

Peterborough Cathedral

Apse and Treasury Ramps

Report on Archaeological Observation and Recording.

Archaeological contractor's Site Code: PCTAR



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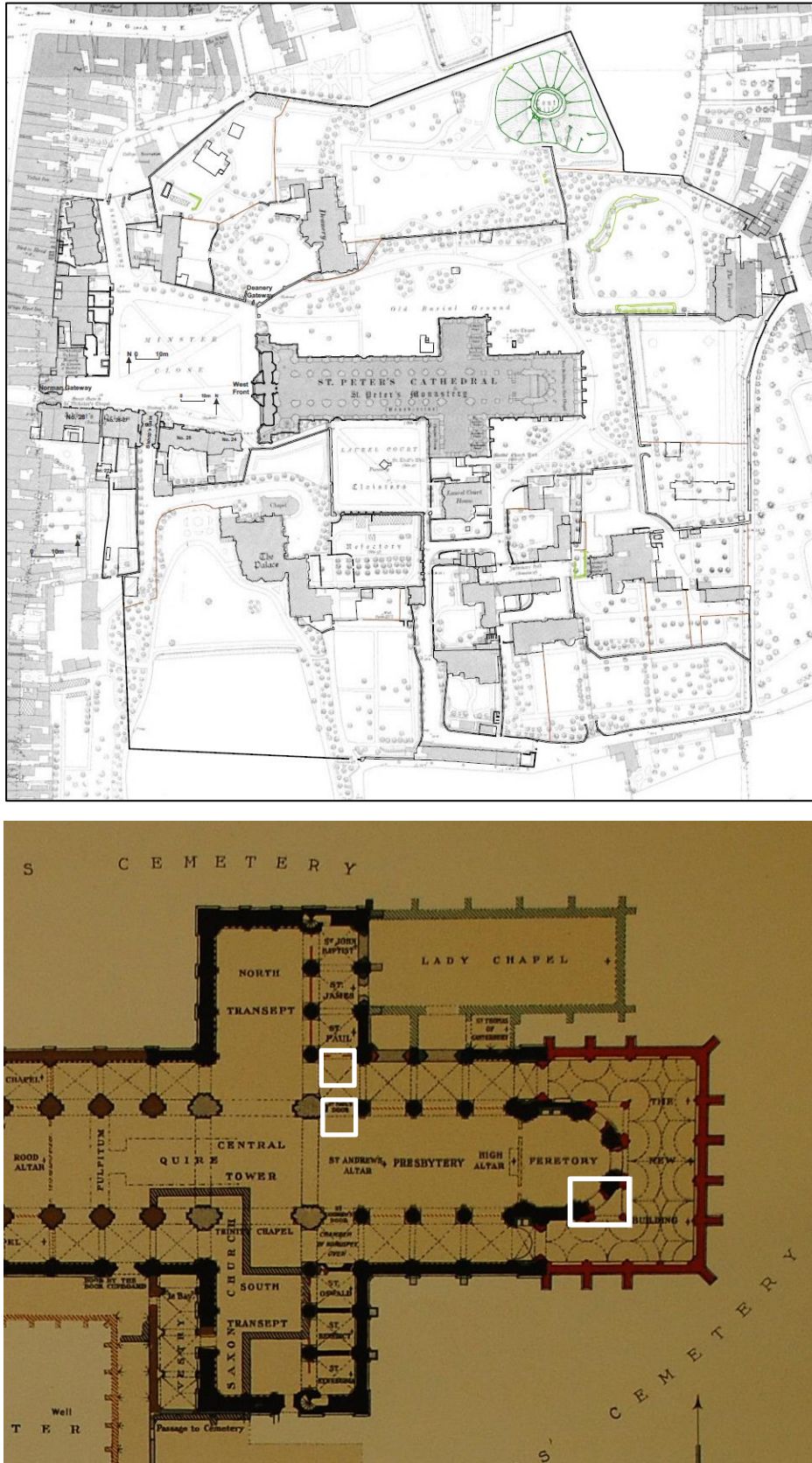


Figure 1

Site Location (upper with 1886 OS as background; lower after Peers 1906)

Peterborough Cathedral

Apse and Treasury Ramps

A Report on a Programme of Archaeological Observation and Recording.

