



YORK ARCHAEOLOGICAL TRUST



**ORGAN DUCT RECORDING,
RIPON CATHEDRAL**

BUILDING RECORDING REPORT

by M. Johnson

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YORK ARCHAEOLOGICAL TRUST

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Registered Office: 47 Aldwark, York, UK, YO1 7BX

Phone: +44 (0)1904 663000 Fax: +44 (0)1904 663024

Email: archaeology@yorkat.co.uk Internet: <http://www.yorkarchaeology.co.uk>

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CONTENTS

	Page
1. SUMMARY	1
2. INTRODUCTION.....	1
3. METHODOLOGY	1
4. RESULTS.....	2
5. DISCUSSION.....	14
6. ACKNOWLEDGEMENTS	16
APPENDIX 1: PLANS & ELEVATIONS (Figures 1-6).....	16

Figures

1. Location of the organ ducts in relation to the choir.....	17
2. Plan of the organ ducts and recorded elements.....	18
3. Elevation 1, S Facing elevation of early walling	19
4. Elevation 2, N Facing elevation of early walling	19
5. N–S elevation along arm of ‘T’ shaped arrangement of organ ducts.....	20
6. Elevation to back of crypt at W. end of tunnel	21
7. Photo locating plan (digital).....	22
8. Photo locating plan (monochrome).....	23

Plates

Recording work in progress	Cover
1. Arm of the ‘T’ shaped of the organ ducts, looking N.....	3
2. Arm of the ‘T’ shaped of the organ ducts, looking S.....	3
3. Shaft of the ‘T’ shaped of the organ ducts, looking W towards rear of crypt.....	4
4. North offshoot of W. end of ‘T’ shaped of the organ ducts, looking N.....	4
5. Graffiti to ceiling of tunnel at external side of crypt, looking W.....	5
6. Present W. end of the choir overriding earlier work, looking WNW	7

7.	East side of N. line of early walling, looking ENE	8
8.	Detail as Plate 7 showing tooling in raking light, looking ENE	8
9.	Level topped mortar deposit at E. end of the early northern wall, looking ENE	9
10.	Central part of the W. stretch of the early S. wall, looking SE	9
11.	N-S aligned limestone wall, looking NW	10
12.	Chalice capital used as a support for a beam of the choir stalls, looking W	12
13.	Rear of the crypt at W end of tunnel, looking W	13
14.	NW corner of choir, looking N	15

1. SUMMARY

Building recording work was carried out in a series of organ ducts beneath the choir of Ripon Cathedral during the temporary removal of pipes. This entailed the production of a series of plans, elevations and notes as well as a photographic survey, these collectively recording early structural elements. Parts of two east–west aligned low stone walls are believed to relate to 12th century works of Archbishop Roger de Pont L’Eveque and to have supported an arrangement of choir stalls. Parts of what is probably a mortar floor are related to these walls. Observations suggest that Roger’s choir extended slightly to the west of the present choir.

A stretch of ?limestone walling at 90 degrees to the 12th century walls is of uncertain date but seems likely to have originally related to an arrangement within the choir, conceivably one that may post-date the Roger choir but precede Gilbert Scott’s current arrangement.

At the west end of the organ ducts the external face of the Anglo-Saxon crypt was recorded. Observations here suggest that an in-filled opening once led to the main chamber of the crypt. The precise date and function of this cannot be conclusively stated though some sort of external access, for either light or humans, would have been required.

2. INTRODUCTION

A programme of small-scale building recording was carried out in the area of 19th century organ pipe ducts below the choir of Ripon Cathedral (NGR SE314 711). These works were conducted by staff from York Archaeological Trust between 8th-10th July 2013. The recording was commissioned by the Cathedral Archaeologist, Liz Humble on behalf of the Chapter of Ripon Cathedral, who also provided an amount of useful information regarding the origin of the ducts. The recording work was carried out subsequent to the temporary removal of the organ air pipes in accordance with the brief prepared by Liz Humble.

3. METHODOLOGY

The area to be recorded comprised a number of spaces within a ‘T’ shaped arrangement of brick-lined ducts beneath the floor of the choir together with areas of shallow sub-floor voids underneath the choir stalls. The confined spaces of these latter voids provided a particularly challenging recording environment. Recording was by scaled hand drawing, photography and written notes.

The drawn record was intended to provide a plan of the tunnels and accessible voids, together with other structural elements and archaeological remains, and for this to be related to the structure of the choir above (Figures 1 and 2). A series of elevations were also drawn recording the faces of early stonework as well as providing a north–south profile across the subterranean spaces (Figures 3, 4, 5, and 6). All drawings were made at a scale of 1:20 and annotated with a series of notes on observations made. Photography was utilised to provide both the general context of the tunnels and work programme and of detail of specific architectural elements of ancient and more recent date. Photographic formats were both high resolution colour digital and 35mm monochrome film. All photographs were located on a plan with numbered directional arrows. All drawings appear in Appendix 1 at the back of this report.

The archive relating to the building recording works is currently stored by York Archaeological Trust under the project code 5717. The archive will eventually be transferred to Ripon Cathedral.

4. RESULTS

4.1 BRICK-BUILT ORGAN DUCTS

The brick-built organ ducts and related elements form an approximate ‘T’ shape and overall measure some 9.9m (east–west) by 13.3m (north–south). There are also accessible areas beneath the choir stalls to both east and west of the arm of the ‘T’, these extending up to 3.5m to the east and fractionally under 4.8m to the west. Within the main body of the brick-lined ducts there is a width of around 1.1m and a ceiling height generally of around 1.38m. Within these areas the ceiling is comprised of large sandstone slabs. At the extreme west of the complex the duct narrows, and slopes gently down, to the rear face of a niche within the main space of the Anglo-Saxon crypt. At either end of the arms of the ‘T’ the ducts rise up, via a combination of brick vertical faces and ramps, to a level of a little over 0.4m below the existing floor of the choir. Headroom also rises in these northern and southern areas owing to the tiered seating arrangement of the choir stalls directly above. A short stretch of brick duct extends northwards, close to a point at the western end of the shaft of the ‘T’. At its northern end, this duct merges into the exit passage from the Anglo-Saxon crypt, immediately adjacent to the spiralled wooden staircase.



