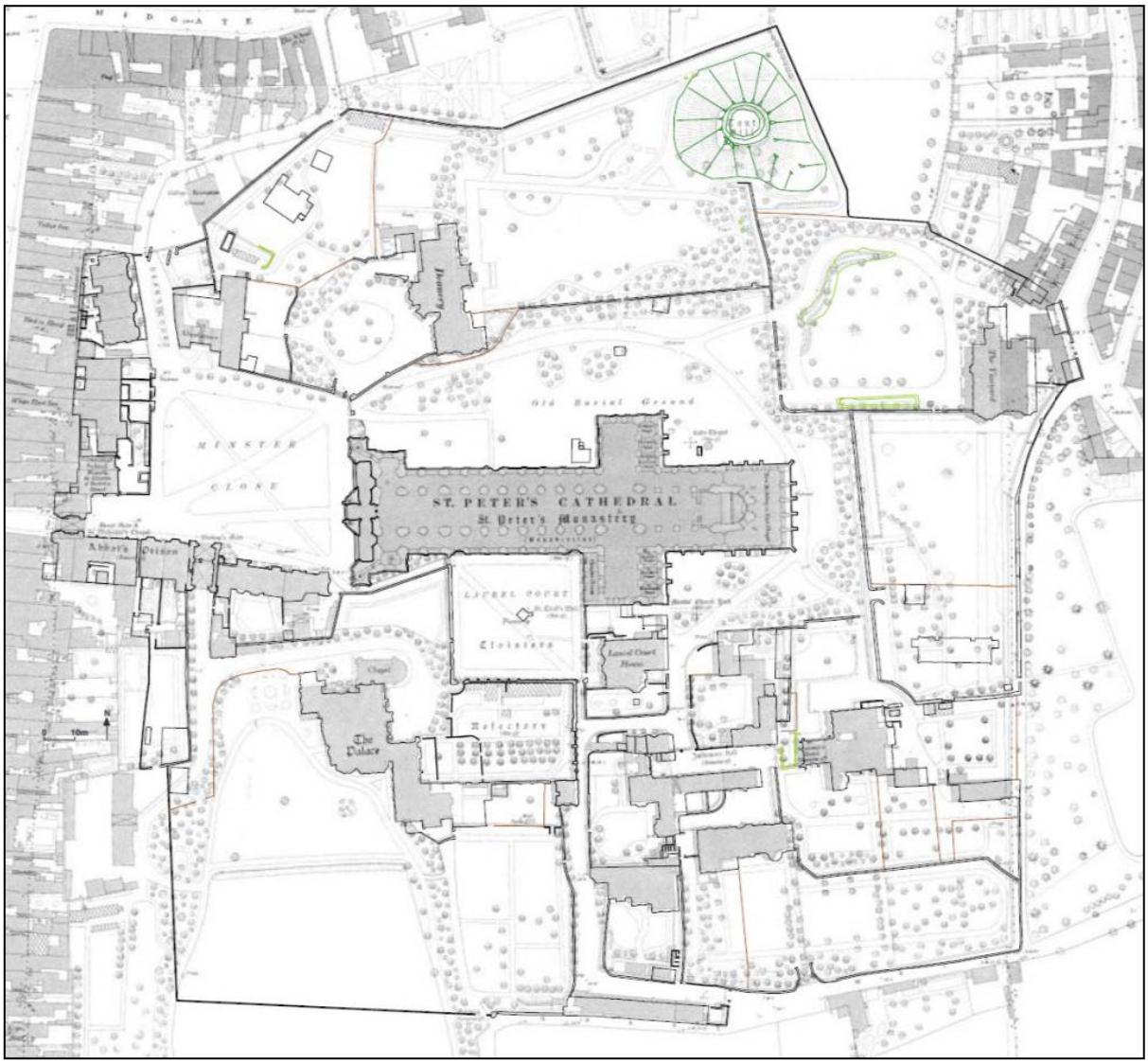
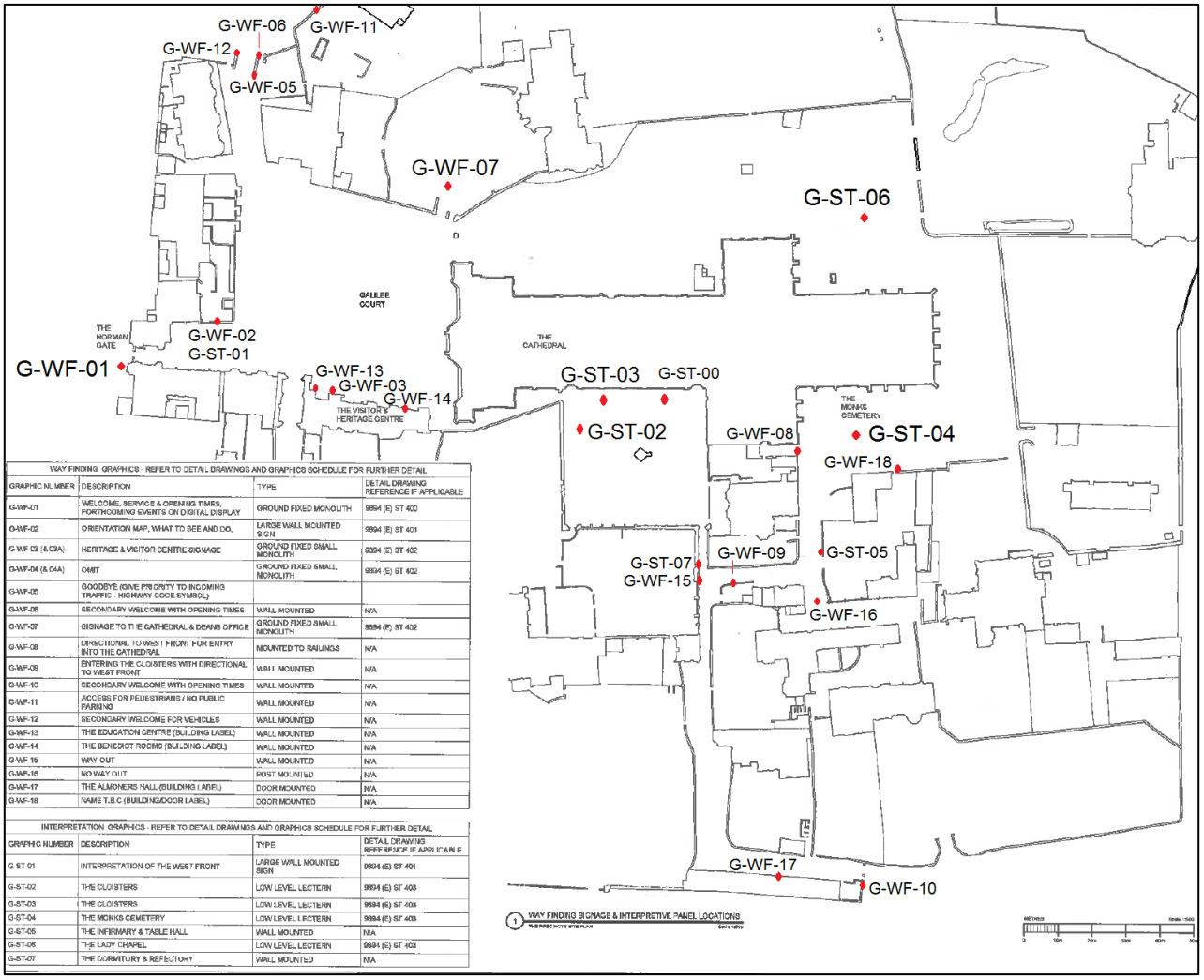


