

Archaeological Investigations during Refurbishment of St. Aldate's Church, Oxford

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with contributions from ANGELA BOYLE and DANA CHALLINOR

SUMMARY

The Oxford Archaeological Unit carried out a series of archaeological investigations at St. Aldate's Church, Oxford between August and October 1999 during the internal refurbishment of the church and the formation of foundations for a new entrance building. The investigations have revealed valuable new evidence for Saxon occupation on the site in the form of a series of eight inhumation burials within charcoal-lined graves. Further, a small 'island' of probable Saxon occupation surface was exposed within the nave of the church while a fragment of 10th-century cross-shaft with carved 'knotwork' decoration was recovered from within the masonry of the south nave wall.

Little evidence was retrieved for the layout of the early church. However, it has been established that the 14th-century crypt beneath the south aisle was not originally furnished with a third, western bay, the space having formerly been occupied by a lateral stairwell. Evidence for 19th-century arrangements was recorded in the form of wall footings, former floor surfaces and a stone-built font base. In addition, a total of 48 brick-lined shaft graves and one brick-constructed barrel vault, all of 18th- and early to mid 19th-century date, were exposed within the body of the church.

The Oxford Archaeological Unit was commissioned by Batterton Tyack Architects, on behalf of the rector and churchwardens, to undertake an archaeological watching brief during the reordering of St. Aldate's Church, Pembroke Square, Oxford (NGR: 451350 206000) in accordance with a condition of the faculty for the reordering works.

The extensive programme of building refurbishment at St. Aldate's was undertaken with a view to increasing both the size and utility of the internal space of the church. In addition, a new entrance was formed at the NE. corner of the church via a new structure, also serving as a linking range between the church and adjacent St. Aldate's Coffee Shop on the corner of Pembroke Street, to the north of the chancel. Much of the internal works comprised the removal of relatively recent additions and the relocation of a number of fittings and monuments within the church. The principal element of work requiring archaeological monitoring was the reduction of the floor level by c. 0.50 m. over the full area of the nave and aisles, chancel and chancel aisles to facilitate the installation of a new, concrete floor slab. Externally, an archaeological evaluation was undertaken in advance of the excavation of foundation trenches for the new entrance range.

LOCATION AND GEOLOGY

St. Aldate's Church is located to the west side of St. Aldate's Street (Fig. 1), the main north-south thoroughfare (medieval 'Fish Street') which leads from Carfax at the centre of the medieval core of Oxford southwards over Folly Bridge (formerly 'Grandpont'). The site is bounded to the south and west by Beef Lane (formerly 'Beef Hall Lane') and to the north by the rear of the southern properties of Pembroke Street (formerly 'Penny Farthing Street'). It lies just within the defences of the medieval town, and adjacent to the former south gate.

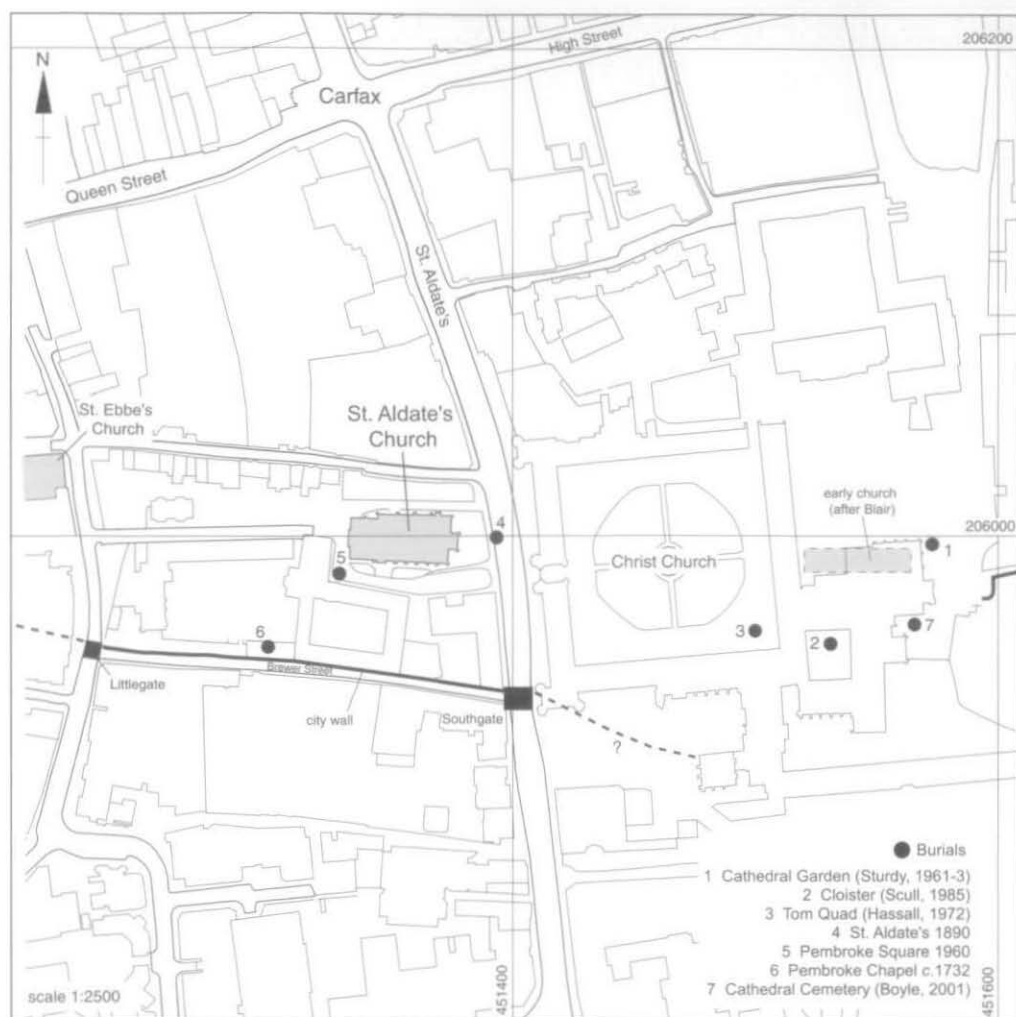


Fig. 1. St. Aldate's Church: site location (including burials referred to in the text).

The site is at an elevation of *c.* 60.35 m. above Ordnance Datum. The Ordnance Survey Geological Survey (Sheet 236, 6th impression, 1972) shows the area to be a 'tongue' of first or flood plain gravel terrace extending to the south of the centre of Oxford. The disturbed nature of the excavated material makes the identification of undisturbed natural gravel problematical and, where exposed during current works, the upper surface of the gravel was located between 59.04 m. and 59.69 m. OD. The subsoil overlying the gravels comprised a *c.* 0.40 m. accumulation of mid red-brown silty clay, the upper levels of which displayed evidence of probable limited cultivation. The upper limit of the Oxford Clay was detected, during probing and Soil Window Sampling to the north of the chancel, at a level of 57.175 m. – 57.48 m. OD.

HISTORICAL DEVELOPMENT OF THE CHURCH (Figs. 2 - 5)

The church of St. Aldate's is first recorded in the 'Chronicon Monasterii de Abingdon' in the second quarter of the 12th century AD as '*Est in civitate Oxenford monasterium quoddam, Sancti Aldadi episcopi venerationi consecratum*'. The implication is that, at that date, St. Aldate's was already an established church and it is probable that it represents an earlier foundation, possibly of Saxon origin. It has been argued that St. Aldate's formed one of a line of three Saxon churches (with the original minster church to the east and St. Ebbe's to the west) aligned along the north bank of the Thames forming the monastic precinct of St. Frideswide, subsequently enveloped within the southern limit of the defended Saxon town.¹ Successive campaigns of extension and reordering over the centuries, and in particular an extensive rebuilding in the late 19th century, have served to obscure almost completely the original form of St. Aldate's and we are left with the scant evidence of surviving fabric to attempt any form of reconstruction of the early church. The later phases of development are a little easier to define thanks to the evidence of early maps, a series of historic plans which survive in the parish archives and a number of drawings and photographs from the 19th and early 20th centuries.

The 12th-century church would have comprised an aisleless nave and chancel² (Fig. 3a) of which only fragments of a much-restored Romanesque arcade survive *ex situ*. This arcade is of five bays with round arches springing from cushion capitals and is commonly held to have originally formed the western part of the north chancel wall; it is shown *in situ* on a plan of c. 1860 with two small splayed (?Norman) windows over. The arcade was reset in the east end of the north chancel aisle during the major 19th-century reordering of the church (see below). It is possible that the length of this arcade represents the length of the original chancel, which would thus have measured 6 m. It also seems reasonable to suggest that such an arrangement would have been reflected in the south wall and possibly the east wall of the chancel. No further fabric from the early church survives. A square tower was added to the western end of the church in the 13th century (Fig. 3b).³ Sadly, all trace of this structure was removed when the west tower was entirely rebuilt in 1873. However, David Loggan's map of 1675 (Fig. 6) and an early 19th-century drawing 'South-West view of St. Aldate's Church' (Fig. 7) by the Oxford architect J.C. Buckler⁴ presumably portray the 13th-century structure and, as such, give an indication of the original appearance of the tower prior to the Victorian rebuilding.

In the early 14th century (c. 1334), the south aisle of the church was formed by the addition of a three-bay chantry chapel dedicated to the Virgin Mary and All Saints to the south side of the nave by Sir John of Docklington, five times mayor of Oxford (Fig. 3c). The chapel measured c. 14 m. (E/W.) x 5.35 m. (N/S.) and included a two-bay, vaulted undercroft beneath the eastern two bays of the aisle. The south wall of the aisle originally displayed three windows of uniform design (of three trefoiled lights with reticulated tracery, two-centred heads with labels) separated externally by stepped buttresses demarcating the interior bay divisions. The main east window was similarly furnished with reticulated tracery which survives within the extant structure. The vaulting of the crypt, which survives today, is of quadripartite form with deeply chamfered ribs that continue down the walls as grouped

¹ J. Blair, *Anglo-Saxon Oxfordshire* (1994), 147-8, fig. 86.