1 Introduction

1.1 Summary

The aim of the apse and treasury ramps installation, supported by the Heritage Lottery Fund as part of the wider Peterborough 900 project, was to improve access to parts of the cathedral previously only accessible by steps. To achieve this aim, areas of existing paving, including one ledger slab, and their bedding, were lifted and replaced with suitable (limecrete) foundations and paved ramps with handrails; the ledger was moved to a nearby location. In the area of the treasury, only 1920s/30s paving and substantial associated bedding material was observed, with possibly the top of the 12th-century strip foundation; the excavated hole for the new location of the ledger clearly revealed the 12th-century foundation, along with the cut for the removal and rebuild of the crossing tower in the 1880s.

In the apse, the new ramp required the removal of the central step, of the three leading from the ambulatory up into the area behind the high altar. In this area, both 12th-century and 16th-century building layers were observed. In the ambulatory, as in the treasury, 1920s/30s paving and substantial associated bedding material was observed, but also the top of the burial earth of the early external or later internal burial ground.

1.2 Site Location and Description

The site is centered on National Grid Reference 519449 298645, within the cathedral church (Fig 1). The apse is the original 12th-century east end of the Norman abbey church, begun in 1118, now enclosed on the east by the early 16th-century 'New Building'. Three windows in the apse, to the north, east and south, were opened up and dropped to ground level, creating access between the New Building and area of the high altar within the apse (Plates 1–2). The new ramp is located within the southern of these openings, turning to the west to create a longer shallower run than the steps (Fig 2).

The treasury is located in the southern two chapels of the north transept. The entrance, through a 15th-century timber screen, is from the presbytery north aisle, and the treasury stands two steps (230mm) higher (Fig 3, Plate 3–4). The new location of the ledger stone (which would otherwise have been destroyed) was between the two piers of bay 1 of the presbytery arcade i.e. facing the treasury entrance.

1.3 Planning Background

The cathedral lies within the 'red line' as defined by the Care of Cathedrals Measure (2011) and, under the Ecclesiastical Exemption Order 1994, the works therefore did not require Listed Buildings Consent, but instead a consent from the Cathedrals Fabric Commission for England. This was duly obtained.

1.4 Historical and Archaeological Background

The foundation stone of the abbey church was laid at the east end i.e. in the apse in 1118, two years after fire had destroyed, or partially destroyed, its 10th-century predecessor (Mellows 1949, 98; Halliday 2009). The presbytery, with four straight bays, an apsidal east end, and apsidal terminations to its aisles, was ready for services to be held there in 1140 (Mellows 1949, 108; Halliday 2009). Peterborough Cathedral church is one of few to retain its Romanesque apse almost in its entirety. Apart from the insertion of later window tracery,

only the ground floor of the apse has been significantly altered. As elsewhere in the church, tracery was inserted in the 14th century, with very fine open tracery-work on the interior. When the 'New Building', designed by John Wastell, was added to the east in the early 16th century, the three easternmost ground storey apse windows, now enclosed, were knocked down to ground level, creating three spaces through which the presbytery and the new ambulatory (New Building) could communicate. In 1894, the presbytery was redesigned by the architect JL Pearson, with a Cosmati-style pavement and a new high altar beneath a marble and alabaster baldachino.

There are three steps in all leading up from the New Building into the presbytery. The upper one forms the edge of Pearson's marble pavement, must date to that period of work or later, and is not disturbed by the new ramp. The lower step, worn, curved, and with a small 45° chamfer, is clearly the lower external plinth of the 1118 apse. This is mostly hidden elsewhere by the many alterations to the apse made when the new building was added (see Plate 1). Although in situ, this plinth may have been disturbed in the early 16th-century when steps were built to bridge the gap between the new ambulatory and the presbytery. Judging by the wear (Plate 2), the broad middle step is contemporary with the knocking through of the window in the early 16th-century, although the outer stone appears to be a replacement, perhaps made during the 1894 works on the presbytery. Further works took place in the apse and New Building in the 1920s-30s, but these probably did not disturb the opening in question, although they did destroy the medieval plinth and steps in the eastern opening.