Figure 1
Peterborough Cathedral, Minster Precincts: Site Location Plan

1.2 Site Location and Description

The area affected by the installation of new and replacement interpretation boards and signs is centered on National Grid Reference 519350 298625 and consists of the whole of the Minster Precincts (Figures 1 and 2). The cloister, in which low-level lectern interpretation boards were installed, subject to Scheduled Monument Consent, lies on the south side of Peterborough Cathedral (Figures 1, 2 and 3).



WAY FINDING GRAPHICS - REFER TO DETAIL DRAWINGS AND GRAPHICS SCHEDULE FOR FURTHER DETAIL

GRAPHIC NUMBER	DESCRIPTION	TYPE	DETAIL DRAWING REFERENCE IF APPLICABLE
G-WF-01	WELCOME, SERVICE & OPENING TIMES, FORTHCOMING EVENTS ON DIGITAL DISPLAY	GROUND FIXED MONOLITH	9894 (E) ST 400
G-WF-02	ORIENTATION MAP, WHAT TO SEE AND DO,	LARGE WALL MOUNTED SIGN	9894 (E) ST 401
G-WF-03 (& 03A)	HERITAGE & VISITOR CENTRE SIGNAGE	GROUND FIXED SMALL MONOLITH	9894 (E) ST 402
G-WF-04 (& 04A)	OMIT	GROUND FIXED SMALL MONOLITH	9894 (E) ST 402
G-WF-05	GOODBYE/ONE PRIORITY TO INCOMING TRAFFIC - HIGHWAY CODE SYMBOL)		
G-WF-06	SECONDARY WELCOME WITH OPENING TIMES	WALL MOUNTED	N/A
G-WF-07	SIGNAGE TO THE CATHEDRAL & DEANS OFFICE	GROUND FIXED SMALL MONOLITH	9894 (F) ST 402
G-WF-08	DIRECTIONAL TO WEST FRONT FOR ENTRY INTO THE CATHEDRAL	MOUNTED TO RAILINGS	N/A
G-WF-09	ENTERING THE CLOISTERS WITH DIRECTIONAL TO WEST FRONT	WALL MOUNTED	N/A
G-WF-10	SECONDARY WELCOME WITH OPENING TIMES	WALL MOUNTED	N/A
G-WF-11	ACCESS FOR PEDESTRIANS / NO PUBLIC PARKING	WALL MOUNTED	N/A
G-WF-12	SECONDARY WELCOME FOR VEHICLES	WALL MOUNTED	N/A
G-WF-13	THE EDUCATION CENTRE (BUILDING LABEL)	WALL MOUNTED	N/A
G-WF-14	THE BENEDICT ROOMS (BUILDING LABEL)	WALL MOUNTED	N/A
G-WF-15	WAY OUT	WALL MOUNTED	N/A
G-WF-16	NO WAY OUT	POST MOUNTED	N/A
G-WF-17	THE ALMONERS HALL (BUILDING LABEL)	DOOR MOUNTED	N/A
G-WF-18	NAME T.B.C (BUILDING/DOOR LABEL)	DOOR MOUNTED	N/A

INTERPRETATION GRAPHICS - REFER TO DETAIL DRAWINGS AND GRAPHICS SCHEDULE FOR FURTHER DETAIL

GRAPHIC NUMBER	DESCRIPTION	TYPE	DETAIL DRAWING REFERENCE IF APPLICABLE
G-ST-01	INTERPRETATION OF THE WEST FRONT	LARGE WALL MOUNTED SIGN	9894 (E) ST 401
G-ST-02	THE CLOISTERS	LOW LEVEL LECTERN	9894 (E) ST 403
G-ST-03	THE CLOISTERS	LOW LEVEL LECTERN	9894 (E) ST 403
G-ST-04	THE MONKS CEMETERY	LOW LEVEL LECTERN	9894 (E) ST 403
G-ST-05	THE INFIRMARY & TABLE HALL	WALL MOUNTED	N/A
G-ST-06	THE LADY CHAPEL	LOW LEVEL LECTERN	9894 (E) ST 403
G-ST-07	THE DORMITORY & REFECTORY	WALL MOUNTED	N/A

Figure 2
Peterborough Cathedral, Minster Precincts showing the approximate locations of the proposed interpretation signs (Table 1, G-ST-01 to 07) and way finding signs (Table 2, G-WF-01 to 18).
(After Haley Sharpe Design Limited)

Graphic Number	Description	Type	Groundworks
G-ST-01	West Front interpretation	wall-mounted	no
G-ST-02	The Cloisters	low-level lectern	yes
G-ST-03	The Cloisters	low-level lectern	yes
G-ST-04	The Monks' Cemetery	low-level lectern	yes
G-ST-05	The Infirmary and Table Hall	wall-mounted	no
G-ST-06	The Lady Chapel	low-level lectern	yes
G-ST-07	The Dormitory and Refectory	wall-mounted	no

Table 1
Peterborough Cathedral, Minster Precincts, interpretation signs

Graphic Number	Description	Type	Groundworks
G-WF-01	Welcome, service & opening times, forthcoming events on digital display	ground-fixed monolith	yes
G-WF-02	Orientation map, what to see & do	wall-mounted	no
G-WF-03	Heritage & Visitor Centre	ground-fixed small monolith	yes
G-WF-04	not installed	(would have been ground-fixed small monolith)	(yes)
G-WF-05	Goodbye & traffic instructions	wall-mounted	no
G-WF-06	Secondary Welcome & opening times	wall-mounted	yes
G-WF-07	not installed	(would have been ground-fixed small monolith)	(yes)
G-WF-08	Directional to West Front for entry	mounted to railings	no
G-WF-09	Entering the Cloisters with directional to West Front	wall-mounted	no
G-WF-10	Secondary Welcome & opening times	wall-mounted	no
G-WF-11	Access for pedestrians/no public parking	wall-mounted	no
G-WF-12	Secondary welcome for vehicles	wall-mounted	no
G-WF-13	The Education Centre	wall-mounted	no
G-WF-14	The Benedict Rooms	wall-mounted	no
G-WF-15	Way Out	wall-mounted	no
G-WF-16	No Way Out	post mounted	no
G-WF-17	The Almoners Hall	door mounted	no
G-WF-18	building/door label	door mounted	no

Table 2
Peterborough Cathedral, Minster Precincts, way finding signs

1.3 Planning Background

Four signs proposed for sites within the scheduled area (SM PE 140) were granted scheduled monument consent by Historic England in February 2017, subject to conditions requiring that the groundworks be carried out under detailed archaeological monitoring and that a report on the archaeological recording be sent to the Historic Environment Record and to Historic England.