Plate 1 Arm of the 'T' shaped organ ducts, looking N

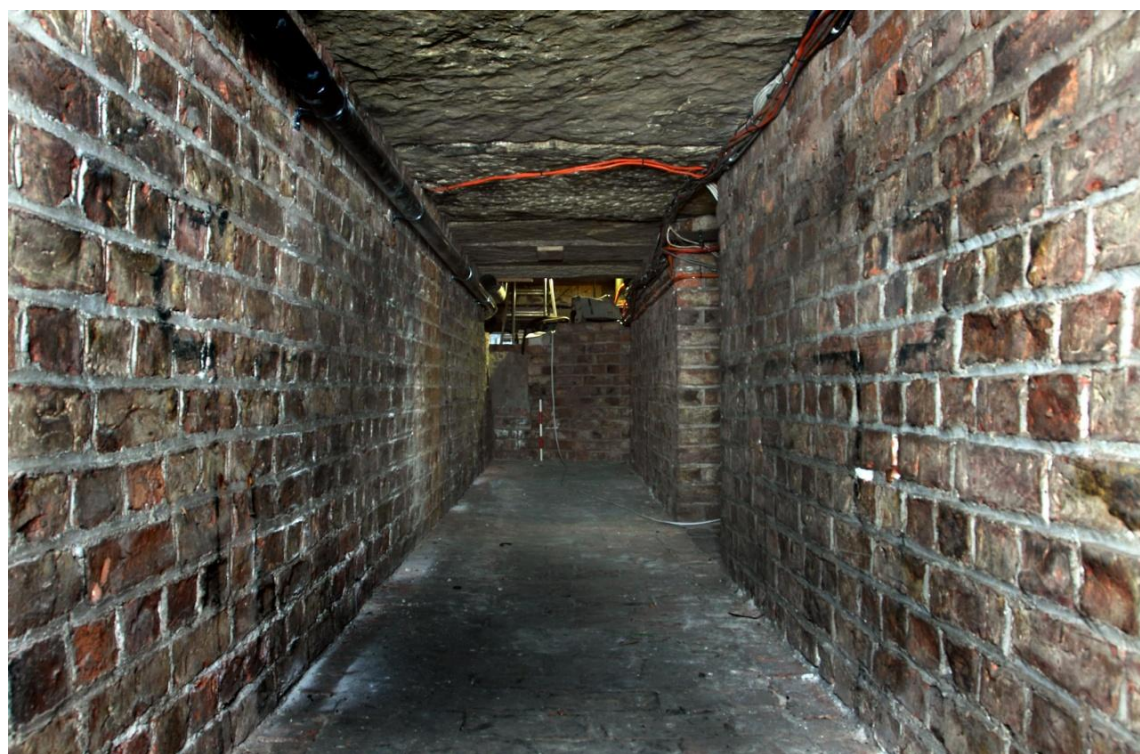
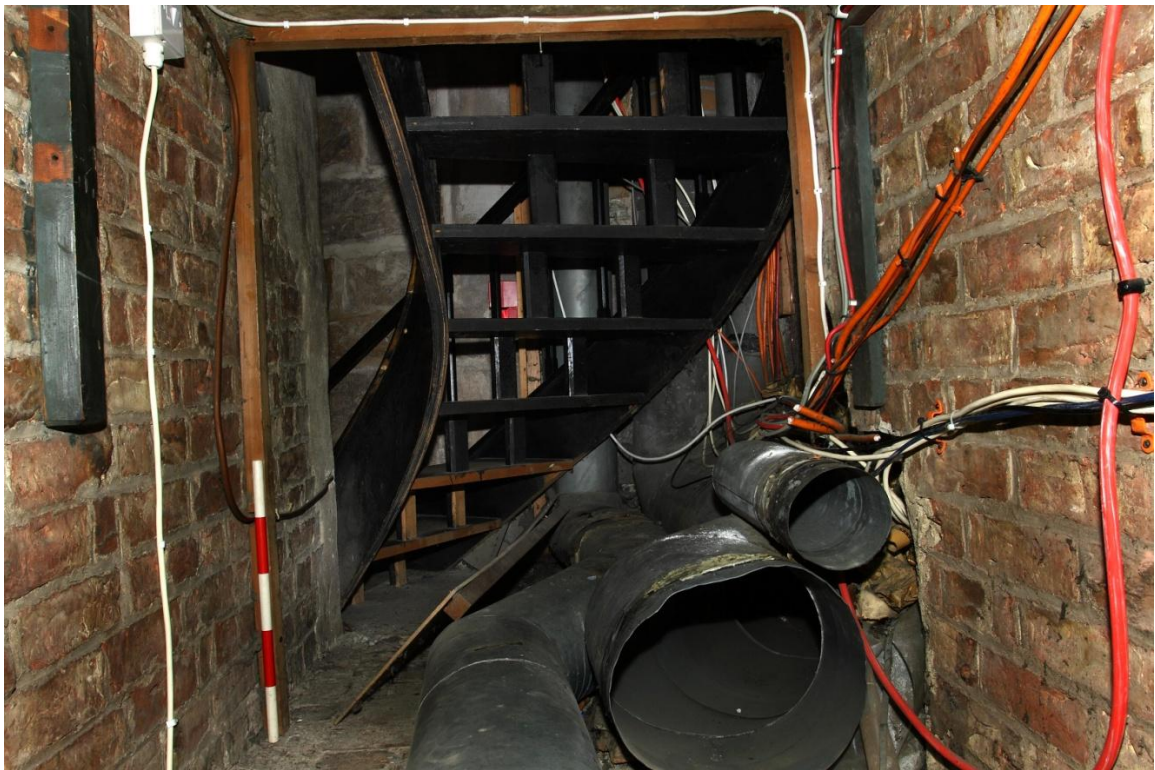


Plate 2 Arm of the 'T' shaped organ ducts, looking S



Plate 3 Shaft of the 'T' shaped organ ducts, looking W towards rear of crypt



*Plate 4 North offshoot of W end of 'T' shaped organ ducts, looking N.
The staircase relates to the crypt exit*

The sides and floor of the organ ducts are brick-built. The hard, red, bricks employed in the construction of the ducts are of a size 220mm x 110mm x 80mm, with little variation to this, and bonded with a hard, seemingly cement-based, mortar. Whilst the main body of the tunnels are roofed by large, thick, slabs of yellow sandstone, the northern and southern ends of the arms of the 'T' are covered by the timberwork of the choir stalls, with open areas providing access beyond these. The narrow area of duct/tunnel adjacent to the Anglo-Saxon crypt, whose ceiling slopes down to the west at a gradient matching that of its floor, is ceiled with two small sandstone slabs. The underside of these small slabs bears some painted graffiti. That on the westernmost slab is faded and not readily decipherable. That to the eastern slab bears the date OCT 24 (?)1870 (possibly 1876?) as well as a number of initials and other capital letters, some seemingly reverse drawn. It is possible that some of the letters extend beyond the brick walling to the sides. If this is the case then the graffiti would pre-date the insertion of the slabs in their present location. It is believed that the brick-built organ ducts were constructed during the 1870s.