² *V.C.H. Oxon.* x, 375.

³ *Ibid.*

⁴ Bodl. MS. Don.a.2, no.15.

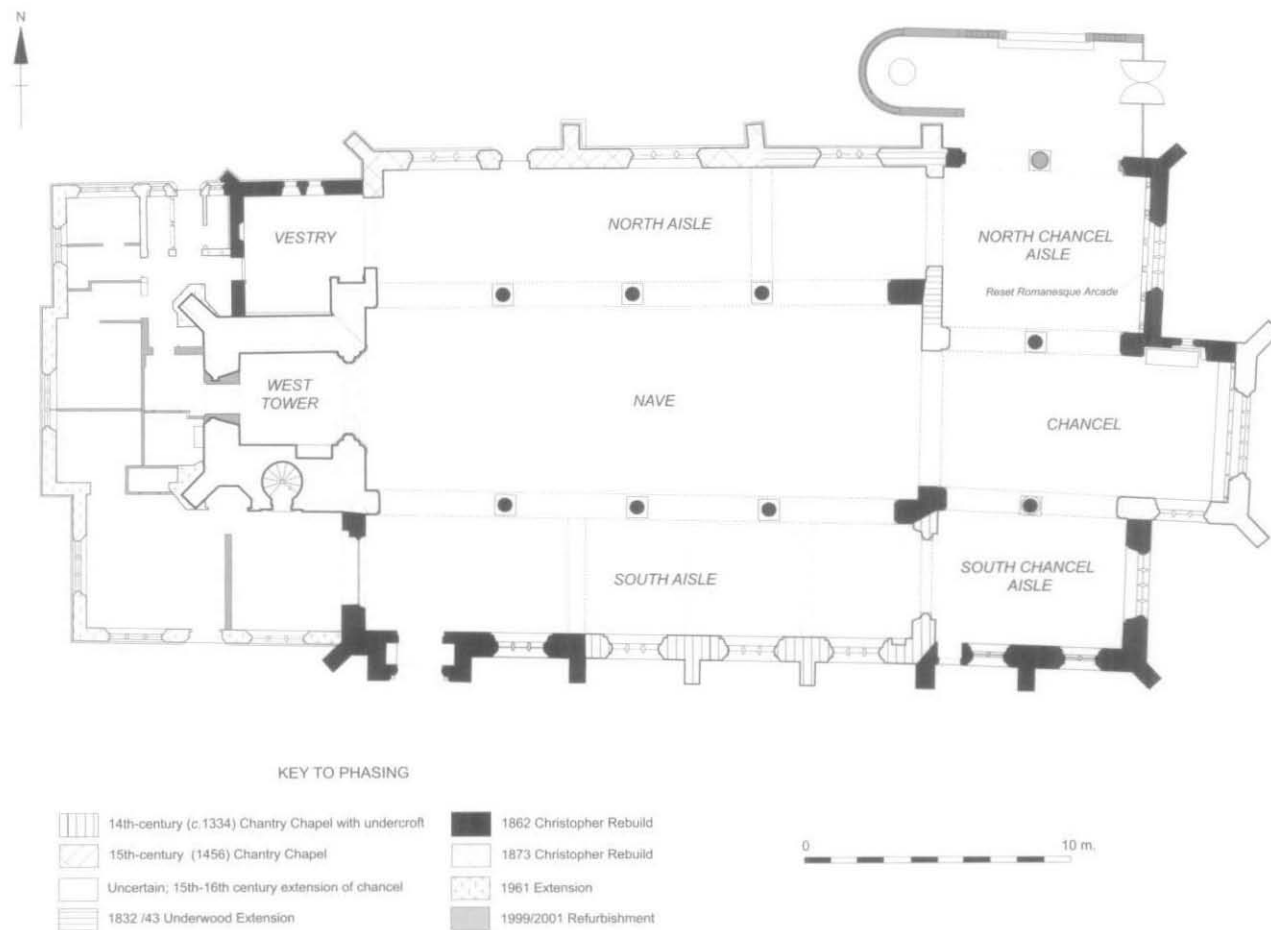
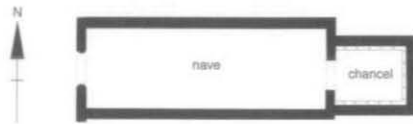


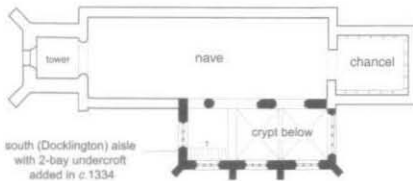
Fig. 2. Phase plan of standing church fabric (based upon Midlands Surveys).



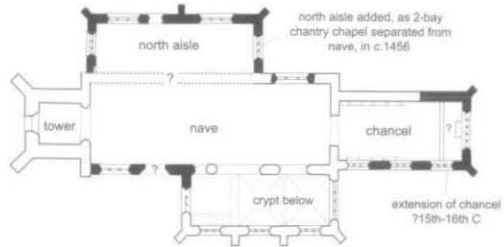
(a) 12th century



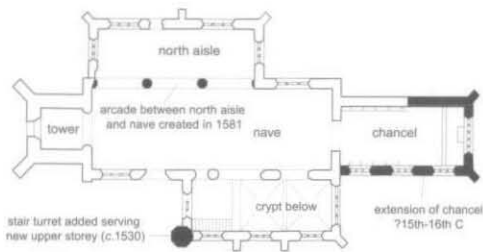
(b) 13th century



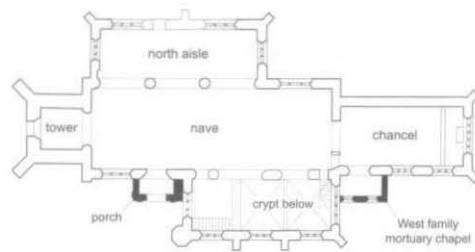
(c) 14th century



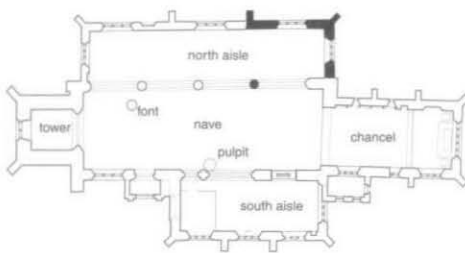
(d) 15th century



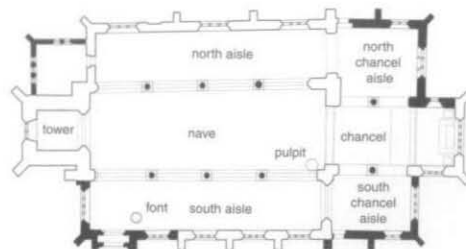
(e) 16th century



(f) 17th -19th century



(g) Plan before Christopher reordering of 1862



(h) Plan after Christopher reordering of 1862

0 20 m.

NB: new work at each phase shown in black

Fig. 3. Historical development of the church (based upon Midlands Surveys).



Fig. 4. Exterior elevations showing historic development: north and east (based upon Midlands Surveys).

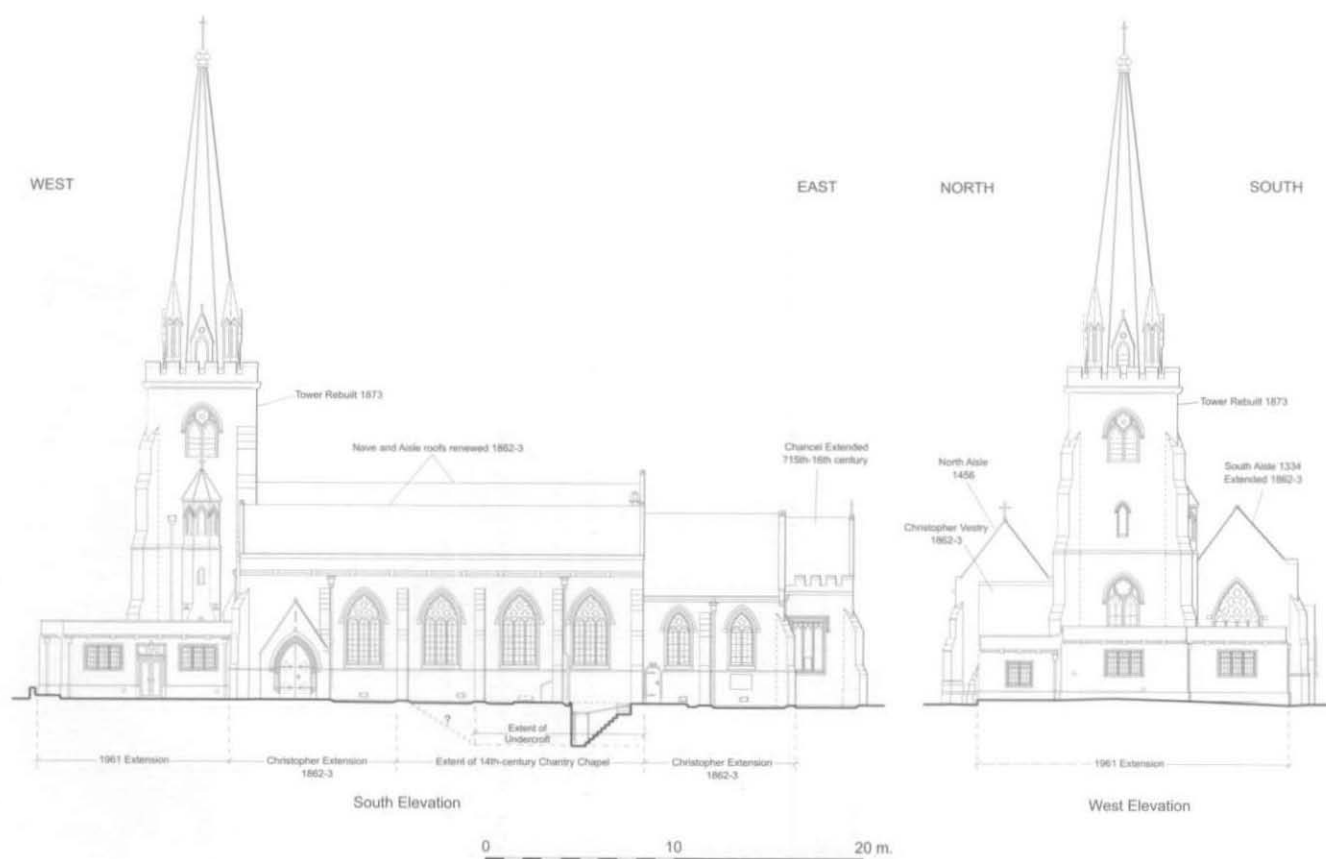


Fig. 5. Exterior elevations showing historic development: south and west (based upon Midlands Surveys).

responds. Current excavations have indicated that the crypt was not originally furnished with a third, western bay as has previously been suggested.⁵ However, a formerly blocked doorway with two-centred head, located in the west wall of the crypt (reopened during the course of present works), originally provided access via a lateral stair running against the south wall of the third 'bay' ascending to a ground level door in the west wall of the aisle, indicated on Buckler's drawing (Fig. 7).