All but one of the new and replacement signs did not require planning permission from the local planning authority, Peterborough City Council. The one exception was a non-illuminated stainless steel monolith with LCD screen, proposed for a position within Cathedral Square adjacent to Norman Gate (G-WF-01). Installation of this sign was granted permission (planning ref: 15/00429/ADV) in June 2015, subject to a condition requiring that the groundworks associated with the installation be monitored by an appointed archaeologist.

1.4 Historical and Archaeological Background

The individual sites affected by the works (Figure 2) lie within and on the periphery of the precincts of Peterborough Cathedral/ Abbey.

The known history and archaeology of the cloister in particular have been described in detail by Jackie Hall, the Cathedral Archaeologist (Hall 2012), with reference to the preliminary results of a geophysical survey of the cloister (Randall 2013; Utsi 2013 and Appendix B). The following is a brief summary of the development of the site.

The origins of the abbey of Medeshamstede in the 650s are well attested in documentary history, but little is known about its buildings and precincts. The abbey as refounded by Aethelwold in 966 has left more substantial remains, including large parts of the east end of its church which were discovered in 1884 during underpinning of the crossing tower and further revealed by an excavation in the NE corner of the cloister in 1894. Irvine's excavation demonstrated that the nave of the pre-conquest church lies beneath the northern part of the cloister garth and its north alley, but did not extend far enough towards the west to expose the full length of the nave.

During the early years of the 12th century, a new dormitory, chapter house and refectory were built in the claustral ranges, and further rebuilding work, largely focused on the church but including other parts of the claustral ranges, was prompted by a major fire in 1116. During the later part of the 12th century, documentary evidence records the rebuilding of the cloister arcade and covered ways.

In the 13th century, numerous minor works were carried out and more major ones, including the rebuilding of the refectory, the remains of which still can be seen in the south wall of the cloister. Only a single, now blocked, doorway in the west wall of the cloister survives from the 14th century.

During the 15th century, a third rebuild of the cloister arcades was undertaken. Although now not visible above ground, the foundations for the inner walls of the cloister arcade have been shown, by the 2012 resistivity survey, to survive on all sides of the cloister.

The abbey was dissolved in 1539 but was refounded as a cathedral two years later and retained the majority of the abbey buildings until the Civil War started to affect Peterborough in 1643. Many buildings and features of the old abbey were lost during the Civil War period, including the chapter house, refectory and cloister arcades. The Lady Chapel, on the north side of the church, was also taken down at this time.

The documented building and rebuilding of the claustral ranges, arcades and other features demonstrates how archaeologically rich this area is. Excavations carried out in the cloister during the late 19th century and the later part of the 20th century have demonstrated that many of the remains lie relatively close to the modern ground surface. The walls of the Anglo-Saxon church, in the NE corner of the cloister, lie only 0.5m below the modern ground surface and a 15th century tiled floor was uncovered in 1994, during conservation of the refectory doorway in the south wall of the cloister, only 0.40m below the modern ground surface. Overlying these monastic remains there are likely to be post-Dissolution features and deposits which have the potential to increase our knowledge of the many changes which have affected the site during the more recent periods of, not always well-documented, history.

1.5 Archaeological Methodology

The methodology outlined in the appended Written Scheme of Investigation (Atkins, 2017), submitted to and approved by Historic England (for SMC), the PCC Archaeologist and the Cathedral Archaeologist, was adhered to throughout the project. Wherever possible, archaeological supervision of the various tasks involved in the sign installation groundworks was organized to minimize delays to the works schedule.

1.6 Timing

The excavation of trenches for lectern-mounted information boards on the north side of the cloister (Figure 2, G-ST-03 and G-ST-00), and for two similar boards outside the scheduled area in the monks' cemetery and close to the site of the Lady Chapel, (Figure 2, G-ST-04 and G-ST-06), was undertaken on the 20th and 21st February 2017. The excavation of a third trench in the cloister, for interpretation board G-ST-02 on the west side of the cloister, was undertaken on the 6th June 2017.

The replacement of existing wall-mounted information boards in Hostry Passage, within the scheduled area, was carried out on 23rd February 2017. Elsewhere in the precincts, other wall-mounted signs were replaced on or about the same day. The installation of signs G-ST-01 and G-WF-02 was completed in July 2017.

Groundworks associated with the installation of a monolith sign with integral LCD screen, immediately outside Norman Gate, were completed on 7th June 2017.

A small monolith sign, intended to stand just inside the grounds of the Deanery (Figure 3, G-WF-07) was manufactured but was not installed. A second small monolith sign, G-WF-04, was included in the list of graphics but was neither manufactured nor installed.