Plate 5 Graffiti to ceiling of tunnel at external side of crypt, looking W

4.2 FEATURES BENEATH THE CHOIR STALLS

Restricted access was possible to those areas, both east and west, beneath the upper tier of choir stalls to the north and south sides of the arms of the 'T' shaped arrangement of ducts. The following elements were observed:

4.2.1 EARLY WALLING

Stretches of walling to both east and west of the northern and southern arms of the duct were observed. These east–west running stretches of walling are aligned parallel to each other as well as parallel to the arrangements of the extant choir. Further, these elements of walling are symmetrically located with regards to their positioning in relation to the choir. Each stretch of walling to the eastern side of the duct is also in-line with its opposing element to the western side. Given that some of the blocks immediately adjacent to either side of the duct show signs of having been hacked back, it is reasonably clear that the original arrangement was one of two stretches of walling, one to the south side and one to the north.

To the northern stretch of walling two courses are visible in places. To the southern stretch only one course can be observed, though a further course/s may well be present below obscuring materials. The levels at the top of visible upper course was in all places almost exactly identical. The walling is constructed of ashlar blocks of sandstone with fine striated tooling being visible on many of these. Block length varied between 220mm–600mm though block height was fairly constant at around 200mm. No masons marks were seen on these blocks. The bonding agent between the ashlar was of a creamy white coloured lime mortar. The presence of later stonework and other structural arrangements above much of this early walling prevented it from being definitively ascertained as to whether or not the early walls were of just one block wide. However, where probing proved possible, it appears that the stonework was less than 300mm thick which would suggest the likelihood of a single block width. The precise relationship of the eastern ends of the early walling in relation to the east end of the choir stalls could not be seen owing to inaccessibility. The same applied to the western end of the southern stretch. It was possible to examine this relationship at the western end of the northern wall and here it could be seen that the existing medieval stonework of the western end of the choir rode over the early stonework. In other words, the early stonework continues west of the present limits of the choir. The striated tooling on the ashlar of the early walls is suggestive of a date around the 12th century, quite probably of Archbishop Roger de Pont L'Eveque.



Plate 6 West side of N line of early walling (right) showing the walling of the present W end of the choir overriding the earlier work, looking WNW

To the south side of the north-eastern stretch of walling an in-situ spread of mortar, with a very slight dip down to the south, lapped against the walling. This creamy white lime mortar contained frequent inclusions of fragments of coarse grained sandstone of a size 5mm – 90mm. It is likely that this material represents a floor surface associated with the early walling. This mortar was indistinguishable from a large spread of mortar that butted up against the southern side of the eastern end of the same stretch of walling. This latter spread had a level upper surface that corresponded with the height of the top of the adjacent walling.



Plate 7 East side of N. line of early walling, looking ENE. Note the mortar surface in front of walling. Stonework above the walling forms propping for beam of choir stalls



Plate 8 Detail as Plate 7 showing tooling in raking light, looking ENE



Plate 9 Level topped mortar deposit at E. end of the early northern wall, looking ENE



Plate 10 Central part of the W. stretch of the early S. wall, looking SE

Deposits adjacent to the remaining three stretches of early walling were of broken up fragmentary and loose mortar in which a small number of brick fragments were also visible. Much of this fragmentary material may derive from formerly in-situ spreads of mortar similar to that described above, but which have been broken up during later episodes of building related works.

4.2.2 WALLING BENEATH SOUTH SIDE OF CHOIR STALLS

A stretch of north – south aligned walling was visible, but inaccessible, beneath the lower tier of stalls to the south side of the choir. The stonework was of a single course of dressed blocks of what appeared to be a whitish coloured stone, probably magnesian limestone. It was not possible to observe tooling or other marks, nor to gain inspection of any bonding agent. Neither was it possible to see the western side of this walling. To the east side of the walling was a fairly level spread of creamy white coloured lime mortar around 110mm+ thick and containing frequent inclusions of stone. At some point in the past a narrow channel had been cut through this mortar revealing a brownish grey material beneath that looked as if it was of a 'soil-like' texture. It is possible that a further mortary deposit may underlay this putative soil.



Plate 11 N–S aligned limestone wall. Note the adjacent slot cutting through mortar and soil deposits. Looking NW

These observations, alas from afar, are intriguing. The walling and mortar may be broadly contemporary – though it is not possible to say whether the walling sits atop the mortar or the mortar laps against the wall. The probability of the walling being of limestone suggests that it may be of a different, presumably later, date than that of the 12th century walls. That the walling does not support any of the existing timberwork of the choir stalls points towards it pre-dating the 19th century Gilbert Scott works in this area. It is possible that this arrangement may relate to a choir arrangement post-dating that of Archbishop Roger but preceding Scott's.

4.2.3 BRIEF OBSERVATIONS ON THE TIMBERWORK BENEATH THE CHOIR STALLS

The principal elements of the timberwork beneath the existing choir stalls are comprised of load bearing beams, joists and floorboards. All visible floor boards were uniform, machine sawn and believed to date to Gilbert Scott's restorations. The beams and joists were of varied scantling and a mixture of the old and 'relatively new', the old perhaps accounting for around a third of the timbers – perhaps slightly more in the case of the beams. The newer elements were again all machine sawn and of regular scantling. The old were of considerably mixed proportions, very non-uniform and some bore wany edges. Quite a number of the older beams contained empty mortices and peg holes. Many of the older timbers had clearly been 'cut to length' for re-use. Such re-use of timbers is very common, even in the 19th century. A bigger question concerns the origin of the older timbers which could conceivably have formed part of the choir stall arrangement that preceded Gilbert Scott's.