The 15th century saw the further enlargement of the church with the addition, in 1456, of a northern aisle in the form of a two-bay chantry chapel measuring 15 m. (E/W.) x 5 m. (N/S.) appended to the north side of the nave (the western two bays of the extant north aisle; Fig. 3d). The work was undertaken by Philip Polton, fellow of All Souls and archdeacon of Gloucester. This chapel remained separated from the nave until 1581 when the north arcade was created, an event commemorated in a small plaque currently located at the west end of the aisle which reads 'W.F. These pilers were made A.D.1581'.

The north wall was furnished with two windows of three cinquefoil ogee lights with vertical tracery within four-centred heads with moulded jambs and labels divided externally by stepped buttresses marking the interior bay divisions. It is probable that the original east window of the aisle is that which survives today in the extended north aisle wall (reset in the refurbishment of 1832-4): it is stylistically similar to those described above though it is of slightly smaller proportions and has a flatter, four-centred head.

In the early 16th century, an upper storey was added to the south aisle, being used as a library by Broadgates Hall, later Pembroke College. This upper storey was removed during reordering in 1832, though its appearance can be ascertained in some detail from the Buckler drawings of the early 19th century (Figs. 7 and 8).⁶ The overall height of the aisle to the ridge would appear to be much in accordance with the present height (compare Figs. 8 and 10); the gable was, however, of much shallower pitch (c. 17° from horizontal) compared to the 19th century aisle (c. 53° from the horizontal). This would allow for an additional wall height of perhaps 2.8 m. above existing parapet level for the upper storey of the aisle. The eastern gable and southern parapet were crenellated. The south elevation was furnished with six evenly-set window openings within square heads; the form of the windows is not clear from the drawings though some indication may be given by the form of the single upper window of the eastern gable, which is of three trefoiled lights with pierced spandrels within a square head. The upper storey was accessed by an octagonal stair turret attached at the SW. corner of the aisle, evident on Buckler's drawing (Fig. 7) as well as on a pre-works plan of c. 1830 (Fig. 3e).

The phasing of the development of the chancel is unclear. As has been noted above, it seems reasonable to suggest that the original 12th-century chancel was c. 6 m. long, and was flanked to north and south by five-bay Romanesque blind arcades. At some point, the chancel was extended eastwards, doubling its length to its present 11.9 m. However, the loss of fabric during the 1862 rebuild (specifically, the replacement of the western 6.5 m. of the north and south chancel walls by two-bay open arcades giving onto the newly formed chancel aisles) makes the date of this extension difficult to define with any certainty. It has been suggested that this event may have occurred as early as the 13th century.⁷ This supposition was based upon stylistic evidence, in particular of the single-light window in the

⁵ e.g. J. Sherwood and N. Pevsner, *The Buildings of England: Oxfordshire* (1974), 287.

⁶ Bodl. MS. Don.a.2, nos. 15, 16 and 18.

⁷ F.C. Eeles, 'The Origin and Growth of St. Aldate's Church, Oxford from 1066 to the Present Day' (paper read to St. Aldate's Fellowship, 4 Nov. 1946).

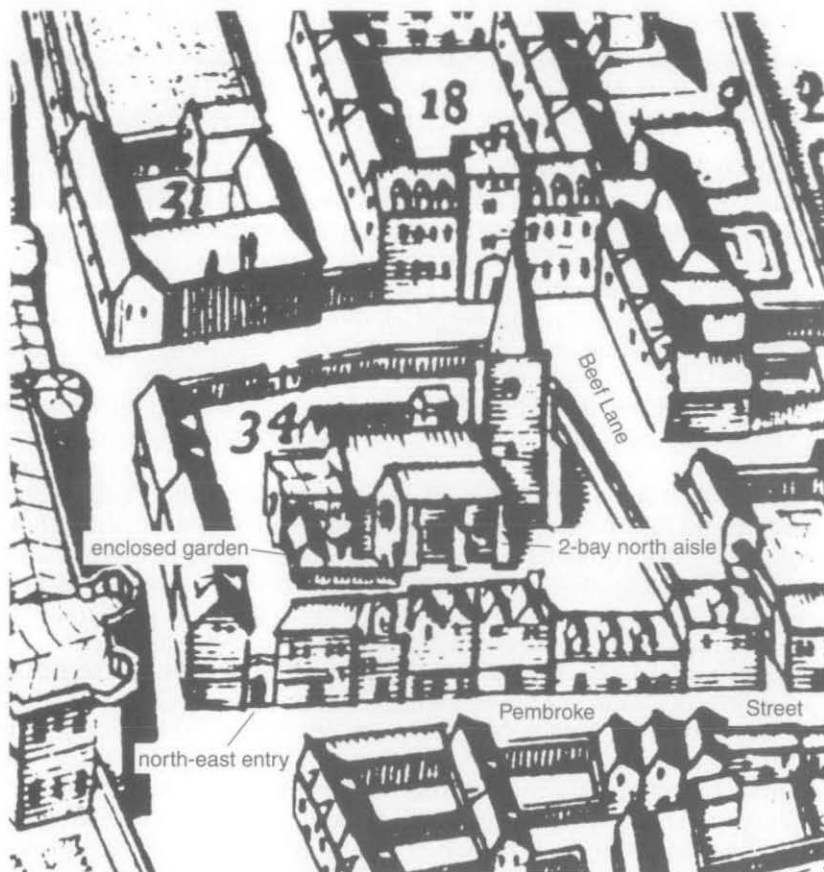


Fig. 6. Detail of St. Aldate's from Loggan's map of Oxford of 1675 (NB. north to bottom of page).

extended north chancel wall. The style of this window is early Gothic (stylistically late 12th century); the stonework, however, is quite obviously of recent date and little may be inferred from its form.⁸ In the eastern surviving section of the south chancel wall is a window of three trefoiled lights with pierced spandrels set, significantly, within a square head with moulded hood (Fig. 5); internally it is splayed with a moulded rear-arch. Again, much of the stonework appears to be relatively modern though it should be noted that the internal splays may be of some antiquity. Buckler's drawing of 'St. Aldate's Church from the east'⁹ (Fig. 8) shows two further windows of similar form in the bays west of the surviving example, and the similarity of these windows to that shown lighting the upper storey of the south aisle (early 16th-century in date) should be noted. Further, this drawing shows the east chancel

⁸ It should be noted that Christopher's plan of 1862-3 indicates that the whole of the north chancel wall was rebuilt during his major reordering work.

⁹ Bodl. MS. Don.a.2, no.18.

window, prior to alterations in 1832; it is of five trefoiled lights with perpendicular tracery within a two-centred head. Finally, a series of stone corbels of c. 1500 survive in the chancel and north aisle¹⁰ and it would thus appear reasonable, from this evidence, to suggest a date of the 15th or early 16th century for the extension of the chancel to its present length (Figs. 3d and e).

During the 17th century, a small family mortuary chapel was appended to the south side of the chancel by John West of Hampton Poyle, a former parishioner who, along with his wife Mary and daughter Ann, is commemorated in the fine marble wall monument reset in the north wall of the west tower during the current reordering.¹¹ A south porch (within the area of the third bay of the south aisle) was also added during the 17th century (Fig. 3f). Buckler's drawing (Fig. 7) depicts a porch of classical design, comprising a round-headed doorway flanked by applied pilasters supporting a simple entablature. Both of these features survived up until 1862 and are well documented in plans, drawings and photographic sources (see for example Fig. 9). A depiction of St. Aldate's church in the later 17th century is provided by Loggan's map of 1675 (Fig. 6) which shows the church with a short, two-bay north aisle (as built in 1456) and a chancel, apparently of smaller proportions than that which stands today. The shortening of the chancel may be the result of cartographic licence, evident elsewhere in Loggan, and need not necessarily imply a short chancel at this date: other sources suggest that the chancel was extended to its current length in the late 15th or early 16th century. To the north of the chancel, the map appears to indicate a small enclosed garden bounded to the east by a north-south aligned, single-storey gabled building and to the north by a low wall. The churchyard is bounded to the south and west by a wall with a central gateway giving to the street to the south; to the north by a series of buildings fronting onto Pembroke Street (with access via an archway the eastern end of the street), and to the east by a further range of houses fronting onto St. Aldate's. These latter houses, late medieval or post-medieval in origin, are listed in Salter's *Survey of Oxford* as 'four tenements' in 1626 (Tenement SW95); that on the corner of Pembroke Street as 'The Church House' (SW96), a double tenement with passageway to the west, sold under the Oxford Pavings Act in 1831. This range of buildings was demolished in the early 19th century, but was recorded before demolition in a series of drawings by Buckler (e.g. Fig. 8). It is interesting to note that in this drawing the chancel would appear to have no roof, perhaps indicating that works related to the 1832 reordering had begun at the time this drawing was made (i.e. before 1827).