2 Scheduled Area Interpretation Boards

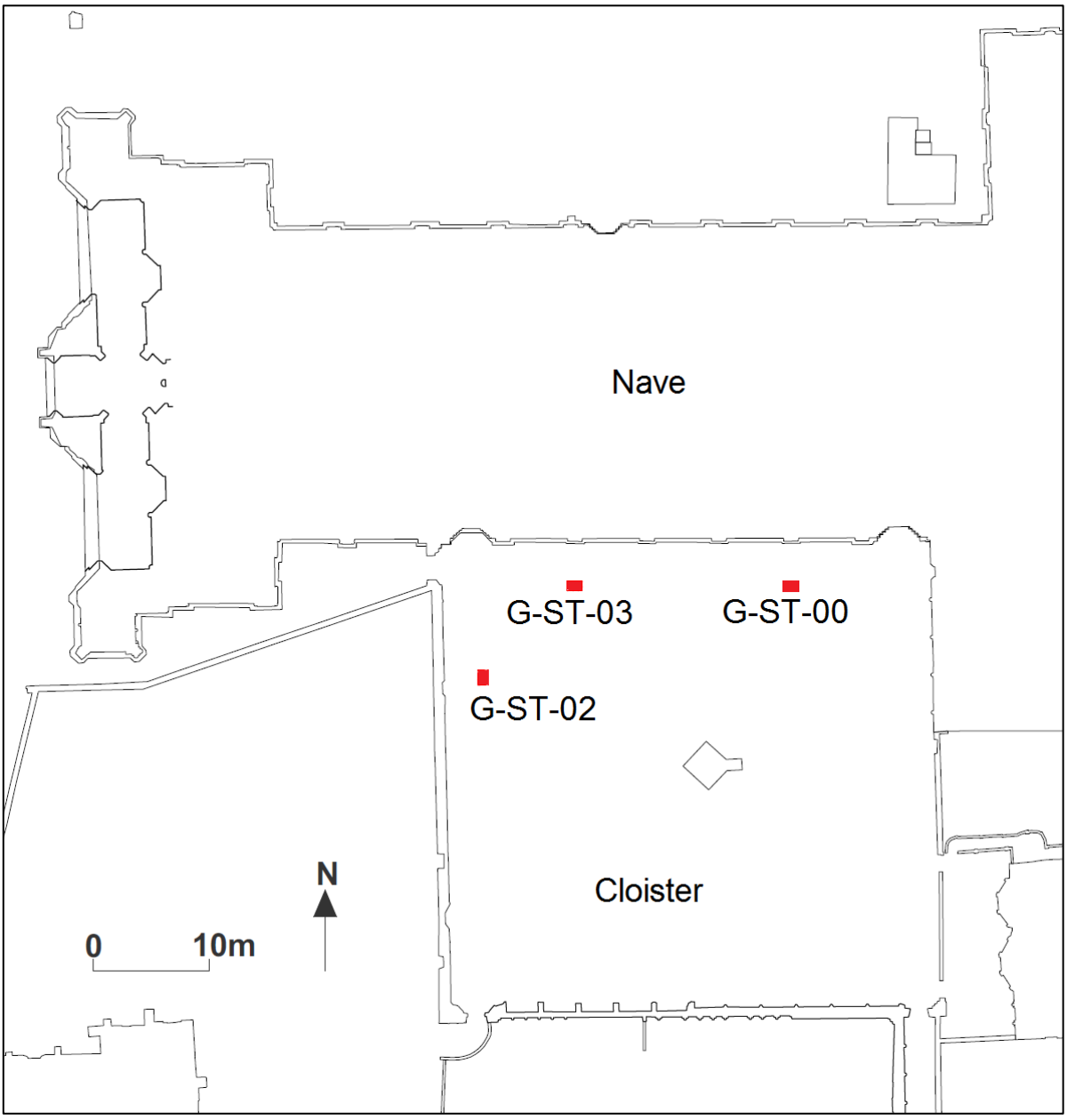


Figure 3
Cloister trench locations

2.1 Introduction

The excavation of two trenches on the north side of the cloister (Figure 3, **G-ST-03** and **G-ST-00**) was carried out on the 20th February 2017 by men working for Signs and Screens Limited, the company contracted to manufacture and install the signs designed by Haley Sharpe Design Limited. Both trenches were excavated by hand under archaeological supervision.

At this stage of the project, interpretation board **G-ST-02** was marked on the graphics location plan, as submitted to Historic England for scheduled monument consent, on the north side of the cloister, to the west of **G-ST-03**. It was apparent at the pre-works site meeting, held on 20th February, that board **G-ST-02** actually showed a view across the cloister from the west, not from the north. However, given the specifics of the scheduled monument consent, it was decided that the lectern could be angled to better reflect the view displayed upon it. After excavation of the two trenches, it was decided that the previously agreed compromise was not acceptable and therefore an application was made, and approval granted, for an amendment to the scheduled monument consent and a third trench was excavated, on the west side of the cloister, for board **G-ST-02**. This work was carried out by the same team on the 6th June 2017, also under archaeological supervision. The now spare trench, close to the NE corner of the cloister, has been renamed **G-ST-00** for reporting purposes.

2.2 Cloister North Side

The trench for lectern-mounted board **G-ST-00** (Plate 1) was 1.26m (E/W) by 0.90m (N/S) by a maximum of 0.32m deep, measured from the adjacent gravel path surface (limit of excavation 7.795m OD). The trench was aligned on the fifth pilaster (counting from the west) and its north side was 3.40m south of the pilaster's plinth.

Plate 1
(Archive image: PCS 17 017)
Cloister lectern G-ST-00: viewed from the east. Scale units 0.50m.
Photograph: Caroline Atkins

Plate 2
(Archive image: PCS 17 013)
Cloister lectern G-ST-03: viewed from the east. Scale units 0.50m.
Photograph: Caroline Atkins

The exposed deposits were, at the limit of excavation, the southern edge of a layer of fine pea gravel, presumed to be part of an earlier path surface, and a substantial sealing layer of modern topsoil and turf.

The trench for lectern-mounted board **G-ST-03** was 1.30m (E/W) by 0.86m (N/S) by a maximum of 0.31m deep, measured from the adjacent gravel path surface (limit of excavation 7.805m OD). The trench was aligned on the second pilaster (counting from the west) and its north side was 3.26m south of the pilaster's plinth.

The exposed deposits (Plate 2) were, at the limit of excavation, a pitched limestone rubble path surface lapped by a deposit of mid brown gritty, loamy clay. Overlying both deposits was the fine pea gravel observed in trench **G-ST-00** and the modern topsoil.

No artefacts were encountered in either trench.

2.3 Cloister West Side

The trench for lectern-mounted board **G-ST-02** (Plate 3) was 1.32m (N/S) by 0.90m (E/W) by an average of 0.20m deep, measured from the adjacent gravel path surface (limit of excavation 7.86m OD).

Plate 3
(Archive image: PCS 17 075)
Cloister lectern G-ST-02: location
Photograph: Caroline Atkins

Plate 4
(Archive image: PCS 17 077)
Cloister lectern G-ST-02: viewed from the south. Scale units 0.50m.
Photograph: Caroline Atkins

The exposed deposits were, at the limit of excavation (Plate 4), a layer of stone chippings, presumed to belong to an earlier and wider path surface, and the crown of a large stone (Plate 4, bottom right of trench) over which the stone chippings lapped. Overlying the presumed path surface and the large stone was a layer of stone chippings mixed with topsoil and above that the modern topsoil and turf. No artefacts were encountered. It is possible that the large stone is part of a buried structure.

2.4 Hostry Passage

Two signs were replaced in Hostry Passage, within the scheduled area; one a way finder (Figure 2, **G-WF-15** and Plate 5) and the other an interpretation board (Figure 2, **G-ST-07** and Plate 6). By agreement, on condition that photographs of the exposed areas of wall face were supplied to the project archaeologist, both existing signs were removed and the new signs were installed without archaeological supervision. Both affected areas of wall face were unlikely to add significantly to the record since both the existing and replacement signs were relatively small, which was just as well, since the contractor failed to supply an acceptable photograph of the medieval wall behind **G-ST-07**.

Plate 5
(Archive image: PCS 17 030)
Way finder sign G-WF-15: as existing
Photograph: Caroline Atkins

Plate 6
(Archive image: PCS 17 037)
Interpretation board G-ST-07: as existing
Photograph: Caroline Atkins

3 Cathedral Precincts Signs

3.1 Introduction

A total of 23 interpretation boards, waymarkers and visitor information signs have been installed in and around the Minster Precincts. Four of these have been covered above, in Section 2, and the remainder are dealt with below.