In 1891 during the preparatory works for the new floor and baldachino, five graves were discovered within the apse near the high altar and the graves were filled with concrete (PCCHER 80262). Between 1921 and 1931, major structural works took place on the new building and eastern arm, including the roof and tie beams, and a steel and concrete ring beam was constructed around the middle storey of the apse (HER 80262 and 80219). In 1934, the New Building and apse were still in poor condition, especially the three openings between the two. Parts of the south and east walls of the New Building were underpinned from the exterior, while inside there was also significant underpinning of the 16th-century structure (Hall 2011). The local historian William Mellows described the ground as 'honeycombed with graves' (Mellows 1947, pp.vii-xii) and three vaults immediately east of the apse were filled with reinforced concrete in 1934. No archaeological records were made during the 1920s and 30s works. Although the works were very close to the southern opening between the ambulatory and the apse, the architect's drawing do not show any alterations here.

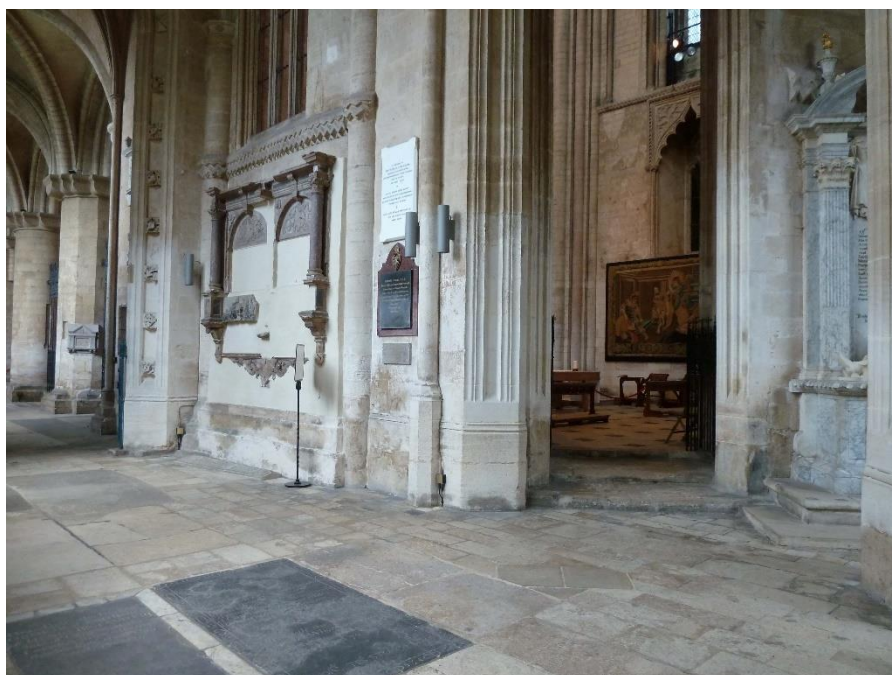


Plate 1
View of ramp location from
ambulatory (New Building).
Photograph: Jackie Hall (2011)



Plate 2
View of ramp location from top showing worn middle and lower steps.
Photograph: Jackie Hall (2011)

The treasury is located today in the two southern chapels of the north transept, built at the same time as the east end (1118-40). The screens surrounding it date to the 15th century (Plate 3); the ones on the west side have been reused from the nave rood screen and cut to fit, while the one on the south, through whose gate the new ramp to the treasury runs, is clearly made-to-measure. As in the New Building, however, the project called for the removal of modern flooring (Plate 4), which could potentially reveal archaeological deposits below. The NRO catalogue suggests that repaving in the north choir aisle (presbytery aisle) and north transept took place in 1938, although it is not certain that the chapels were repaved at this time; plans to repave the south transept and one of its chapels were drawn up in 1934 and 1939 respectively. A medieval ledger stone was reused in the new paving.