During the 19th century, the church underwent two distinct refurbishments. Firstly, in 1832 and 1843, a scheme of reordering was undertaken by Henry Jones Underwood, architect of Oxford Prison and St. Paul's, Walton Street amongst other buildings. A surviving original plan in the parish archives is useful in that it shows the extent of the building before Underwood's work. This programme of work involved the eastern extension of the north aisle by c. 7 m. to the full length of the nave (Fig. 3g). It would appear reasonable to suggest that the original 15th-century east window of the aisle was reset in the newly extended north wall during this phase of work. Photographic sources (Fig. 9) indicate that the upper storey of the south aisle had been removed by the time of this phase of work. Minn indicates a date of 1838-43 for the removal of the upper storey.¹²

¹⁰ RCHME, *An Inventory of the Historical Monuments in the City of Oxford* (1939), 128.

¹¹ *Ibid.* pl. 29.

¹² Bodl. MS. Minn Top. Oxon. d. 503.

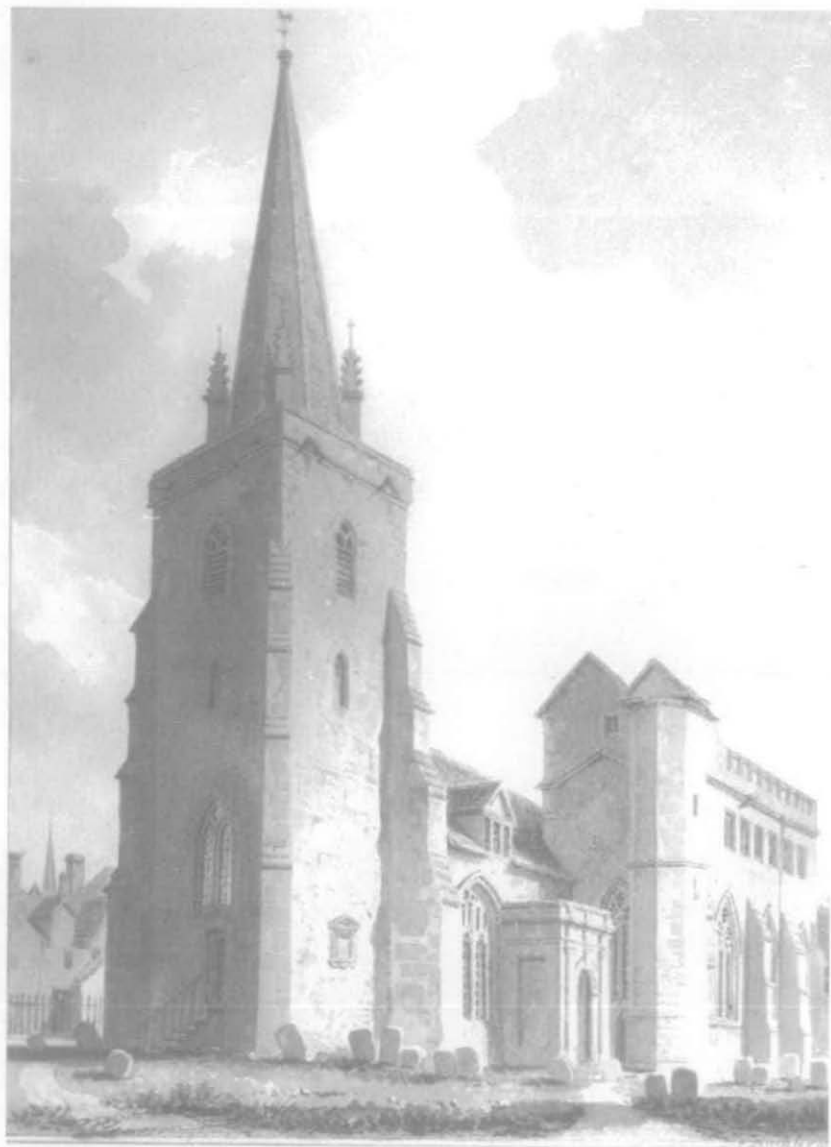


Fig. 7. J.C. Buckler's engraving 'View of St. Aldate's from the south-west' (1811-27): Bodl. MS. Don. a.2 No. 15; note upper storey of south aisle, angle stair turret and south porch.



Fig. 8. J.C. Buckler's engraving of St. Aldate's from the east (Bodl. MS. Don. a.2 No. 18); note missing chancel roof.

In 1862, a second major campaign of building was instigated by the evangelical A.M.W. Christopher (rector 1859-1905) with a view to enlarging the church and doubling its seating capacity (Fig. 3h).¹³ This work was undertaken by the rector's cousin, the architect John T. Christopher, and comprised not so much a reordering as an extensive rebuilding exercise resulting in the loss of much historic fabric; the extent of Christopher's work is evident from a comparison of two original architects' plans of 1862-3 which survive today in the parish archives. The principal objective of increasing capacity was achieved by the extension of the north and south aisles and a radical change in seating arrangements. The north aisle was extended eastwards by 8.5 m. to flank the western part of the chancel, the western part of the north chancel wall being replaced by a two-bay open arcade. At the west end of the aisle, a new vestry (5 m. x 5 m.) was created to the north of the west tower. The south aisle was similarly extended to flank the western part of the chancel, necessitating the dismantling of the original east wall and the demolition of the 17th-century West family mortuary chapel. The upper part of the 14th-century east window, with fine reticulated tracery, was retained in its original position and survives today as the screen above the arch dividing the aisle proper from the extended chancel aisle. At the west end, the south aisle was further extended to the full length of the nave, resulting in the loss of the 17th-century south porch.

¹³ J.S. Reynolds, *Canon Christopher of St. Aldate's, Oxford* (1967), 124.



Fig. 9. Photograph of St. Aldate's from the east *c.* 1861; note West family mortuary chapel at east end of south aisle (from Reynolds, *op. cit.* note 13, pl. 45).



Fig. 10. Photograph of St. Aldate's from the east *c.* 1875; note extension of the south aisle (1862) and the rebuilt west tower (1873) (from Reynolds, *op. cit.* note 13, pl. 45).

Internally, both aisle arcades were entirely rebuilt in four bays supported on slender columns of pink Aberdeen marble with simple stone bases and crisp, stiff-leaf capitals; the nave and aisle roofs were replaced and a new chancel arch formed.

Subsequently, the west tower was completely rebuilt in 1873 on the site of its 13th-century precursor. It measures c. 7.5 m. x 7.5 m. in plan, with stepped, diagonal buttresses to the NW. and SW. (encased within 1960s work at ground floor level), and stands 19 m. tall to a crenellated parapet above which rises an 18 m. tall octagonal spire. Access to the upper levels of the tower is via a spiral stair, within the width of the south wall at ground level, which rises as an external turret to a height of 13 m. The upper level (bell stage) of the tower displays uniform fenestration to each elevation: two cinquefoil lights with vertical tracery within two-centred heads. A photograph of c. 1861 (Fig. 9) shows the simpler form of the tower before the Christopher rebuild.

The 20th century has seen a further series of changes to the interior, and the extension of the church to the west with a series of single storey buildings around the base of the tower.

The pulpit was moved from the south to the north side of the chancel arch in 1905; at the same time an extra step was provided for the communion table, and the clergy seats and choir stalls were rearranged, by the architect Mardon Mowbray.¹⁴ Some changes were made in commemoration of Canon Christopher: a new east window in 1913 designed by Harold Rogers, and oak communion rails and a memorial tablet in 1916.¹⁵ The south chancel aisle was fitted up as a chapel in 1918, and in 1920 an oak reredos, to the design of Harold Rogers, was installed in the chancel in memory of parishioners killed in the war.¹⁶

Under C.M. Chavasse (rector 1922-8) some practical changes were made. Significantly, the 'discovery of a charnel house in the third bay of the south aisle crypt' led to an application for the removal of '6 cartloads of human bones... and to reinter the same in one of the City Cemeteries', though in the event no faculty for this seems to have been granted.¹⁷ A new organ was provided in 1926 by the generosity of Sir William Morris (later Lord Nuffield), whose mother worshipped in the church.¹⁸ The faculty application included a new heating system, removal of the font, oak flooring in the nave aisles and Trinity chapel, and a stone chamber to contain the electric blower for the organ, 'according to the specification of H.S. Rogers'.¹⁹ This was followed in 1926 by a faculty 'to remove the present screen in front of the organ in the North Aisle and in place thereof to erect a carved oak screen according to the design of Miss Wybergh of Overton, Flintshire'. The application described the screen as the anonymous gift of a lady, and its subject being intended to illustrate the Benedicite; at the same time a cross 'of Ypres design' was placed in the side chapel to commemorate the foundation of the 'Toc H' group.²⁰ The screen between the organ and choir was a subsequent installation in 1929, described as an 'oak screen on the north side of the chancel in accordance with the design of Mr P.S.P. Morter of Liverpool'; the application stated that it was 'intended to complete the general scheme resulting from the

¹⁴ Faculty dated 13 Sept. 1905, Oxfordshire Record Office [hereafter Oxon RO], MS. Dioc. Papers c. 1922.

¹⁵ Reynolds, op. cit. note 13, pp. 372-4; faculties dated 20 Oct. 1913 and 3 April 1916 (parish records).

¹⁶ Faculties dated 2 Sept. 1918 and 8 Mar. 1920; designs for reredos in Oxon RO, MS. dd Par. Oxford St. Aldate's, c. 21, item 'o', and designs for both proposals in Oxon RO, MS. Oxf. Dioc. Papers c. 1922.

¹⁷ Oxon RO, MS. Oxf. Dioc. Papers c. 1922, with letter of explanation from Chavasse.

¹⁸ M. Adeney, *Nuffield. A Biography* (1993), 159.

¹⁹ Faculty dated 17 Aug. 1925.