The timberwork supporting choir stalls is itself supported by a combination of features. These are magnesian limestone blocks atop the 12th century walling, free-standing pillae – some of 19th century brick, others of stone blocks (mostly re-used), some of brick and stone, and by sandstone slabs relating to the extant floor of the choir. The setting of all these elements relates to the 19th century re-ordering of the choir. One of the re-used stones is of especial note, a chalice capital of probable 12th century date, supporting a transverse beam under the southern choir stalls.



Plate 12 Chalice capital used as a support for a beam of the choir stalls, looking W

4.2.4 STONEMWORK BEHIND THE CRYPT NICHE

The end of the narrow, sloping tunnel at the western end of the shaft of the 'T' shaped arrangement of ducts forms the rear, external, side of the niche within the principal chamber of the Anglo-Saxon crypt. Visible at the basal part at the end of this tunnel is part of the walling of the crypt, some one and a half blocks wide. The visible upper parts of these blocks, which are of a coarse grained sandstone bonded with a pinkish mortar, are roughly hewn. Directly above this level there is an infill of post-medieval brickwork that is largely covered in a mortar render. As far as could be judged, this brickwork was of a deeper orangish red colour than the 1870s brickwork elsewhere in the tunnel and ducts. Drilled through the lower parts of the brickwork are two cables and two light fittings, the opposite sides of which are visible within the crypt. Towards the upper parts of the end of the tunnel two large blocks of yellow, coarse grained sandstone project from the sides. These blocks almost certainly represent original stonework of the crypt. Between these large blocks there are a number of thin slab-like pieces of fine grained sandstone (possibly Elland Flag?) which again may be post-medieval infill contemporary with the brickwork immediately below. At the upper part of the tunnel elevation there are a number of blocks of red sandstone, all roughly hewn and some probably smashed. The bonding agent that appears to be original to these is again of a pinkish coloured mortar identical to that employed in the stonework at the base.



Plate 13 Rear of the crypt at W end of tunnel, looking W

These observations suggest that the very basal and upper parts visible at the end of this tunnel are original Anglo-Saxon work whilst the material between these points is post-medieval infill. It is possible therefore, that prior to the brick infilling there was a small opening that led to the main chamber within the crypt. It cannot be conclusively stated whether this feature was an original element of the crypt or a later insertion. The width of any such opening cannot be stated as the sides may have lain beyond the brick sides of the present tunnel. Measuring the heights of the cables in relation to floor level in the main crypt chamber suggest that the lower part of this opening is some 1.83m above the floor level. One further point of note concerning this putative opening relates to its depth below the present floor level of the crossing and choir which appears to be around 1.90m (to base of

opening). Clearly an opening at this depth would require some sort of access, be that for light or physical human access. Whilst the structural configuration of any such access is unknown, one wonders what the purpose of this sloping tunnel, whose brickwork is identical to the remaining ducts and is almost certainly contemporary, actually is. The tunnel does not appear to have a function directly related to the organ pipe ducts. It may be that the brickwork of the tunnel is actually just a lining of the 1870s that in part replaced some form of earlier access? Whether the unusual stonework settings within the main crypt chamber are associated with this feature are equally unknown.

5. DISCUSSION

The character and context of the east – west aligned low stone walls beneath the existing choir suggest the likelihood that they relate to works of Archbishop Roger in the second half of the 12th century. The observation that parts of these are over-ridden by the existing stonework of the west end of the choir suggests that Roger's choir extended somewhat to the west of the extant choir. That this is likely to be the case finds support in a number of observations of the surrounding structure. The blocked arcading to the west end of the north side of the choir (and above this at the level of the triforium and clerestory also) indicate the obscuring of around a metre or more of early stonework. This obscuring almost certainly has its roots in the cladding of the original Romanesque crossing piers by later work. The spatial arrangement of these walls in relation to the choir suggests the probability that the walling once supported an arrangement of choir stalls. The mortar surface adjacent to areas of this walling may form a choir floor contemporary with such stalls.