Plate 3
Treasury, showing screen.
Photograph: Stephen Oliver

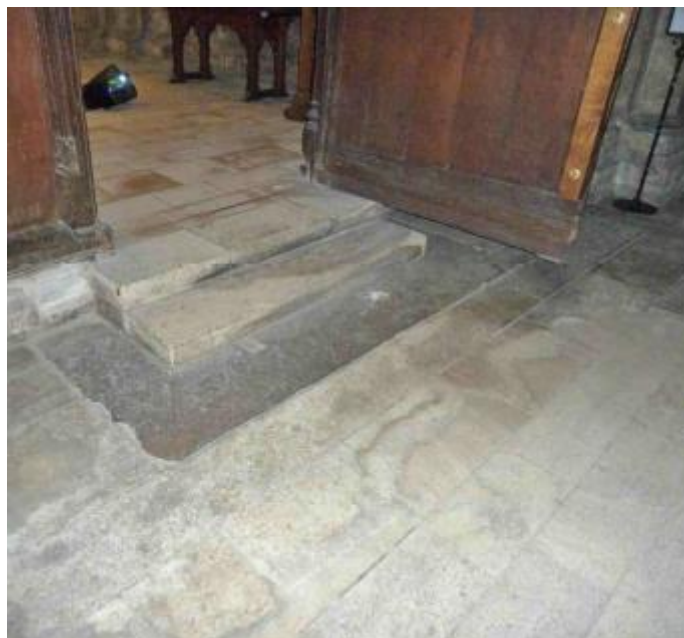


Plate 4
Treasury, showing modern paving, with ledger below step
Photograph: Stephen Oliver

During the course of the works, it was decided to relocate the ledger stone on the other side of the aisle from its previous location, between the north-east crossing pier and pier 1 of the choir north arcade (as opposed to the original suggestion of within the main area of the aisle). It is well known that the crossing tower, down to the foundations of the piers, were completely rebuilt in the 1880s, under the aegis of J.L. Pearson, the Cathedral Architect. The clerk of works, J.T. Irvine made many records at the time, including a diary of works and discoveries. The concrete for the new foundation of the north-east crossing pier was laid ('thrown down') 5th to 9th September 1883, and a few days later three courses of Yorkshire stone slabs were laid (CUL PDC MS35). The upper course can still be seen, standing a little higher than the surrounding 1930s Clipsham stone paving (Plate 5). It is not completely clear from the accounts how many other foundations were replaced in the presbytery, although the 'circular pillar N side of choir' was clearly underpinned.



Plate 5
Presbytery north aisle, bay 1,
showing new location for ledger
stone, prior to works.
Photograph: Stephen Oliver

1.5 Archaeological Methodology

At the shallow depths at which works were planned (300mm depth in the presbytery north aisle, outside the treasury; 240mm in the presbytery arcade; and a maximum of 170mm in the ambulatory outside the apse), an archaeological watching brief was acceptable, as per ClfA guidelines (2014). The principal aim was 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, to further aid understanding of the archaeology and architecture of the cathedral/abbey. Specific objectives included the identification of burial earth, if present; the identification (and avoidance) of burial vaults, if present; and study of the visible medieval ledger stone. At this high level, burials were not anticipated but if encountered, work was to stop for reassessment and every effort made not to disturb them, as per Church of England policy, as set out in the relevant guidance (APABE 2017).

Within the thickness of the apse wall, where the middle step required removal, the archaeological focus was on characterising materials relating to medieval and post-medieval building periods.

1.6 Timing

As a whole, the Cathedral Ramps Project commenced on Monday 26th June 2017 and was completed 1st September 2017. Archaeological inspection took place on a number of days, starting with the excavation for the treasury ramp, followed by that for the apse ramp, and then concluding with the relocation of the ledger slab.