²⁰ Faculty dated 29 Mar. 1926, letter of application dated 4 Mar. 1926, Oxon RO, MS. Dioc. Papers.

gift of the organ by W.R. Morris Esq'.²¹ This was funded by 'voluntary donation', presumably another Morris gift, since the carved panels refer to the motor industry and 'Sir William Morris'.²² The parish records suggest a degree of controversy over this screen, and the collaboration of Wybergh and Morter rather than the parish architect Rogers.²³

A little later, in 1931, the floor of the chancel was paved in marble to the designs of R. Fielding Dodd, the executed design being one of a number of alternatives preserved in the parish records.²⁴ This proposal was made following the architect's report on the condition of the tile floor, and the DAC report urged approval on 'national and economic as well as artistic grounds, the use of green Westmorland slate, Yorkshire stone slabs and Hopton Wood, Derbyshire, marble in the place of the foreign marbles proposed'.²⁵ Later faculties relate to new electric lighting (1934) and dormer windows in the nave roof (1938).²⁶ The churchyard was cleared after a proposal in 1942 'to move certain gravestones from their present position in the churchyard to other positions therein in accordance with the report and plan of H.S. Rogers'; this was granted after a Consistory Court hearing.²⁷ Accompanying the application was a careful survey of the gravestones, showing the positions of all those proposed to be moved, and their intended destination; up until this point there were still some five rows of graves on the east side of the church.

The main subsequent alterations were the addition of a meeting place, kitchen and lavatories at the west end of the church in 1961, while at the east end the organ was removed for the creation of a mezzanine floor with meeting room in 1982. The latter involved the removal of the cornice from the Morris screen, which was placed in the meeting room above, but the infilling of the open arcade of the screen with oak panels was the subject of a separate faculty application in 1987, when it was remarked that the screen had previously been moved back from its primary position against the stalls in the general reordering of 1981.²⁸ Other liturgical reorganisation has largely been of temporary staging and removable items, and in the course of redecoration the granite pillars were obscured with unsympathetic paint, though this has been removed during the present works.

ARCHAEOLOGICAL MONITORING: METHODOLOGY

For the purposes of recording, the site was divided into five distinct areas, reflecting differing conditions and approaches. These areas are shown in Fig. 11 and can be summarised as follows:

Area 1: The chancel. Work at the eastern end of the chancel (the area of the altar step) was limited to the recording and removal of a series of former floor levels of 18th- and 19th-century date. To the west, ground reduction was undertaken by contractors to a similar level to that in the Nave (Area 2).

Area 2: The nave, north aisle and western bay of the south aisle. Ground reduction within Area 2 was undertaken by groundwork contractors under archaeological supervision. For the most part, the extent and depth of excavation was dictated by the groundwork programme related to the insertion of a new concrete floor slab

²¹ Faculty dated 11 Mar. 1929; design drawing, Oxon RO, MS. dd Par. Oxford St. Aldate's b. 21, dated Nov. 1928; letter of application dated 1 Feb. 1929 in Oxon RO, MS. Dioc. Papers.

²² Morris became a Baronet in March 1929, Baron in January 1934 and Viscount in 1938; his mother was buried in 1934: G.E.C., *Complete Peerage*, xiii, 534.

²³ Oxon RO, MS. dd Par. Oxford c. 21, item 'p'.

²⁴ Faculty dated 23 Oct. 1931 (not in parish records); designs in Oxon RO, MS. dd Par. Oxford St. Aldate's b. 21.

²⁵ Architect's report, and DAC Report with faculty in Oxon RO, MS. Dioc. Papers.

²⁶ Faculties dated 23 Aug. 1934 and 23 June 1938, in MS. Dioc. Papers.

²⁷ Faculty dated 14 Oct. 1942, but not effective until November, Oxon RO, MS. Dioc. Papers.

²⁸ Current parish records, correspondence relating to 1987 petition for faculty.

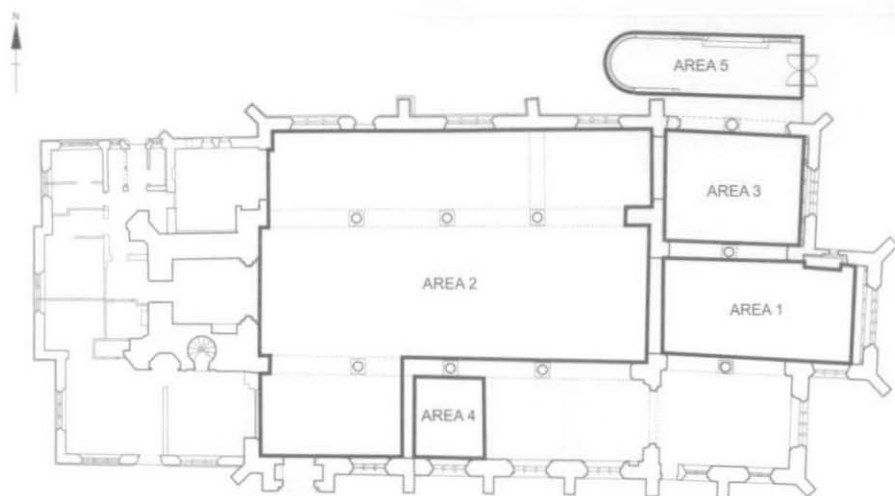


Fig. 11. Excavation Areas (based upon Midlands Surveys).

and took the form of a 'watching brief' on contractors' work rather than an archaeological excavation *per se*. Almost from the outset, it was apparent that the level of the reduced dig was impacting upon a number of brick-built funerary structures of late 18th- to mid 19th-century date. From an engineering point of view it was essential to establish the nature, extent and number of such features within the nave and aisles as the implications for the design of a suitable floor slab were critical. For this reason, the level of the reduced dig over the northern part of the nave was increased beyond the initial 0.50 m. to expose the upper surface of any grave structures. It became apparent that the incidence of graves within this trial area was highly concentrated. At this point the design of the proposed floor slab was revised to take into account the lack of 'firm ground' to support a ground-bearing slab, and an alternative system devised whereby the new slab was supported on a series of five concrete piers formed adjacent to the north wall of the north aisle. The excavation of these piers was monitored archaeologically and the opportunity was taken to record the exposed masonry of the north wall foundations.

Area 3: The north chancel aisle. This was treated as a separate area in that the deposits encountered were foreseen to be of a different nature – the area having been a graveyard, external to the church, up until the Christopher reordering of 1862-3.

Area 4: Bay 3 of original south aisle. The installation of a new, total-immersion baptistery with related hydraulic lifting equipment required more extensive excavation, involving the removal of c. 2.50 m. of deposits. The upper levels of rubble fill were removed by mechanical excavator down to the level at which point a series of pre-aisle burials, cut by the foundation trench for the west aisle wall, were identified. Beyond this point excavation progressed by hand. Again, the progress of excavation was closely linked to engineering concerns and the exposure of archaeological features directed certain changes of the original design, specifically a reduction in the scale and proportions of the proposed new baptistery.

Area 5: The proposed new entrance building. Within this area a two-staged approach to evaluation was employed. First, a single north-south aligned evaluation trench, following the line of one of the proposed foundation trenches, was excavated by hand to establish the nature of deposits likely to be encountered during the main phase of work. Subsequent to the evaluation, a watching brief was maintained on the main phase of ground level reduction and the excavation of the remaining foundation trenches.

ARCHAEOLOGICAL DESCRIPTION

AREA 1

The upper (eastern) end; altar step (Figs. 12 and 13)

Work at the eastern end of the chancel was limited to the recording and removal of a series of former floor surfaces dating to the 19th and early 20th centuries. The earliest floor surface comprised a layer of inscribed stone memorial slabs (136: comprising memorials Nos. 8-22; Fig. 12).²⁹ The maximum dimensions of floor 136 were 5.4 m. (N/S.) x 2.8 m. (E/W.), though it is unclear whether this represents the full original extent. The preservation of memorials was variable with several fine slate examples with carved coats of arms (No. 18) and well preserved inscriptions (Nos. 8, 9 and 17), while other slabs had suffered badly from the application of a very hard, cementacious bedding layer for the overlying tiled floor 134. The floor comprised predominantly 18th-century memorials though two 17th-century examples were noted (Nos. 18 and 21). A *terminus post quem* for the laying of the floor was provided by the latest dated memorial slab (No. 8) to Thomas Nowell, principal of St. Mary Hall and Regius Professor of Modern History, dated 1801.

Floor 136 was overlaid by a fairly well preserved decorated tile floor (134: Fig. 13). This floor presumably dates to the Christopher reordering of 1862 and is contemporary with the Gothic arcade of five bays enclosing texts in the east wall. Tiles were by Minton Hollins and Co. of Stoke-on-Trent and comprised both plain (black, red and yellow) and decorated examples laid diagonally in a hard cementacious mortar bedding. The floor survived only within the area of the 1930s stone steps: a maximum of 5.4 m. (N/S.: the full width of the chancel) x 2.46 m. (E/W.: extending up to the east wall of the chancel). It was apparent that this did not represent the full western extent of the floor, further tiles had been removed at the time of the laying of the 1930s marble floor. Located centrally against the east wall of the chancel, and obscuring the bases of the Gothic arcade, was a low altar step (ctx.135: 2.43 m. N/S. x 1.26 m. E/W. x 0.15 m. high) again in plain and

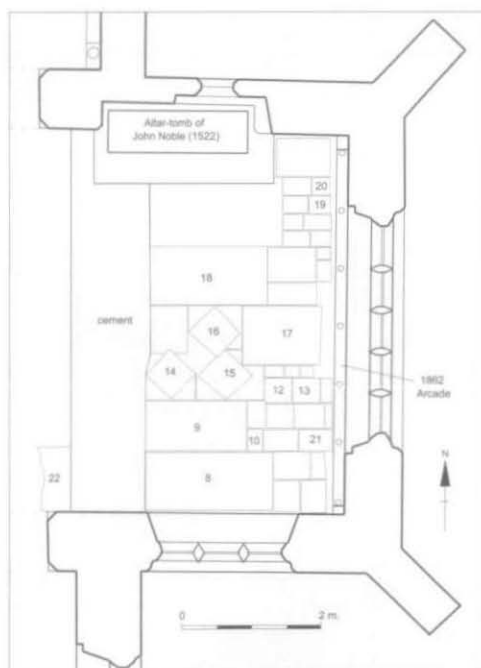


Fig. 12. Lower level of altar step: location of inscribed memorial slabs Nos. 8-22.