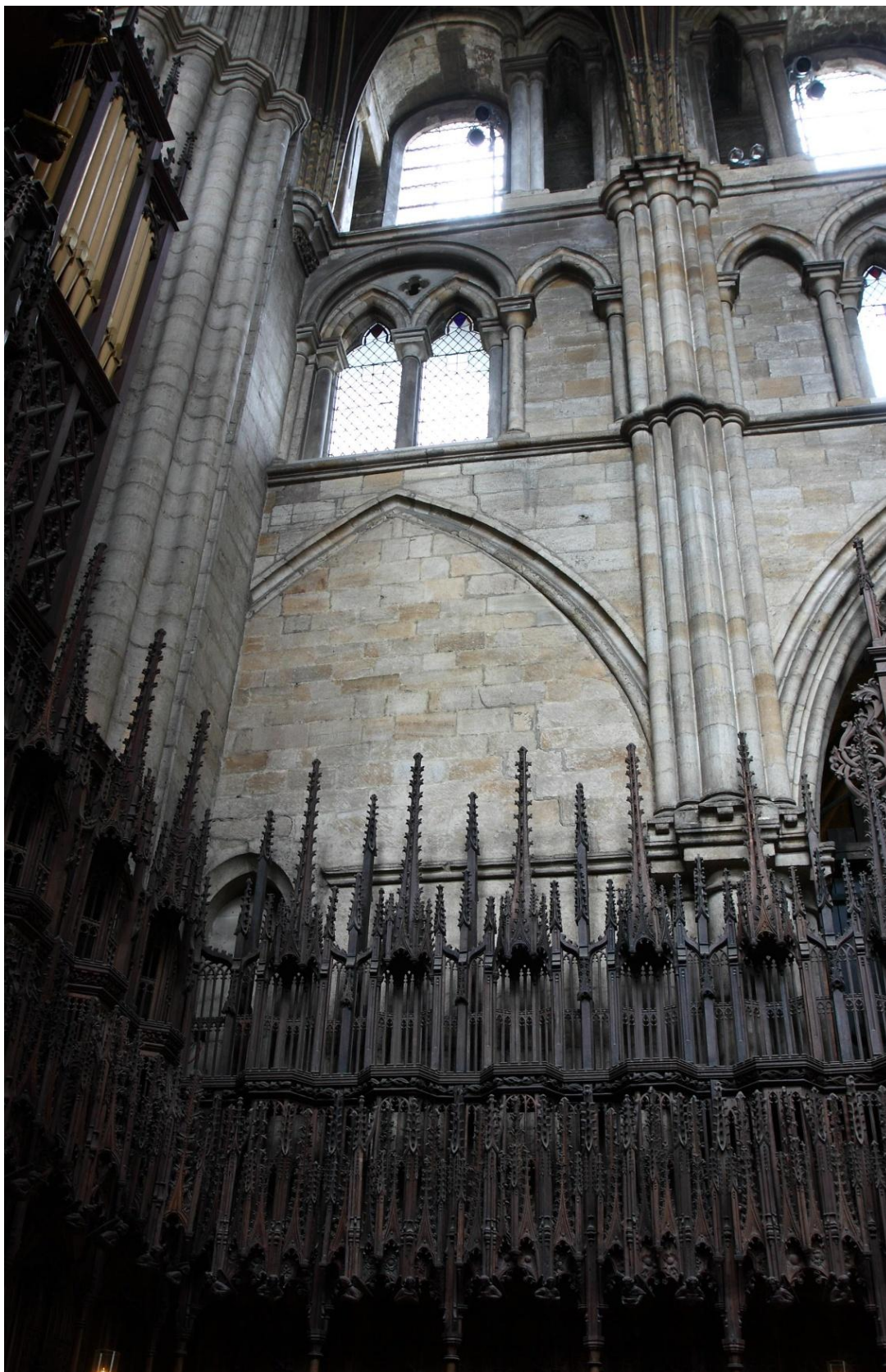


Plate 14 NW corner of choir. The W side of the older work is encapsulated in the later crossing pier (as is the early walling below choir floor), looking N

The stretch of ?limestone walling at 90 degrees to the 12th century walls is of uncertain date but seems likely to have originally related to an arrangement within the choir, conceivably one that may post-date the Roger choir but precede Gilbert Scott's current arrangement.

It is probable that the montage of stone and brickwork to the external face of the Anglo-Saxon crypt represent an infilled opening that led to the main chamber. The precise date and function of this cannot be conclusively stated though some sort of access, for light or humans, would have been required. It is possible that the present narrow, brick lined tunnel that leads towards the crypt is effectively a re-lining of part of the original access.

6. ACKNOWLEDGEMENTS

Report	M. Johnson
Photography	M. Andrews
Illustrations	M. Johnson
Editor	M. Stockwell

The author is indebted to Stuart Harrison for a number of comments and insights regarding the remains beneath the choir immediately prior to the commencement of the recording works.

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APPENDIX 1: PLANS & ELEVATIONS (FIGURES 1 – 6)

The location of all drawings is marked on Figure 1.

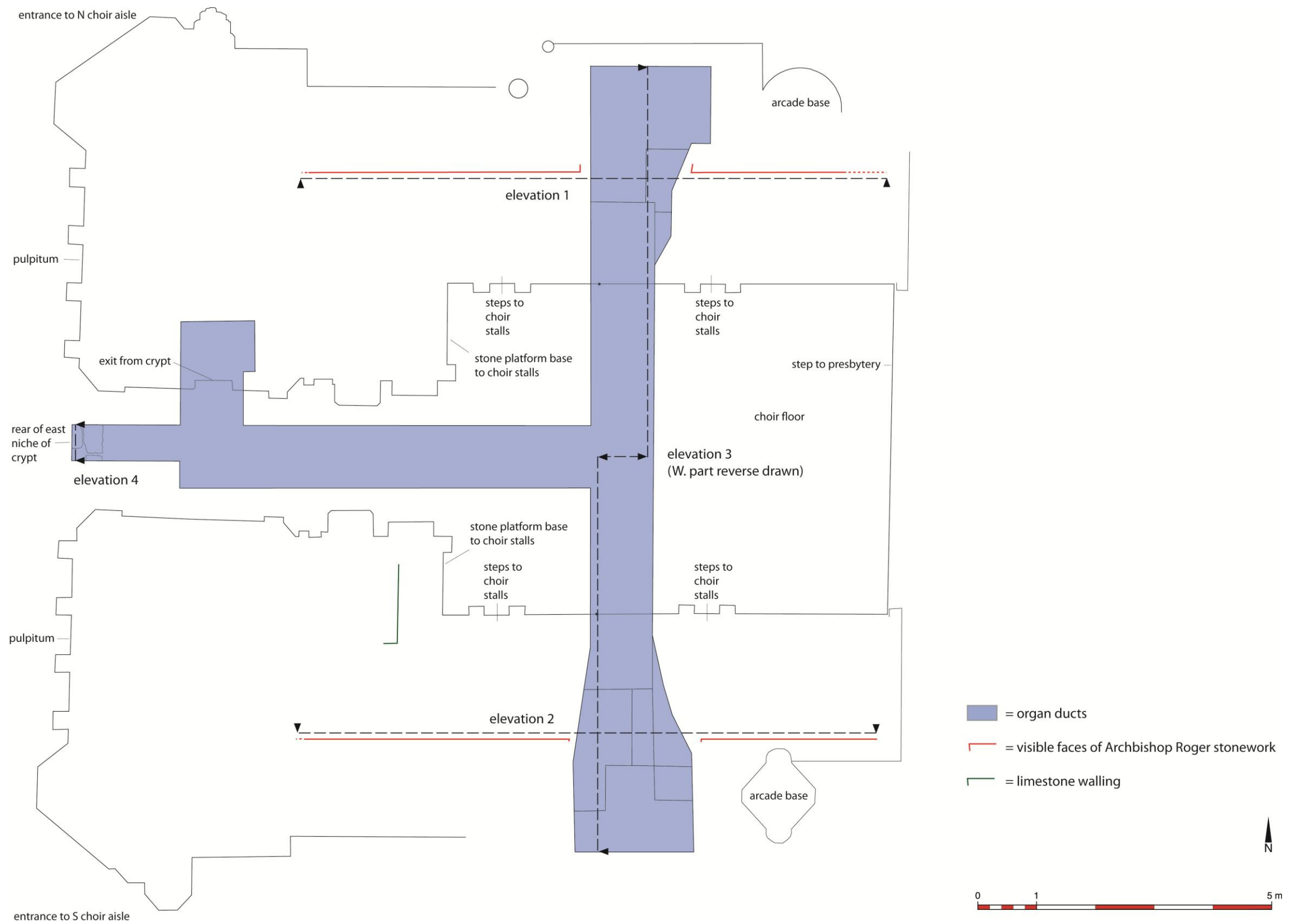


Figure 1 Location of the organ ducts in relation to the choir. Position of the elevations indicated