2 Archaeological Observations: Apse Ramp

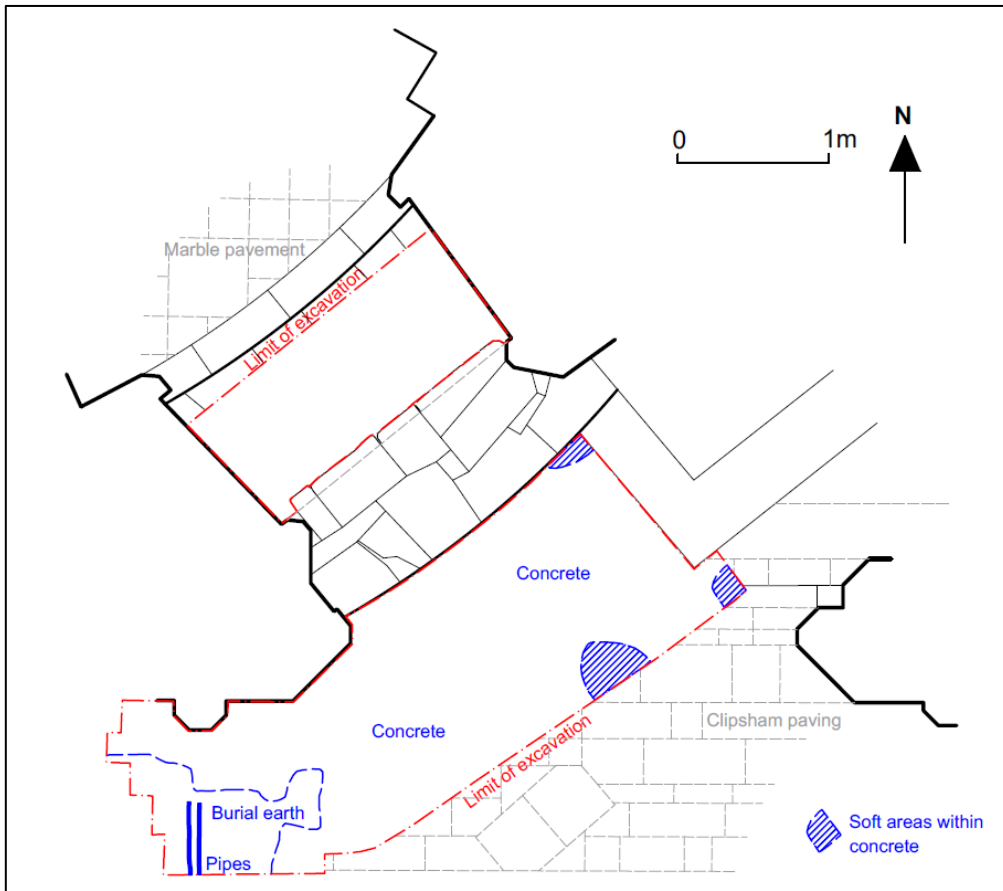


Figure 2

South entrance into apse, showing areas of excavation and features; paving not accurate (using plan supplied by Oliver Architecture Ltd.)

2.1 Removal of Step

When the central step was removed, it was found to be bedded on hard buff lime mortar, apparently continuous with the mortar bed running under the jambs of the opening, c.20–40mm deep (Plates 6 and 7). Since these jambs belong with the 16th-century New Building, this shows that both the mortar bed, and the step, were also 16th-century.



Plate 6
(Archive image PCTAR 43)
Steps into apse, after
removal of central step
Photograph: Jackie Hall



Plate 7
(Archive image PCTAR 45)
Section at north-east
side of apse step; buff
mortar upper and right;
sand and rubble lower
and left
Photograph: Jackie Hall

Immediately below the mortar lay a deposit of dark orange sand and rubble, with very little lime; only the top was seen (at c. 9.31m OD) and it was not excavated. Since this layer also appeared to run beneath the jambs of the opening but was very different from the bedding mortar for the step, there is the real possibility that it is the original wall core of the 1118 apse foundation. There were no finds or other dating evidence.