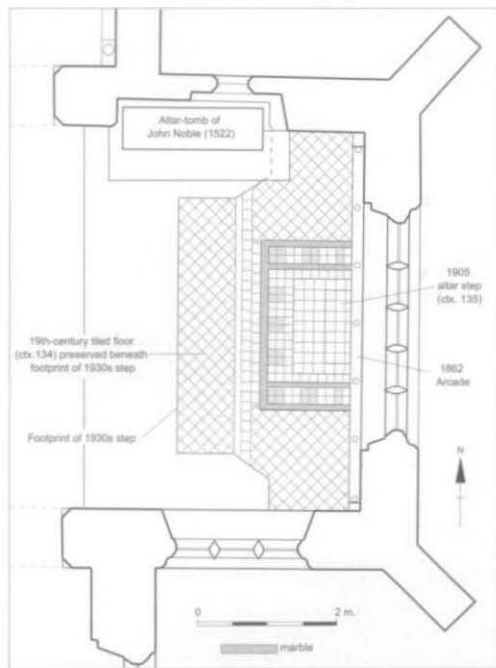


Fig. 13. 19th-century tiled floor and 1905 altar step exposed beneath 1930s marble.

²⁹ A full inventory of memorials recorded during the project is included within the archive report.

decorated Minton tiles with grey marble edging though obviously post-dating floor 134 (it does not respect the pattern of the earlier floor). It is presumed that this step corresponds to the 'additional step for the communion table' inserted in 1905 by Mardon Mowbray, Architect.

Both floor 134 and step 135 were obscured with the laying of the marble floor (100) and associated stone steps (which partially obscured the texts within the Gothic arcade) in the 1931 reordering by Fielding Dodd.³⁰

The lower (western) end (Figs. 14 and 15)

At the limit of the reduced dig a total of four brick-lined shaft graves (131, 137, 139, 141) were exposed (Fig. 14). All retained stone capping slabs. Each of the graves was found to contain a well-preserved coffin, three of them lead lined (132, 138, 140). Graves 137 and 139 both extended beneath the existing altar step and were thus only partly exposed. Shaft 137 was noted to be >1.50 m. deep and contained at least three burials, the uppermost being within a lead-lined coffin retaining a legible brass name plate thus allowing the individual to be identified as Mary Ward, died 24 January 1841 aged 78 years. This grave was of particular interest in that the upper coffin was supported by stone slabs as opposed to the more usual iron stacking bars observed elsewhere within the church.

All graves were recorded prior to being recapped with concrete paving slabs. Details may be found within the project archive.

Located centrally within the chancel, and constructed over the top of grave 131, was a large stone-built rectangular charnel pit (ctx.123/130), divided longitudinally into two sections by a central stone wall. The overall dimensions of structure 123/130 were 4.40 m. (E/W.) x 2.50 m. (N/S.) x maximum 0.40 m. high. The voids were completely infilled with charnel material, and were closed by a compact gravelly mortar capping layer (125). Overlying the capping layer of charnel pit 123 was a layer of loose sandy gravel retained within a brick-built structure 125. This layer served as a bedding layer for a series of 7 memorial slabs (102: comprising memorials Nos. 1-7, Fig. 15) which were exposed immediately beneath the 1930s marble floor of the chancel (100) and its related concrete make-up material (101). The earliest slab (No. 1; to Sir Richard Holloway) was dated 1699 and the latest (No. 6), 1836; the latter slab providing a *terminus post quem* for the laying of the memorials presumably as part of a former floor surface possibly related to the layer of memorial slabs (136) recorded at the east end of the chancel. Both the layer of memorial slabs (102) and the charnel pit structure (123) were cut by a Victorian service duct (119) which was brick built with a base of reused broken memorial slabs.

AREA 2 (Fig. 16)

Early Occupation

The earliest deposit revealed within the body of the church comprised an isolated 'island' of stratified occupation deposits (359) directly overlying the natural subsoil (363/4), exposed within a test pit against the north wall of the nave. Although undated by any artefactual evidence in this instance, it may be argued from the stratigraphic location of these deposits, and from a comparison with a number of other sites within Oxford (most recently at Lincoln College), that these deposits represent a Saxon occupation surface. It is unfortunately not possible, given the very limited extent of the surviving deposits, to ascertain whether the layers represent evidence of a Saxon church or a deposit of a domestic nature. The survival of such an early deposit is of intrinsic interest, not only for its miraculous survival amidst a honeycomb of later features (see below), but also in that it provides a datum for Saxon occupation (60.16 m. OD) against which to gauge later features and deposits. What is particularly noteworthy is the limited build-up of material (*c.* 1 m.) between the Saxon deposits and the level of the Victorian floor (61.23 m. OD), implying as it does that substantial truncation events have occurred in the past.

A notable find suggestive of early occupation on the site was also made during ground reduction work within the south nave where a fragment of fine carved cross-shaft (Fig. 17), stylistically mid 10th-century in date, was retrieved from a secondary context, re-used within the masonry of wall 373. The fragment is 48 cm. tall, of rectangular cross-section, tapering from 37 cm. wide / 19.5 cm. deep at the bottom to 30 cm. wide / 13.5 cm. deep at the top. The stone is differentially worn and badly broken at the lower end. Each face displays single plain relief borders enclosing panels of interlace decoration: the two broad faces display a similar motif of six-strand plaits while the narrow faces display a four-strand plait and a 'Stafford Knot' (Cramp's type 23e)³¹ respectively. The upper face is dressed square and retains a central rectangular mortice

³⁰ Faculty dated 23 Oct. 1931.

³¹ R. Cramp, *A General Introduction to the Corpus of Anglo-Saxon Stone Sculpture: Grammar of Anglo-Saxon Ornament* (1995), fig. 23, p. xli.

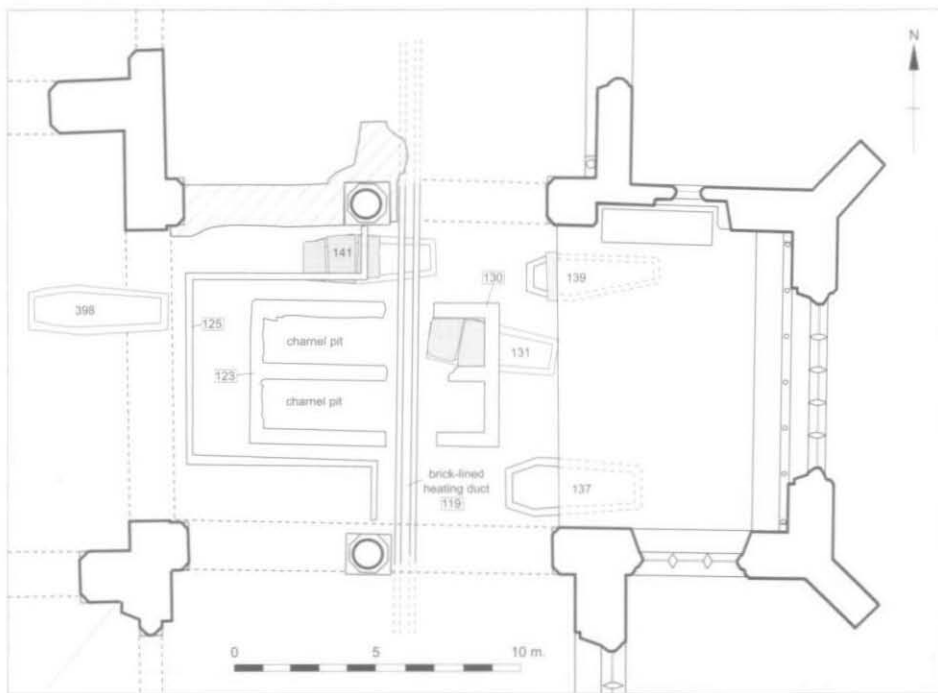


Fig. 14. Plan of chancel pit structure and 19th-century shaft graves.

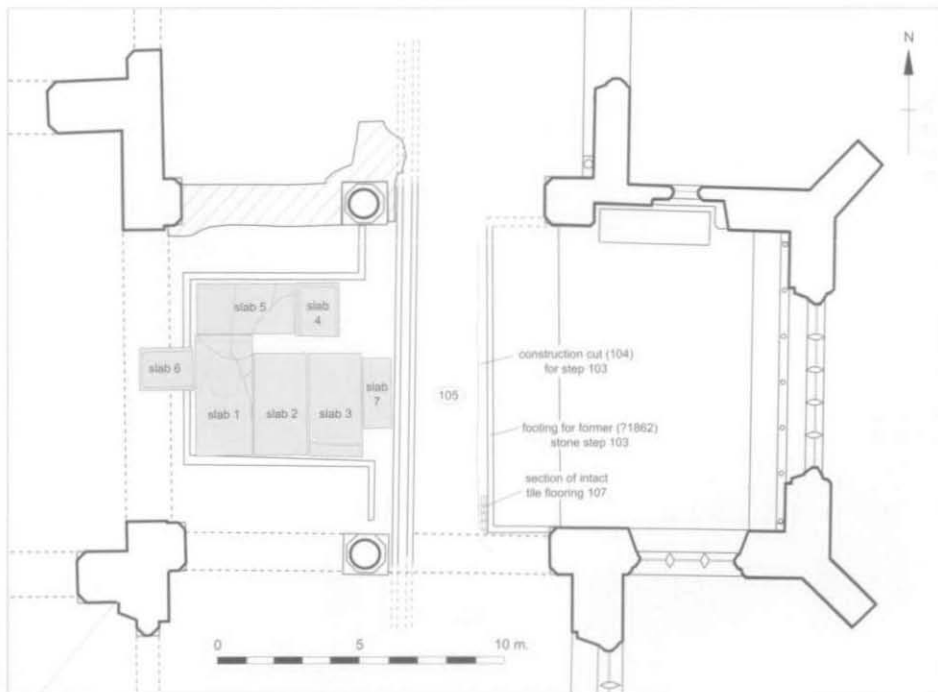


Fig. 15. Memorial slabs overlying chancel pit 123/130; former (?1962) altar step.