- └─ = visible face of Archbishop Roger stonework
- └─ = limestone walling
- ★ = quatrefoil locating points (visible in tunnel & choir)

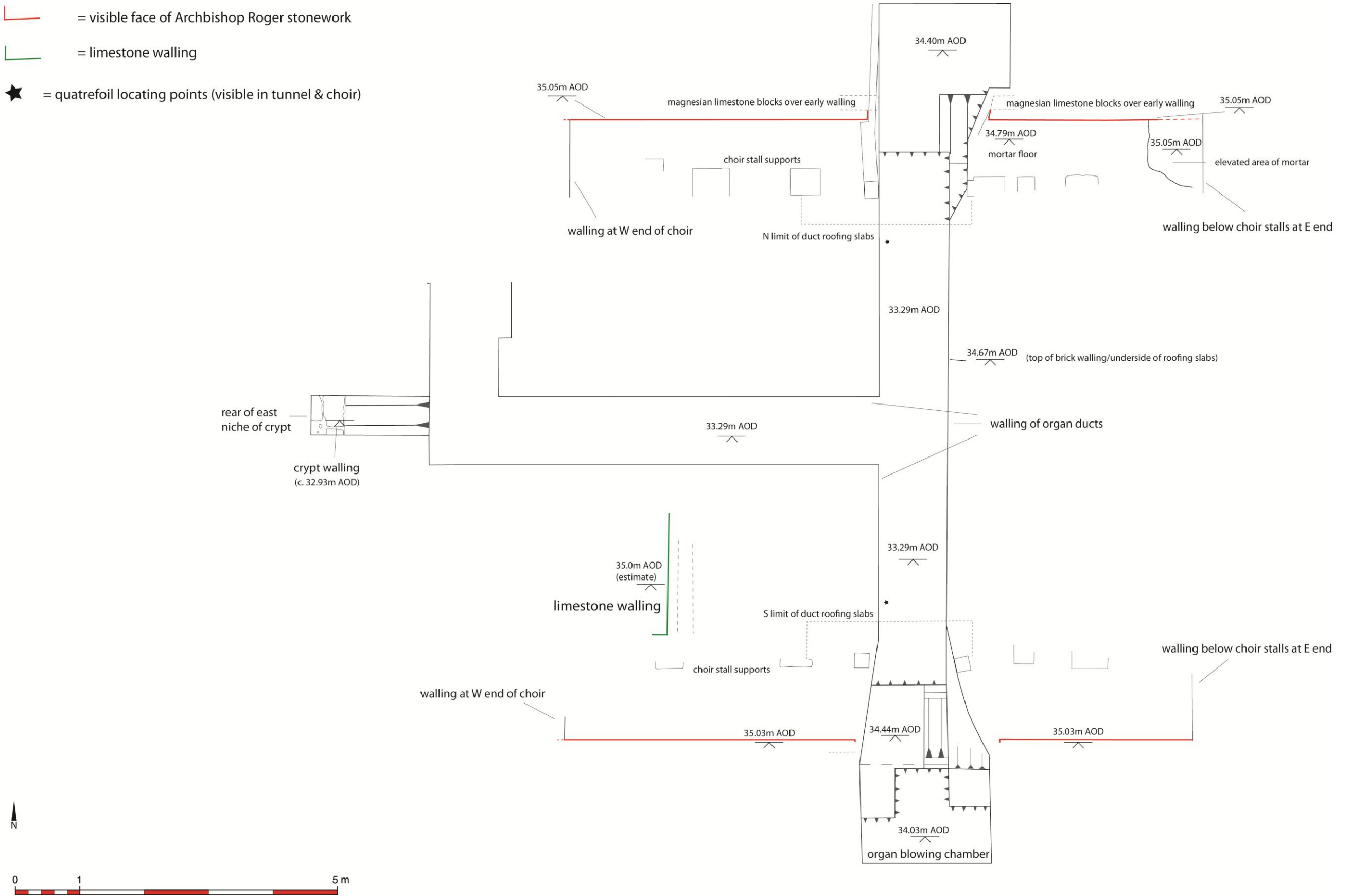
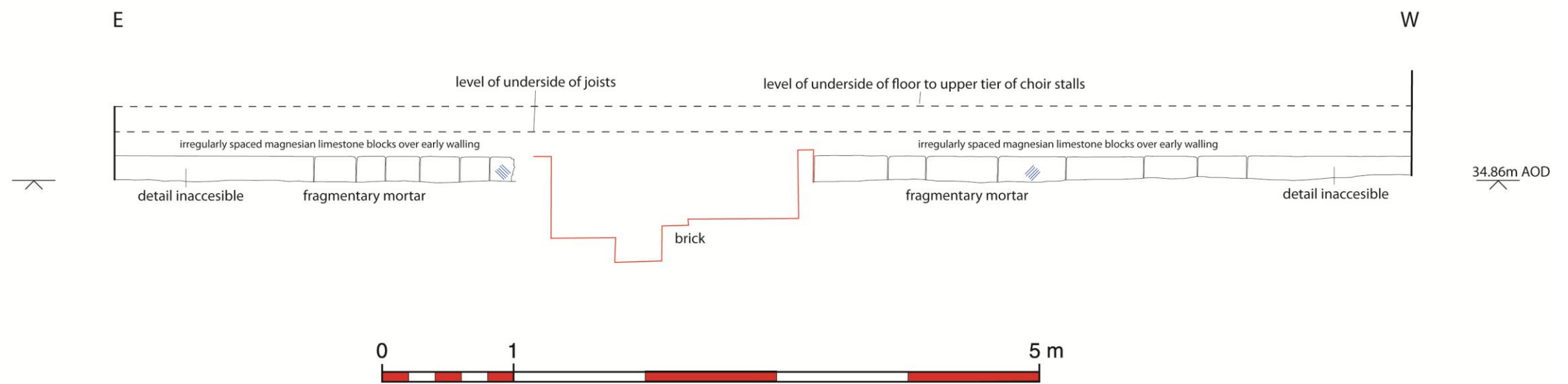
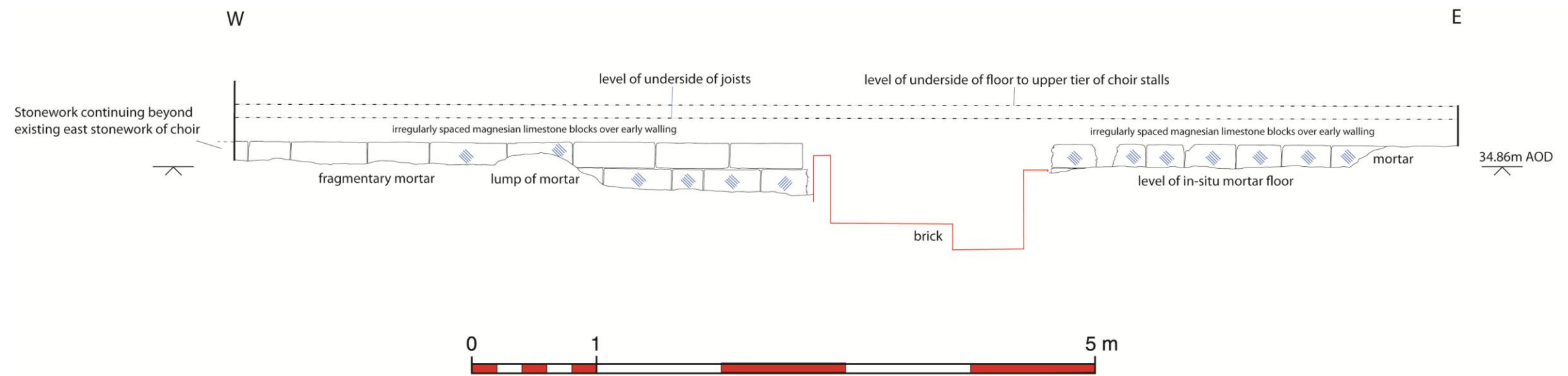