The slabs of the outer step projected 50–100mm below the central, removed, step (Fig 2 and Plate 7). Because of later pointing in the jambs, it was not possible to discover the relationship between these inner stones of the step and the jambs i.e. they could be either 12th-century, contemporary with the plinth, or 16th-century, contemporary with the opening.

2.2 Removal of Paving outside Apse

The area shown in Fig 2 outside the apse was excavated by the masons to a depth of 65–170mm; 65mm next to the apse plinth and up to 170mm on the outer edge. For the most part, the 1930s 2in (50mm) thick Clipsham Stone paving slabs were bedded on 20–30mm of 1:1 cement mortar (Plate 8). In three areas, the masons found patches of significantly softer bedding mortar, and it is suggested that this related to piecemeal repair or replacement, using a lime mortar, probably by Julian Limentani, Cathedral Architect, 1989–2014. Below the cement was a thick layer of cement-based concrete.



Plate 8
(Archive image PCTAR 55)
Section at north-east
side of removed apse
paving
Photograph: Jackie Hall

For the most part, the bottom of the concrete was not reached, and was therefore more than 80-90mm thick (Fig 2 and Plate 9). At the west end, however, the concrete was removed directly onto the top of burial earth (Fig 2 and Plate 10).



Plate 9
(Archive image PCTAR 48)
East end of trench,
showing concrete
Photograph: Jackie Hall



Plate 10
(Archive image PCTAR 52)
West end of trench,
showing concrete, burial
earth and pipes
Photograph: Jackie Hall

Only the top of the burial earth was reached, 110–140mm below floor level (9.095–9.065m OD). Five fragments of disarticulated bone were disturbed and reburied as close as possible to the site of disturbance; they probably result from more major disturbance in the 1930s. Two parallel modern blue plastic pipes emerged 135mm below the top of the south-west baulk, seemingly heading for the electrical fittings in the pier i.e. despite their colour, they appeared to be conduits for electrical wires.