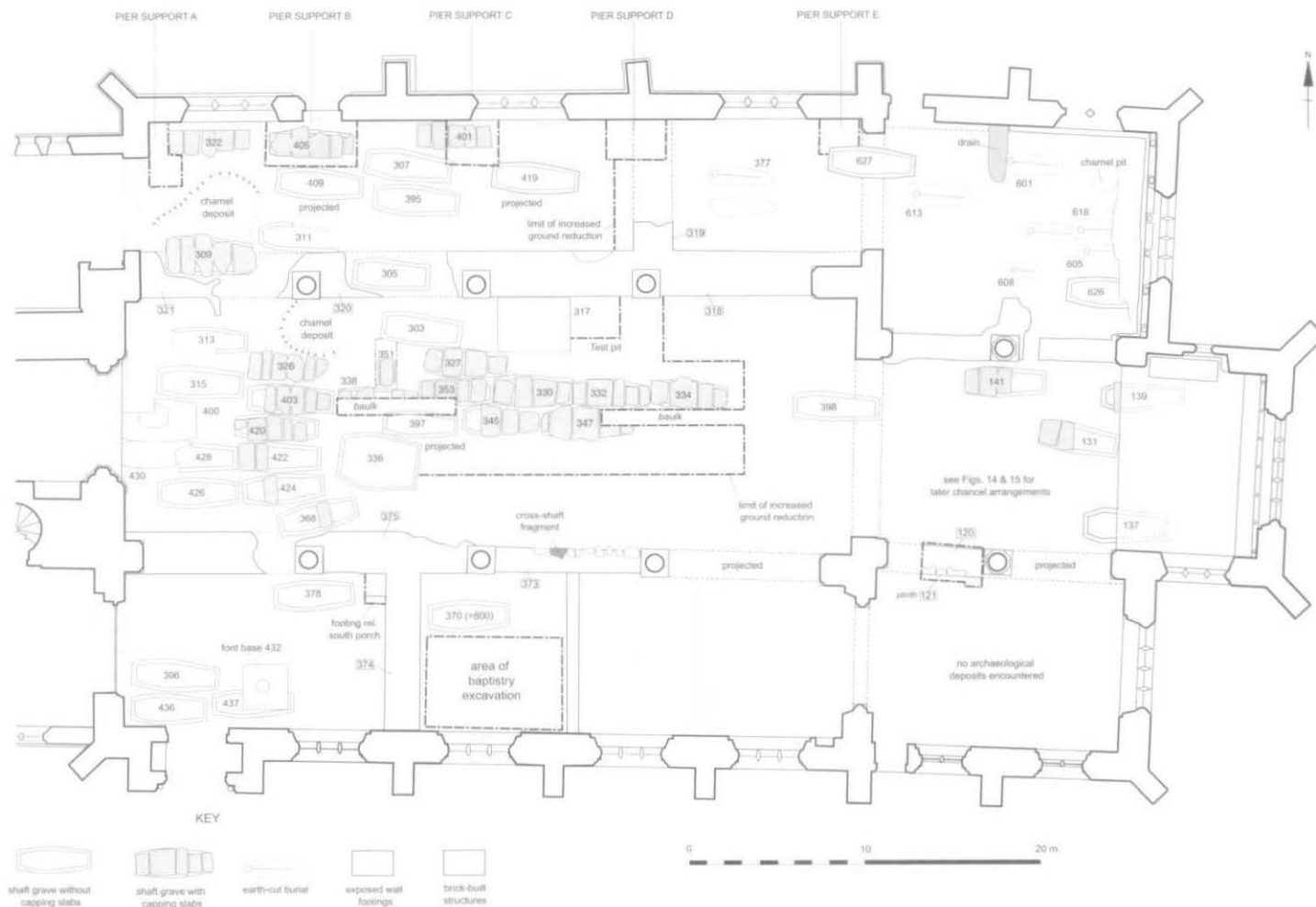


Fig. 16. Main excavation (Areas 2 and 3) (based upon Midlands Surveys).

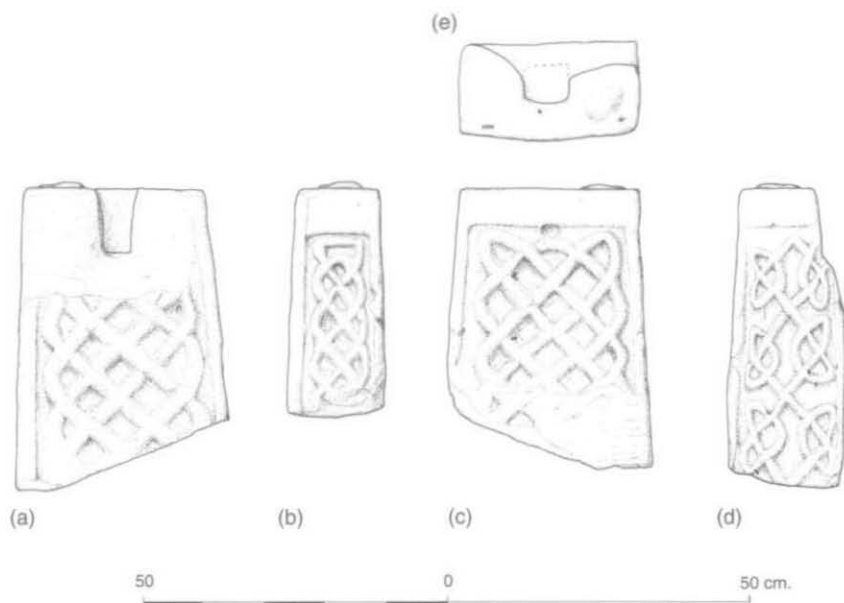


Fig. 17. Detail of 10th-century cross-shaft fragment.

which would have originally functioned to house an iron tie fixing this stone to the one above. Similar mortices or circular 'dowel holes' are known from other cross-shaft fragments; e.g. St. Peter's, Bishop's Waltham³² and St. Margaret's, Barking.³³ Although the upper face of the stone remains partly intact, no evidence of the lower extent of the stone survives (the lower part of the decoration is broken away and no evidence for a return of border mouldings is visible).

A total of 25 free-standing cross-shaft fragments are known from the south-east of England, of which fifteen take the angular form represented by the fragment recovered at St. Aldate's.³⁴

The Construction of the North Aisle (Fig. 18)

The excavation of four deep pier pits along the length of the north wall of the aisle allowed for the inspection of the footings of the original 15th-century chantry chapel wall. The dimensions of the pier pits averaged 1.70 m. x 1.20 m. and they were located at regular intervals along the length of the wall. Where exposed, the footings of the 15th-century wall were noted to comprise a series of wide relieving arches founded upon natural subsoil at a height of 59.50 m. OD. The arrangement was most clearly exposed in pier pit C, where an arch c. 2.90 m. wide x 1.20 m. high was recorded. The technique, representing an economic solution to building footings through disturbed ground, is familiar from other sites of comparable date within Oxford, and has been recorded at 26-28 Cornmarket (Zacharias's) in 1380³⁵ and more recently at Lincoln College Kitchen in 1437. Similar techniques were employed in the building of the city wall in the 13th century, and examples can still be observed in sections of the wall at Merton College and in Brewer Street to the south of St. Aldate's. The footings contrast with the deeper solid masonry foundations excavated for the extended aisle in 1832, exposed in pier pit E, which were noted to extend down to the level of the natural gravel.

³² Ibid. 250, pls. 418-19, 421-2.

³³ Ibid. 205, pls. 256-9.

³⁴ Ibid. 23.

³⁵ J.T. Munby, 'Zacharias's: a 14th-century Oxford New Inn and the Origins of the Medieval Urban Inn', *Oxoniensia*, lvii (1993), 271; figs. 13 and 19.