Figure 2 Plan of the organ ducts and recorded elements



Figures 3 & 4 Elevation 1 to top (S. Facing elevation of early walling), Elevation 2 to bottom (N. Facing elevation of early walling). Blue hatching relates to direction of striated tooling

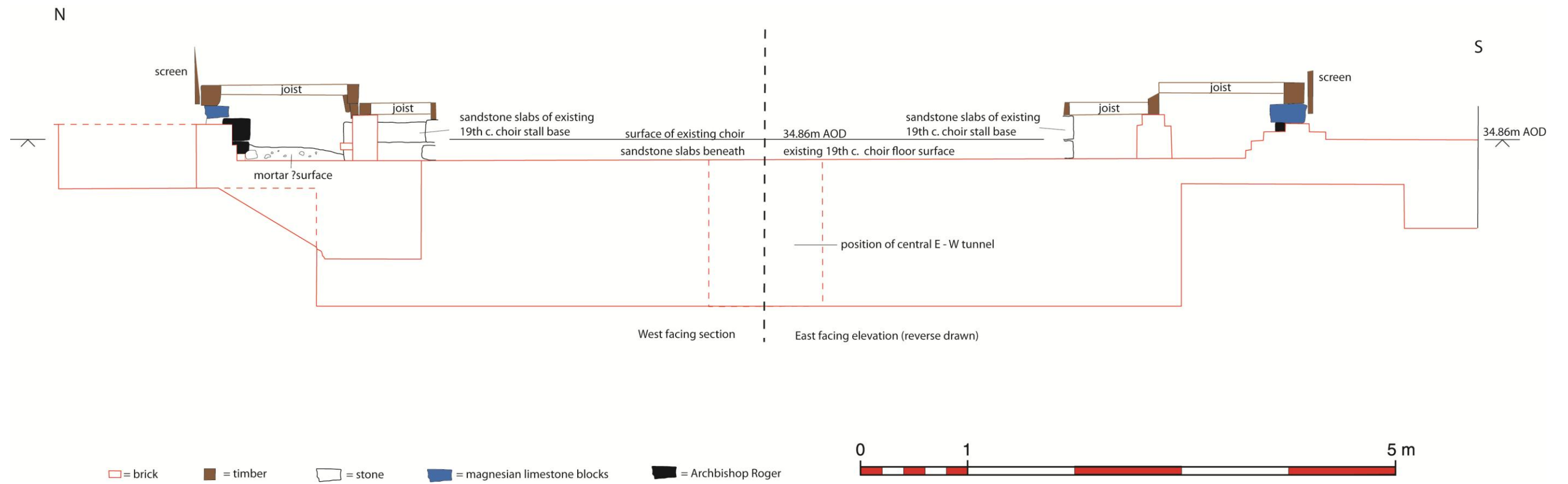