3.2 Interpretation Board Lecterns

3.2.1 Monks' Cemetery

The trench for lectern-mounted board **G-ST-04** (Plate 7) was 1.30m (E/W) by 0.95m (N/S) by a maximum of 0.34m deep, measured from the adjacent, turfed, ground surface. The trench was aligned on the existing tarmac road with its centre approximately 13.50m south of the third buttress east of the south transept. The precise location is recorded in the site archive.

The two deposits exposed in the trench (Plate 8) were a light to mid brown gritty clay-loam mixed with small stones, fragments of limestone and brick, and the modern topsoil. Within the lower deposit were a few small sherds of white glazed china, which were noted but were not retained. The 50/50 ratio of loam to stone and brick fragments in the lower deposit suggests that it represents either part of an earlier track surface or a leveling deposit for the present one.

Plate 7
(Archive image: PCS 17 042)
Interpretation board G-ST-04: location
Photograph: Caroline Atkins

Plate 8
(Archive image: PCS 17 045)
Interpretation board G-ST-04: groundworks
Scale units : 0.5m
Photograph: Caroline Atkins

3.2.2 Lady Chapel

The trench for lectern-mounted board **G-ST-06** (Plate 9) was 1.30m (SE/NW) by 0.90m (NE/SW) by a maximum of 0.31m deep, measured from the adjacent, turfed, ground surface. The trench was aligned on the existing tarmac road with its centre approximately 22.50m north of the third buttress from the west end of the New Building. The precise location is recorded in the site archive.

Three deposits were exposed in this trench (Plate 10), the earliest of which was a layer of crushed limestone, potentially an earlier path surface. Within this layer, at the SE end of the trench, were lenses of cleaner limestone fragments and pale sand. Separating this probable path surface and the modern topsoil and turf was a layer of gravel and small stones mixed with a mid brown clay-loam. No artefacts were encountered.

Plate 9
(Archive image: PCS 17 057)
Interpretation board G-ST-06: location
Photograph: Caroline Atkins

Plate 10
(Archive image: PCS 17 053)
Interpretation board G-ST-06: groundworks
Scale units : 0.5m
Photograph: Caroline Atkins

3.3 Monoliths

3.3.1 Heritage and Visitor Centre

The groundworks associated with the installation of a small monolith sign outside the front door of No. 25 Minster Precincts (Plate 11) were carried out in November 2014, when the area outside the door was being reduced and resurfaced as part of the Galilee Court Landscaping Project. The small trench, 0.26m (N/S) by 0.65m (E/W), was excavated without archaeological supervision in an area already recorded and landscaped (Hall and Atkins, 2017).

Plate 11
(Archive image: PCGC 402)
No. 25 Minster Precincts: the location of the small monolith sign **G-WF-03**
Photograph: Caroline Atkins

3.3.2 Norman Gate

The trench for the large monolith sign, **G-WF-01** (Plates 12 and 13), was 0.79m (S/N) by 0.62m (E/W) by a maximum of 0.26m deep, measured from the adjacent paved surface. The trench was aligned on the west face of the west wall of the Gate, to the south of the gate passage, and an average of 0.68m distant from it. The precise location is recorded in the site archive.

The requirement that an archaeologist should be present during the excavation of this trench was included in the planning permission conditions because it was proposed that the trench would be in excess of 0.80m deep. What was not known at that time was that the stone paving of Cathedral Square had been set on a raft of almost un-dentable concrete, the likes of which the contractor (LMH (Civil Engineering) Ltd.) had rarely seen before. After lengthy attempts to cut through the concrete, it was agreed that the base plate for the monolith could be bolted to it. Consequently, nothing of archaeological interest was exposed by the groundworks.

Plate 12
(Archive image: PCS 17 081)
Interpretation board G-WF-01: location
Photograph: Caroline Atkins

Plate 13
(Archive image: PCS 17 083)
Interpretation board G-WF-01: groundworks
Photograph: Caroline Atkins

3.3.3 Small Monolith Signs Omitted from the Installation Programme

Two small monolith signs were included in the schedule at the design stage but were subsequently omitted from the programme. **G-WF-04** was omitted early on but **G-WF-07** was manufactured and remained in the works programme until late February 2017. Installation of monolith sign **G-WF-07** has been postponed, not permanently cancelled.

3.4 Wall-mounted Signs

Excluding the two signs installed in Hostry Passage (see Section 2.4), a total of 15 signs have been mounted on a gate, a post, a door and assorted walls. The majority of these have been installed without supervision because the supporting structures were either already exposed and available for photographic recording (eg. Plates 14 and 15, signs **G-WF-13** and **G-WF-14**) or were of little or no archaeological interest. The sites included in the latter group (ie. **G-WF-02, G-WF-05**, **G-WF-06**, **G-WF-08**, **G-WF-09**, **G-WF-10**, **G-WF-11**, **G-WF-12**, **G-WF-16**, **G-WF-17**, **G-WF-18**, **G-ST-01, G-ST-05**) were left to the installation contractor to record photographically after removing the existing sign and cleaning the area before fixing the new sign in its place (eg. Plates 16 and 17).

Plate 14
(Archive image: PCS 17 007)
Interpretation board G-WF-13: intended location on No. 25 Minster Precincts.
Photograph: Caroline Atkins

Plate 15
(Archive image: PCS 17 001)
Interpretation board G-WF-14: intended location on No. 24 Minster Precincts.
Photograph: Caroline Atkins

Plate 16
(Archive image: PCS 17 063)
Interpretation board G-WF-05: intended location.
Photograph: Chris Osborn

Plate 17
(Archive image: PCS 17 073)
Interpretation board G-WF-17: intended location.
Photograph: Chris Osborn

4 Conclusions

Before the installation work commenced on site, it appeared likely that the groundworks associated with any or all of the ground-fixed lecterns and monoliths might expose interesting, and possibly significant, archaeological deposits and features. However, the combination of careful site selection, programme omissions and alterations to the depth of excavation required for the larger monolith sign outside Norman Gate, ensured that the opposite was true. The only deposits exposed by the groundworks which were of even marginal interest were a selection of recently buried path and road surfacing materials.

5 Acknowledgements

Thanks to Signs and Screens Limited and LMH (Civil Engineering) Ltd. for access to the sites during installation works and to the various staff of Peterborough Cathedral involved in the project for enabling the watching briefs.

6 Project Archive

The project archive, paper and electronic, including drawn, written and photographic records will be deposited with Peterborough City Museum under the project code PCS 17.

7 References

Hall, J, 2012, Peterborough Cathedral: Historical and Archaeological Assessment, The Cloisters, unpublished report for Peterborough Cathedral.