3 Treasury Ramp

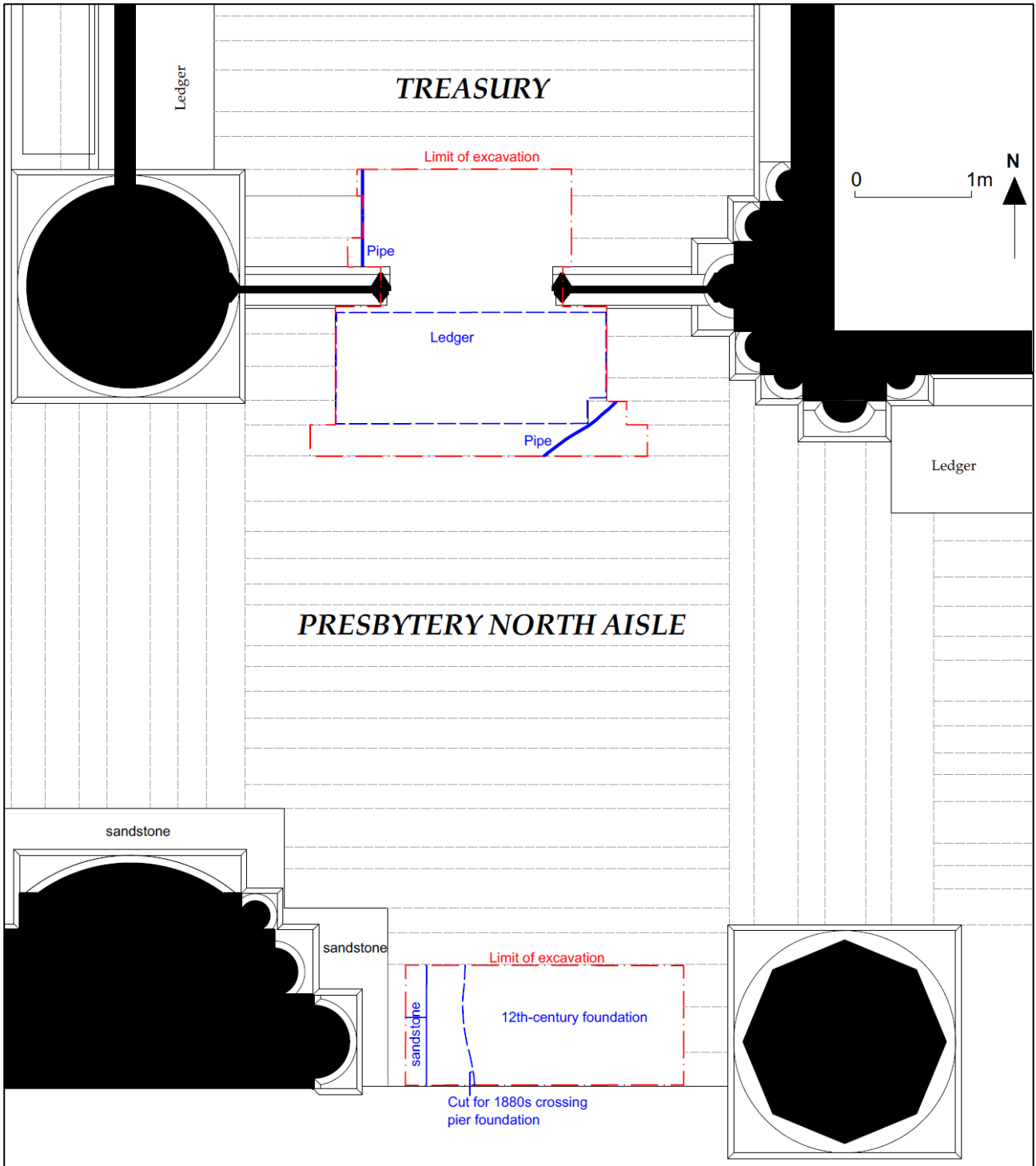


Figure 3

The Treasury and Presbytery, showing areas of excavation for new ramp, and re-location of Ledger Stone (using plan supplied by Oliver Architecture Ltd.)

3.1 Treasury Groundworks

The removal of paving and bedding layers to a depth of c.0.5m in the treasury and 0.3m in the adjacent presbytery aisle i.e. to the same bottom level proved to be remarkably uninteresting (Plates 11–12). Across

the whole area, the 2in (50mm) thick Clipsham Stone paving slabs (in one instance a 65mm Ketton Stone slab) were bedded onto 30–45mm of 1:1 cement mortar, and then onto concrete. In the treasury, with its higher floor level, the concrete was 110–160mm thick, compared to 95–120mm in the aisle. Below this, was a thick unbottomed layer of levelling material – sand and rubble with dumps of mortar and other material within it – more than 250mm thick in the treasury and more than 125mm thick in the presbytery aisle. There was no dating evidence, and we cannot be certain whether this is 1930s levelling in preparation for a new floor, or whether it is late Victorian, associated with the major programmes of underpinning that took place throughout the church. The lower part of this deposit (only seen by the archaeologist in section) could have been the original 12th-century strip foundation running between the piers. Given the similarity in colour and material between this and foundation that is definitely 12th-century, in the apse and in the presbytery arcade (above and below), this is perhaps likely.



Plate 11
(Archive image PCTAR 40)
East end of trench in
presbytery
Photograph: Jackie Hall



Plate 12
(Archive image PCTAR 40)
Whole of trench,
viewed from treasury
Photograph: Jackie Hall

Two pipes were found (Fig 3), both metal with some corrosion. The one inside the treasury was a conduit for live electrical cabling. The one in the south-east corner of the trench, in the aisle, did not appear to be live.

3.2 Ledger Stone

The ledger slab was partially visible prior to the works (Plate 4) but it only became fully visible after the removal of the old steps (Plate 13). It was carefully moved (frontispiece), so that it would not be destroyed and was available for close inspection. It is of Purbeck Marble, and a plain rectangle 2.33 x 0.965 x c.0.09 m. It has only a single indent, for a short plain brass, 340 x 70–75mm with three fixing locations. Examination showed that it had not been turned over and reused.