Figure 5 N-S elevation along arm of 'T' shaped arrangement of organ ducts

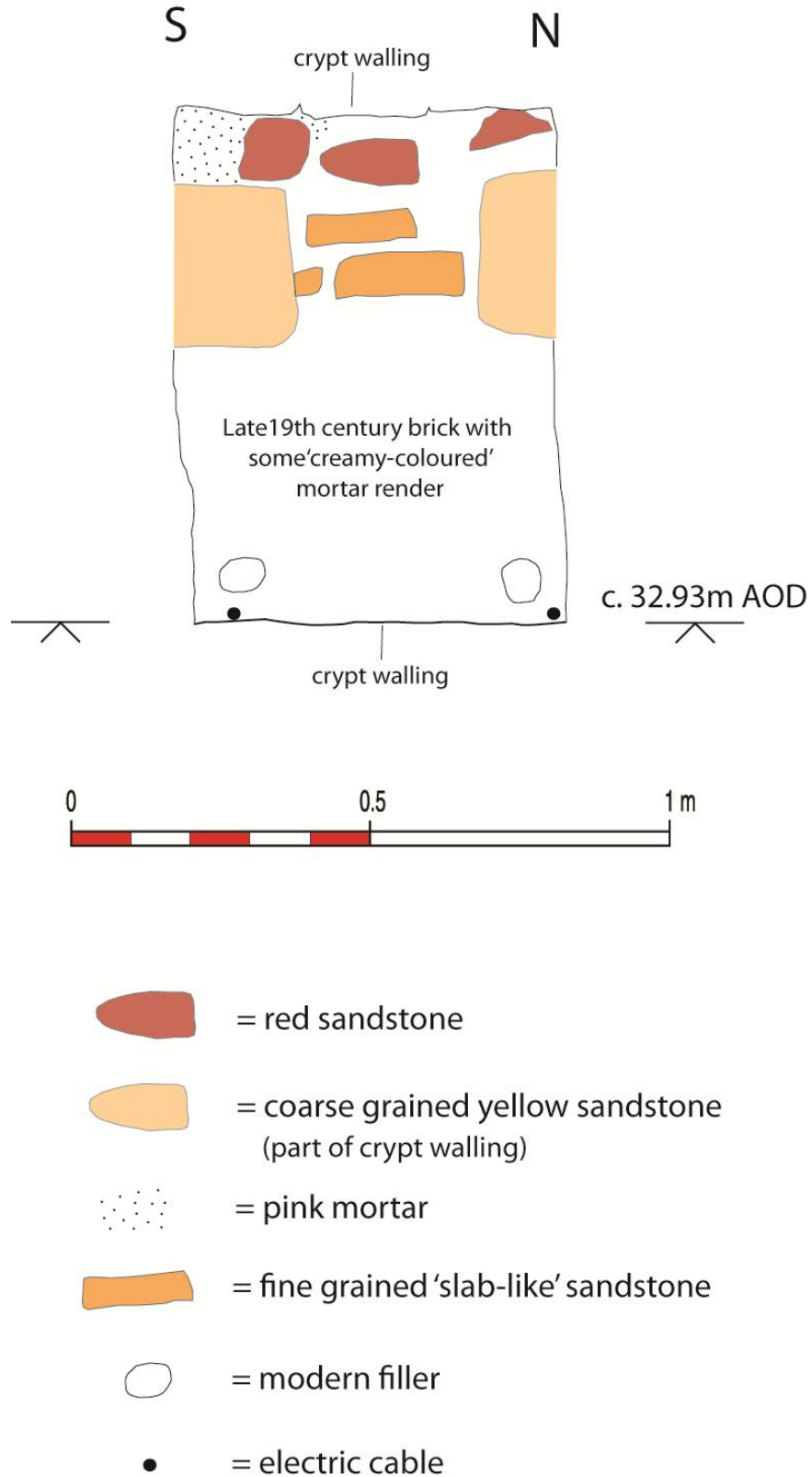


Figure 6 Elevation to back of crypt at W. end of tunnel

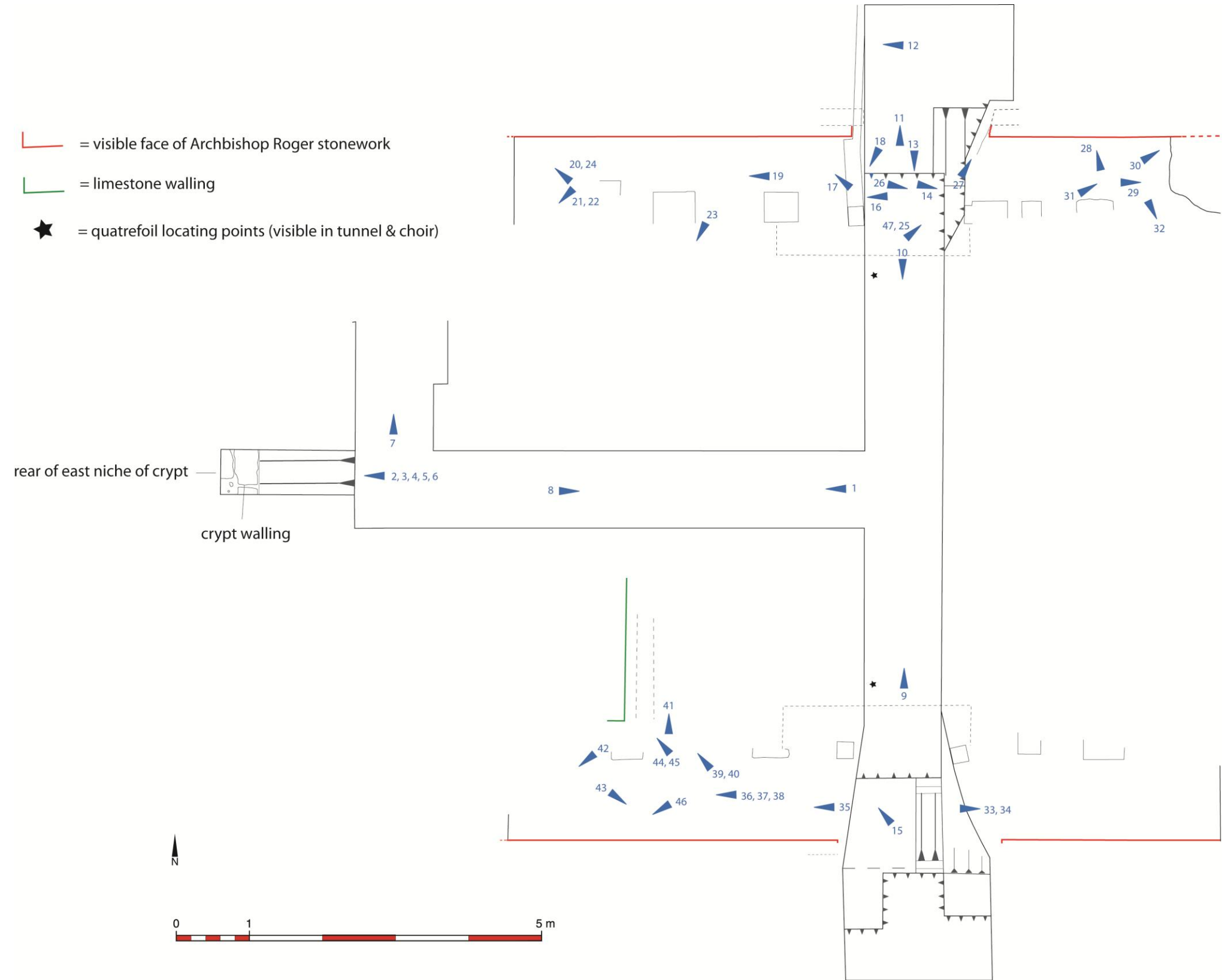


Figure 7 Photo locating plan (digital)



Figure 8 Photo locating plan (monochrome)