Hall, J, 2014, 'The Cloister, Part II: latest developments', *The Friends of Peterborough Cathedral Journal*, 42–47

Hall, J and Atkins, C, 2017, Peterborough Cathedral, Galilee Court Landscaping Project, unpublished report for Peterborough Cathedral (available through PCCHER)

Randall, B, 2013, Geophysical Survey of Peterborough Cathedral Cloister, unpublished report for Peterborough Cathedral

Utsi, E, 2013, Ground Penetrating Radar Survey of the Cloisters of Peterborough Cathedral, unpublished report for Peterborough Cathedral

Appendix A

A Written Scheme of Investigation for a
Programme of Archaeological Observation and Recording
associated with the erection of new signage in
The Cloister and Precincts, Peterborough Cathedral, Peterborough
Scheduled Ancient Monument 140

Prepared for the Chapter of Peterborough Cathedral
by Caroline Atkins

1 Summary

This written scheme of investigation (WSI) details an archaeological mitigation strategy which, if approved, will be implemented during groundworks associated with the erection of 4 new and replacement signs in the scheduled area of the Cloister and Precincts of Peterborough Cathedral. The new signage project as a whole aims to install a total of up to 25 signs, the proposed locations of which are widely dispersed, some lying outside and some within the scheduled area (SM 140).

New signs proposed for the Galilee Court and the site of the Lady Chapel require neither scheduled monument consent (SMC) nor planning permission, and therefore need not be included in this WSI. However, all of the signage works will be dealt with in the manner described in Sections 4 and 5 below.

2 Site Location and Description

The proposed sites for the new signs within the scheduled area all lie to the south of the cathedral, two of them (low level lecterns) in the cloister, one in Hostry Passage (wall mounted) and one for the Infirmary and Table Hall (wall mounted). The scheduled area as a whole is centred on National Grid Reference TL 195 985 and the centre of the cloister on NGR TL 1938 9862.

The cloister, which is c. 42.2m (E/W) by c. 40.2m (N/S), abuts the south side of the cathedral church. The covered alleys no longer survive but there are paths around all four sides, varying in width from 2.8m to 4.0m, and there is also a broad diagonal path (with well head half way along it) running NW to SE.

There are currently three information boards along the east side of the cloister. It is proposed that the two new signs will be set close to the existing path on the north side of the cloister.

The geology of the Peterborough area is made up of Jurassic limestone, clays and alluvial deposits.

3 Historical and Archaeological Background

The known history and archaeology of the cloister has been described in detail by Jackie Hall, the Cathedral Archaeologist (Hall 2012), with additional geophysics of the cloister (Randall 2013; Utsi 2013). The following is a brief summary.

The origins of the abbey of Medeshamstede in the 650s are well attested in documentary history, but little is known about its buildings and precincts. The abbey as refounded by Aethelwold in 966 has left more substantial remains, including large parts of the east end of its church which were discovered in 1884 during underpinning of the crossing tower and further revealed by an excavation in the NE corner of the cloister in 1894. Irvine's excavation demonstrated that the nave of the pre-conquest church lies beneath the northern part of the cloister garth and its north alley, but did not extend far enough towards the west to expose the full length of the nave.

During the early years of the 12th century, a new dormitory, chapter house and refectory were built in the claustral ranges, and further rebuilding work, largely focused on the church but including other parts of the claustral ranges, was prompted by a major fire in 1116. During the later part of the 12th century, documentary evidence records the rebuilding of the cloister arcade and covered ways.

In the 13th century, numerous minor works were carried out and more major ones, including the rebuilding of the refectory, the remains of which still can be seen in the south wall of the cloister. Only a single, now blocked, doorway in the west wall of the cloister survives from the 14th century.

During the 15th century, a third rebuild of the cloister arcades was undertaken. Although now not visible above ground, the foundations for the inner walls of the cloister arcade have been shown, by the 2012 resistivity survey, to survive on all sides of the cloister.

The abbey was dissolved in 1539 but was refounded as a cathedral two years later and retained the majority of the abbey buildings until the Civil War started to affect Peterborough in 1643. Many buildings and features of the old abbey were lost during the Civil War period, including the chapter house, refectory and cloister arcades. The Lady Chapel, on the north side of the church, was also taken down at this time.

The documented building and rebuilding of the claustral ranges, arcades and other features demonstrates how archaeologically rich this area is. Excavations carried out in the cloister during the late 19th century and the later part of the 20th century have demonstrated that many of the remains lie relatively close to the modern ground surface. The walls of the Anglo-Saxon church, in the NE corner of the cloister, lie only 0.5m below the modern ground surface and a 15th century tiled floor was uncovered in 1994, during conservation of the refectory doorway in the south wall of the cloister, only 0.40m below the modern ground surface. Overlying these monastic remains there are likely to be post-Dissolution features and deposits which have the potential to increase our knowledge of the many changes which have affected the site during the more recent periods of, not always well-documented, history.

4 Aims of the Archaeological Project

It is the aim of the project to investigate and interpret the exposed archaeological evidence for previous use of the site and to record that evidence, which would otherwise be destroyed by the proposed groundworks, for future use in local research projects. The specific objectives of the project are:

To identify and record all archaeological features and artefacts exposed during development groundworks.

To determine the form, function, spatial arrangement and sequence of the archaeological features encountered.

To recover dating evidence from the archaeological features.

To retrieve environmental evidence relating to the environment and economy of the site.

To interpret the archaeological features and finds within the context of the known archaeology of the site and surrounding area.

5 Methodology

5.1 SITE WORK

5.1.1 All groundworks and masonry fixings associated with the erection of the new information boards will be undertaken under archaeological supervision.

5.1.2 The installation contractor will allow adequate time and access for the archaeological contractor, who for this project is Caroline Atkins, to make a full and detailed record of any archaeological deposits which are uncovered within the limits of the development excavations. The archaeological work will be carried out in accordance with the development timetable and will cause no significant delay to the development unless otherwise agreed if, for example, human remains or other major archaeological finds are encountered (see paragraphs 5.1.8 and 5.1.9).

5.1.3 All archaeological features encountered will be located on a copy of the developer's plan, at a scale of 1:100, with levels relative to Ordnance Datum, and details of each feature or deposit will be recorded to enable the determination of their form and function and stratigraphic sequence. Any significant features will also be recorded at a scale of 1:20 or 1:10, as appropriate, and in sectional drawings.

5.1.4 A photographic record, both digital and on 35mm film, will be made of archaeological features, where appropriate, and general views of the site will be taken to record the context.

5.1.5 All finds made during the groundworks will be collected, located and assessed for later analysis by the appropriate specialists. Modern artefacts will be noted but will not be retained.

5.1.6 In the unlikely event that the groundworks expose historically waterlogged deposits which have the potential to contain environmental remains, minimum 40L samples will be collected for analysis and submitted for assessment to the most readily available and appropriate specialist at the time.

5.1.7 In the event that deposits relating to industrial activity are encountered, samples and/or assemblages of slags and residues will be submitted to the appropriate specialists for analysis. Even a small sample of any of these materials may have the potential to provide information on the industrial processes concerned.

51.8 In the likely event that human skeletal remains are exposed, *in situ* burials will be left undisturbed as far as is practical, and disarticulated bones will be saved for reburial. If preservation *in situ* is not possible, and the lifting of human skeletal remains is necessary, then a licence will be obtained from the Ministry of Justice and a detailed record will be made before the remains are lifted and before any further work is permitted on the site. Prompt reburial will be the preferred option.