A cut out in the bottom left corner indicated that its former, perhaps original, position was up against an architectural feature or a monument. In likelihood, this was between two of the piers of the main arcade in either the nave or the presbytery, which have squared plinths.

It is probably late medieval or early modern.



Plate 13
(Archive image PCTAR 25)
Ledger stone
Photograph: Jackie Hall

3.3 New Location for Ledger Stone

An area only slightly bigger than the ledger was excavated between the north-east crossing pier and pier 1 of the presbytery north aisle arcade (Fig 3). Thanks to the contractors, Herringbone Restoration Ltd, it was possible to remove the various building materials in layers, stratigraphically, which greatly enhanced the archaeological information retrieved.

The earliest deposit was the strip foundation between the two piers (Plate 14), seemingly made of orange sand and ragstone rubble, with no lime mortar at all. This was not excavated, but appeared to be rammed to make a well-compacted foundation, the top of which was c.245mm below floor level (c. 8.88m OD). The west end of the trench was naturally excavated to a lower level (300mm below floor at deepest point), because the fill here was softer, and made up of yellow-brown sand and small aggregate. This difference clearly marked the cut for the Victorian excavation of the crossing pier foundation and the pit for the new foundation of 1883. The fill itself is also probably Victorian, given its difference from the 1930s materials above. Its removal revealed the lower sandstone course (on top of concrete) of the Victorian foundation in the west side of the trench.



Plate 14
(Archive image PCTAR 72)
Presbytery aisle; west end of trench for ledger stone. On the left side, the orange sandy 12th-century foundation can clearly be seen, and on the right, the brown-grey concrete of the Victorian foundation for the crossing pier, with one of the sandstone courses described by Irvine just visible far right with the trench.
Photograph: Jackie Hall

This softer west end was partially filled in with large stones (eg c.300 x 220 x 110mm), which probably marked the beginning of the many layers making up the base for the 1930s repaving. Apart from these stones, five different layers were clearly visible (Plate 15).

The lowest levelling deposit was principally medium-large stones in some cement mortar, in a thick layer (80mm); above this was a fairly soft cement-based concrete with 50–70% aggregate, only 50mm thick – it appeared to have been poured in, as it had a very flat upper surface (plate 16) and the larger stones had sunk to the bottom. Above was a thin (12–17mm) layer of possibly neat cement, followed by bedding cement-based mortar (40mm; probably a 1:1 mixture) on which the 2 in (50mm) paving slabs were laid.



Plate 15

(Archive image PCTAR 66)

Presbytery aisle; east section of trench for ledger stone. At the bottom (not in section) the 12th-century foundation is visible, with two layers of aggregate/concrete above, two layers of concrete/cement above that, with the paving slabs on top.

Photograph: Jackie Hall



Plate 16

(Archive image PCTAR 64)

Presbytery aisle; trench for ledger stone, showing top of concrete with high level of aggregate

Photograph: Jackie Hall

4 Conclusions

The masons' excavations for the new ramps, and the relocation of the ledger stone, revealed primarily modern deposits, associated with the large scale renewal of the paving in the 1930s. Importantly, however, the apse excavation showed how close to the floor surface burial earth can still be, while the original, 12-century, foundation was clearly identified both in the apse, with the removal of the middle step and in the presbytery north aisle; it was characteristically orange sand and rubble with little or no mortar. In the presbytery, the cut for the late Victorian rebuilding of the crossing tower, including the foundations, could clearly be seen.

The ledger was shown not to have been turned over and reused.

5 Acknowledgements

Thanks to Herringbone Restoration Ltd for access to the site during works, notably John May; to Stephen Crane of Peterborough Cathedral for enabling the watching briefs; and to the Cathedral Architect, Stephen Oliver, for providing drawings and other information.

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 PCTAR.

7 References

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