5.1.9 In the event that a major archaeological find is identified, the archaeological contractor will immediately inform the Cathedral Archaeologist and Historic England and a site meeting will be convened with the Church Commissioners, the archaeological contractor and relevant specialists at the earliest opportunity. The preferred mitigation option will be to secure the *in situ* preservation of the remains. Completion of the groundworks in the relevant part of the site will not be permitted until a mitigation strategy has been agreed and implemented.

5.1.10 All relevant Health and Safety Legislation will be complied with throughout the period of site work.

5.1.11 The supervising archaeologist will be covered by current Public Liability Insurance.

5.2 ANALYSIS & REPORT

5.2.1 All saved finds will be recorded and reported upon by appropriately skilled archaeologists. The finds will be assessed for their suitability for inclusion in the site archive.

5.2.2 Within three months of the completion of the watching brief a written description and analysis of the methods and results of the watching brief will be produced, incorporating specialist artefact and environmental reports where necessary and/or available.

5.2.3 Copies of the report will be supplied to Historic England, the Cathedral Archaeologist, the Peterborough City Council Historic Environment Record, and the Church Commissioners.

5.2.4 Whatever the outcome of the archaeological watching brief, a short note or longer report if appropriate, will be submitted to the OASIS recording project.

5.2.5 Caroline Atkins will retain copyright of the report relating to the programme of archaeological investigation associated with the installation of the new signs but agrees that Historic England, Peterborough Cathedral and the Peterborough City Council Historic Environment Record (PCCHER) have licence to reproduce any or all material contained in the report and archive for reference purposes on the understanding that this licence does not cover commercial use of the material by Historic England, the Cathedral, the PCCHER or any third party. In all cases Caroline Atkins retains the right to be identified as the originator of the work.

5.3 ARCHIVE DEPOSITION

5.3.1 A paper and electronic archive, ordered to MoRPHE PPN3 standards, and containing all primary and secondary written and photographic material will be prepared and lodged with the Peterborough Museum, or another suitable repository agreed by the Chapter.

5.3.2 A copy of the archive index, including the location of archive materials, will be supplied to Historic England and to the PCCHER.

6 References

Hall, J., 2012, 'Peterborough Cathedral: Historical and Archaeological Assessment, The Cloisters'. Unpublished.

Randall, R., 2013 'Archaeological Evaluation Report: Geophysical Survey of Peterborough Cathedral Cloister.' Unpublished.

Utsi, E., 2013, 'Ground Penetrating Radar Survey of the Cloister of Peterborough Cathedral', Unpublished

Caroline Atkins

17th February 2017

Appendix B

an extract from

The Cloister, Part II: latest developments
published in *The Friends of Peterborough Cathedral Journal*, 2014, pp 42-47

Jackie Hall (Cathedral Archaeologist)

Last year, I reported on what we know about the cloister from the archives and architecture, as preparation for an archaeological activity for the Cathedral's HLF project. Wonderfully, the Cathedral was successful in its bid so, subject to the necessary conditions, we should be able to undertake some archaeological investigations there in summer 2016. Meantime, though, we can look more closely at the geophysics undertaken just over a year ago and, entirely coincidentally, report on emergency recording at Thorpe Hall that briefly revealed more of the late medieval cloister.

Geophysics: Resistivity by Bob Randall

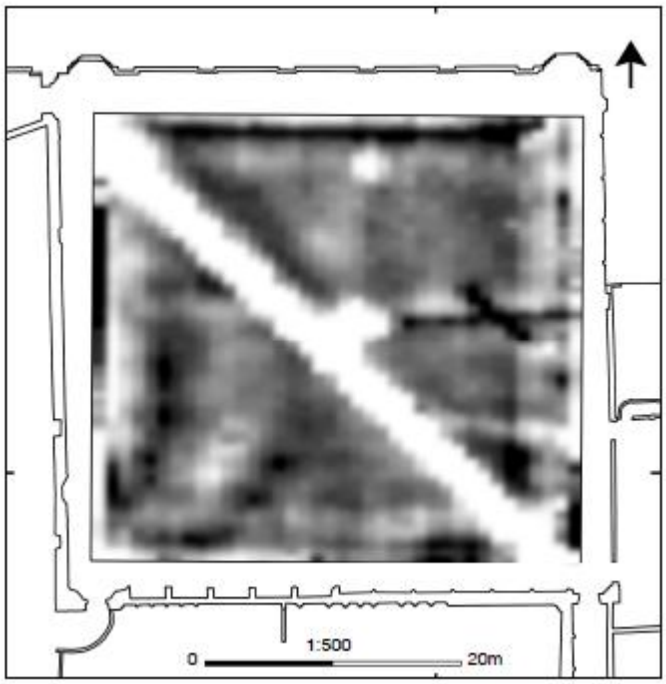


Fig 1
Greyscale plot of processed resistivity data (Bob Randall)

In November 2012, Bob Randall undertook a resistivity survey in the grassed area by taking measurements of electrical resistivity at intervals of 0.5m along lines 1m apart (Randall 2013). Fig 1 shows the processed data and Fig 2 areas of high and low resistance. The high and low resistance anomalies could be interpreted as follows:

(1) This high resistance anomaly, which was detected though the gravel path, would appear to correspond to the known excavated wall discovered by Donald Mackreth in the 1984 excavations. This feature gave one of the highest readings of the area surveyed.

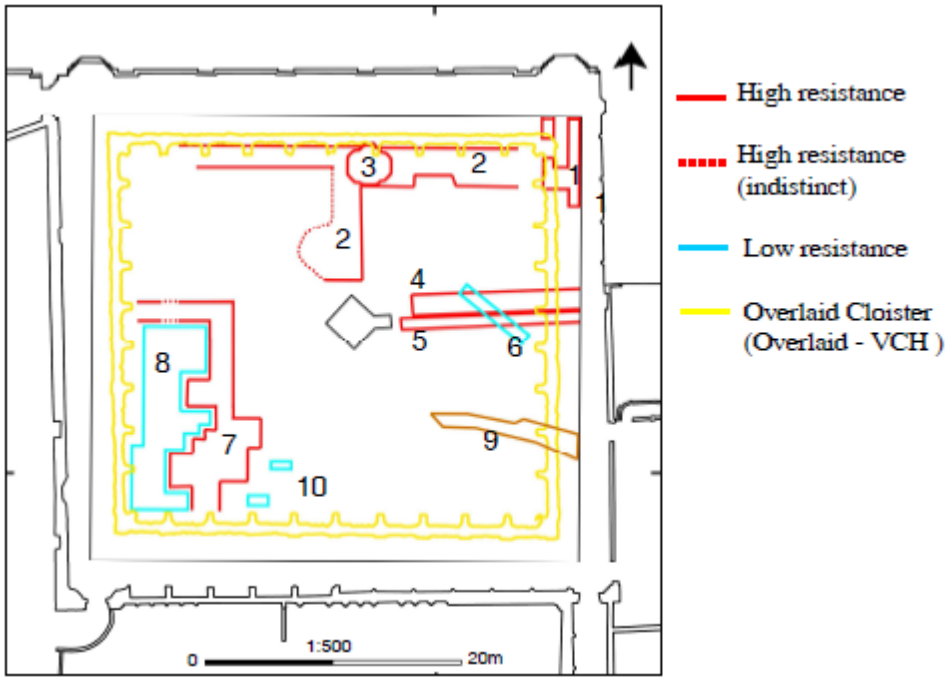


Fig 2 Graphical interpretation of significant anomalies (Bob Randall)

(2) This to have a significant form and runs the width of the surveyed area and clearly shows a right angle feature running towards the centre of the cloister. These responses could have a number of interpretations; a spread of rubble associated with earlier building debris or part of a earlier subdivision of the cloister

(3) Within (2) is a particularly high resistance area – possibly associated with near surface structural remains.

(4) and (5) Running from the eastern edge to the centre of the cloister are a pair of parallel features. Although anomaly (5) appears as low resistance feature, a subsequent electrical section taken in dryer conditions clearly shows both as high resistance features. It would appear that (5) is an inverted, high resistance, feature, suggesting that anomalies (4) and (5) represent different materials, one impervious (masonry ?) and the other free draining (rubble or robbed out areas ?)

(6) A low resistance anomaly appears to cut through (5) and (6) and could be associated with a relatively modern service excavation trench.

(7) and (8) The high resistance feature (7) appears to be structural in nature and could be associated with the remains of a lavatorium thought to be in this area. The low resistance anomaly (8) may be due to an impervious layer, such as a floor, also associated with the lavatorium

(9) This is associated with a grassed over path known from the 1886 ordnance survey map.

(10) This appears to be two discrete small areas of low resistance, approximately 2-3m in length and 1m wide, aligned in east-west direction.

Electrical ‘pseudo-sections’ which look across features at depth were also taken across features (2) to (4), for which see the full report.

Geophysics: Ground Penetrating Radar by Erica Utsi

In February 2013, Erica Utsi undertook a Ground Penetrating Radar survey of the whole area, including the paths. This is potentially much more complex than an area-wide resistivity survey, since information (specifically, differences in the electromagnetic properties of adjacent materials) in gathered from different depths. Measurements were taken every 3.1cm along lines spaced 25cm apart and the data was processed into a 3D block, through which fourteen horizontal slices were taken. Different features appear at different depths. Only two of these are looked at here.

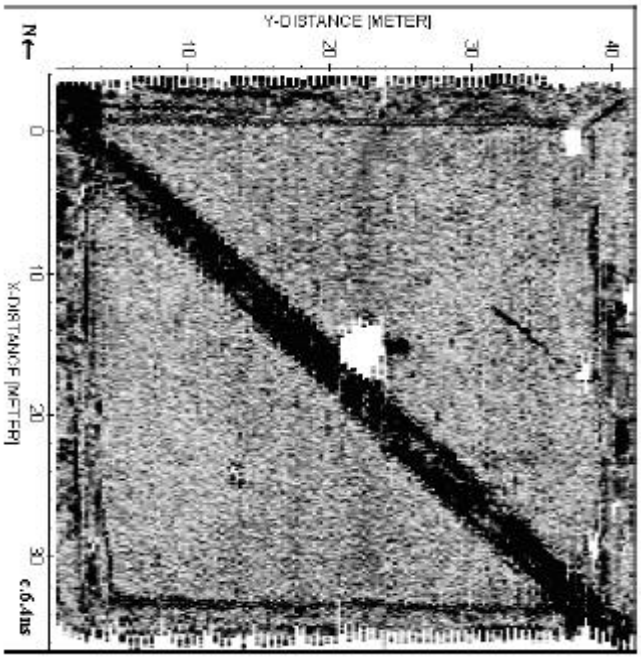


Fig 3
GPR 'time-slice' at
c.6.4 ns (c.27cm)
(Erica Utsi)

Fig 3 shows a slice at c.27cm depth. Two new features appear at this level. The first of these is a strong response from a short diagonal sloping feature in the eastern half of the time slice. This appears to be roughly parallel to the diagonal path but its function is not clear. It appears to be some form of built structure but its function and origin are not obvious. The second is the appearance of a faint but broad north/south line leading from the northern edge towards the diagonal path and the well. A similar feature, lying along the east/west orientation at the eastern end of the Cloisters is also visible, centred along x = 23m and most clearly visible where it joins the diagonal path. Features observed at a higher level in the SW corner of the Cloisters are no longer visible.

Fig 4 shows a slice at c.76cm depth. By this depth, the inner base of the former cloister is visible to the east and west as well as the south. Two boundary walls observed in higher time slices are still firmly visible i.e. a north/south wall around y = 24m and an east/west wall around x = 14.5m. Material adjacent to this latter wall is also clearly visible. There is a very faint trace of material along a narrow line apparently linking the north/south wall centred on

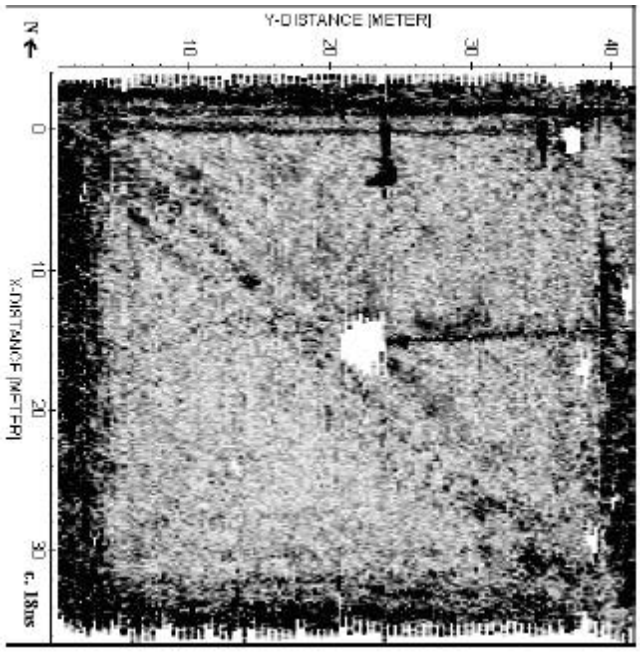


Fig 4
GPR ‘time-slice’ at c.8 ns (c.76 cm) (Erica Utsi)

y = 24m to the shorter parallel one to the east of it (at y = c. 35.1m). It is tempting to suggest that this “dotted line” might mark the position of the otherwise elusive south wall of the Anglo-Saxon church, in which case it would be reasonable to suppose that the second might relate to internal structure. If this theory is correct, then there is very limited extant material present.

See the full report for many more details and features at different depths.