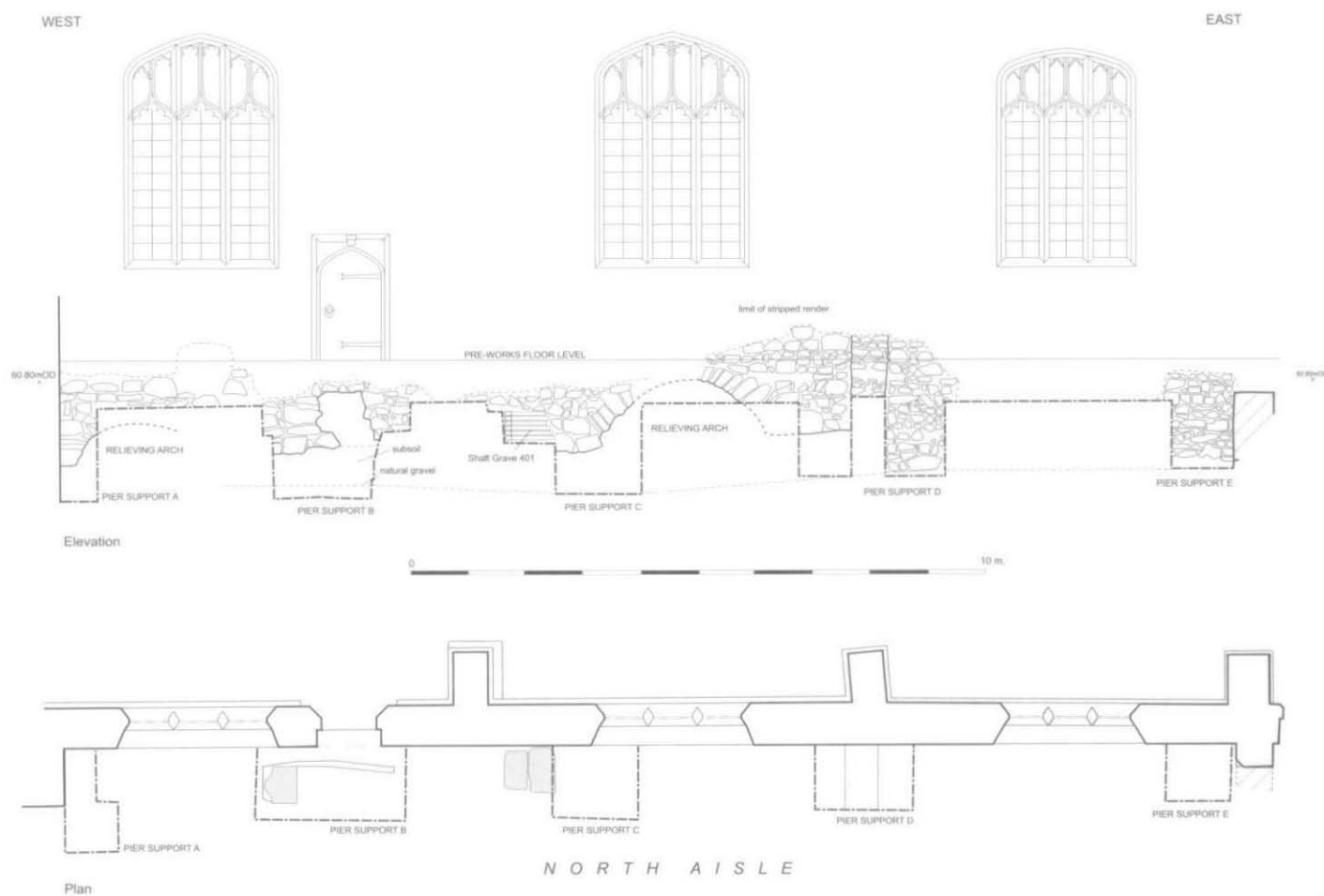


Fig. 18. Details of north aisle wall exposed in pier support excavations.

18th- and 19th-century grave structures

A total of 38 brick-lined shaft graves and a single brick-constructed barrel vault were exposed within the nave, north aisle, and the westernmost bay of the south aisle during ground reduction (Figs. 16 and 19). All were aligned approximately west-east and many retained capping slabs (including a number of reused 17th-century headstones). Several graves were noted to contain the fragmentary remains of coffins while two examples, 348 and 438, contained well preserved coffins with legible name plates allowing individual burials to be identified ('Elizabeth Hardaway, died 1813, aged 81 years' and 'M Harpur died 1817, aged 31 years' respectively). Coffins were generally of single or double shell, timber construction and were single-break in form. A total of six triple-shell, lead-lined examples were recorded. Individual graves and related burials will not be discussed at any length here; details may be found in the project archive. All graves were recapped with concrete lintels prior to the pouring of the new floor slab.



Fig. 19. General view of church during ground reduction work (looking east); note the concentration of graves in the centre of the nave.

19th-century reordering

A series of three brick-lined heating ducts were exposed, aligned east-west and located centrally to the north aisle, nave and south aisle respectively; the insertion of the heating duct running central to the south aisle necessitated some inventive alterations to the crown of the 14th-century crypt where the key stones of each bay were replaced by iron mouldings reflecting the profile of the ribs. The bases of the ducts were formed of broken and reused memorial slabs of 18th- and 19th-century date (the latest example dating to 1837). The brick walls of the ducts additionally served to support the north-south aligned joists of the 19th-century floor structure, which were given further support by a series of east-west aligned sleeper walls within the nave.

Within the westernmost bay of the south aisle, immediately west of the existing south door, a 1.3 m. square structure (432) of stone rubble construction and surviving to a maximum height of 0.41 m. with a slightly off-centre central circular hole (0.35 m. diam.) was exposed. Reference to historic plans confirms that this feature represents a base for the 15th-century font, relocated to this position from the north side of the nave during the 1862 reordering.

All features were sealed (in the case of the graves), or abutted by, a mixed deposit of loose soil, building rubble and large quantities of disarticulated human bone (301/302). This material presumably represents accumulation related to both the previous disturbance of graves (for the digging of 19th-century structures) and to the extensive 19th-century reorderings within the church. Several discrete areas of highly compacted mortar possibly represent debris from the rebuilding of the aisles in 1862, though it is equally plausible that they represent a deliberate deposit designed to 'seal' the previously exposed shaft graves.

AREA 3

The eastern end of the north aisle (the 'north chancel aisle') was treated as a separate area for the purposes of recording in that it was known to constitute an area of external graveyard up until the 1862 Christopher reordering when the north aisle was extended eastwards to flank the western section of the chancel.

Burials (Fig. 16)

At the limit of ground reduction, the upper surface of a former graveyard soil (617) was exposed. Cut into layer 617 the outline of five earth-cut graves (601, 605, 609, 613 and 618), with visible human skeletal remains, and two brick-lined shaft graves (626 and 627) could be discerned. Although technically at the limit of ground reduction, it was felt that the potential impact of the proposed concrete floor slab upon the burials within the earth-cut graves was unacceptable and, for this reason, all exposed burials were excavated under archaeological conditions and were subject to a rapid osteological evaluation prior to reinterment within the church. All burials were aligned west-east and were contained within shallow earth-cut graves, implying a significant truncation of the graveyard soil during the 1862 reordering.

TABLE 1. DETAILS OF EARTH-CUT BURIALS WITHIN AREA 3

<i>Context number</i>			<i>Comments</i>
<i>Grave cut</i>	<i>Coffin</i>	<i>Skeleton</i>	
601	603	604	
605	607	608	Adult male (c. 46+)
609	611	612	c. 2 years old; musket ball recovered from cranial cavity
613	615	616	Adult male (c. 46+)
618	620	621	Adult male (c. 46+)

Structural Remains

At the southern limit of Area 3 a foundation of limestone rubble construction (628), 5.80 m. long x 0.80 m. wide, was exposed in plan only. The foundation was oriented east-west and aligned with the extant north wall of the eastern chancel. This footing represents the former north wall of the original chancel. At the western limit of the area a further foundation of similar characteristics (629) was exposed, again in plan only. Footing 629 was 0.80 m. wide x 3.20m long and was aligned north-south, representing the eastern wall of the north aisle as extended in the 1832-4 reordering of the church. Interestingly, a brick-lined shaft grave (627) was noted to cut through the latter footing 629, implying that it was excavated after the extension of the aisle in 1862, representing an intramural burial at that date.

All features were sealed by a mixed layer of loose earth and charnel (600), similar to that recorded within the nave, which was in turn overlaid by a compact mortar and rubble construction level. The most recent floor level comprised a woodblock floor and related, bituminous make-up layers.

AREA 4 (Figs. 20–21)

As part of the original refurbishment design, it was proposed to install an octagonal total-immersion baptistry within the westernmost bay of the original south aisle. The identification at an early stage of brick-lined shaft graves (ctx. 800, 801) within the northern half of Area 4, combined with the realisation that the southern nave and aisle walls did not extend as deep as the adjacent bays (where they form the northern and southern walls of the crypt respectively), again prompted a change in design. A new baptistry design was thus evolved; this was of rectangular form and occupied only the southern part of Area 4, a maximum area of 2.65 m. N/S. x 4.40 m. E/W., thus avoiding impacting upon the brick-lined shafts and avoiding the need to underpin the south nave arcade.

Early Burials

Within the area of the new baptistry, a sequence of 19 burials was excavated (Fig. 20). All were of extended, supine inhumation form, unaccompanied by grave goods, and oriented west-east. The earliest of the graves (442, 829, 832, 837, 849, 858, 863) were dug into the natural gravel and displayed a significant degree of intercutting indicating a considerable concentration of burials within the area (Fig. 21). The stratigraphically later graves were dug into a natural subsoil (811=866) overlying the gravel or into an overlying former graveyard soil (810). The latest of the graves (819) was clearly cut by the construction cut (824) for the western wall (374) of the original south aisle and so the entire sequence of burials clearly pre-dates the early 14th century.

A total of eight of the burials (442, 829, 832, 837, 845, 849, 851 and 858), concentrated towards the bottom of the sequence, were of a form commonly known as 'charcoal burials'; that is, the inhumations were either laid upon or covered by substantial deposits of carbonised wood. The skeletal material itself, though

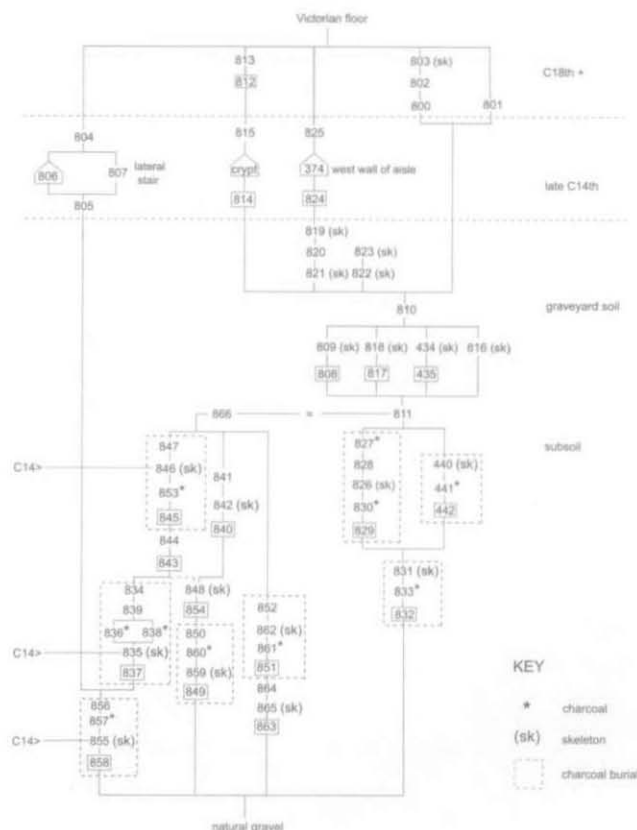


Fig. 20. Area 4; stratigraphic matrix.

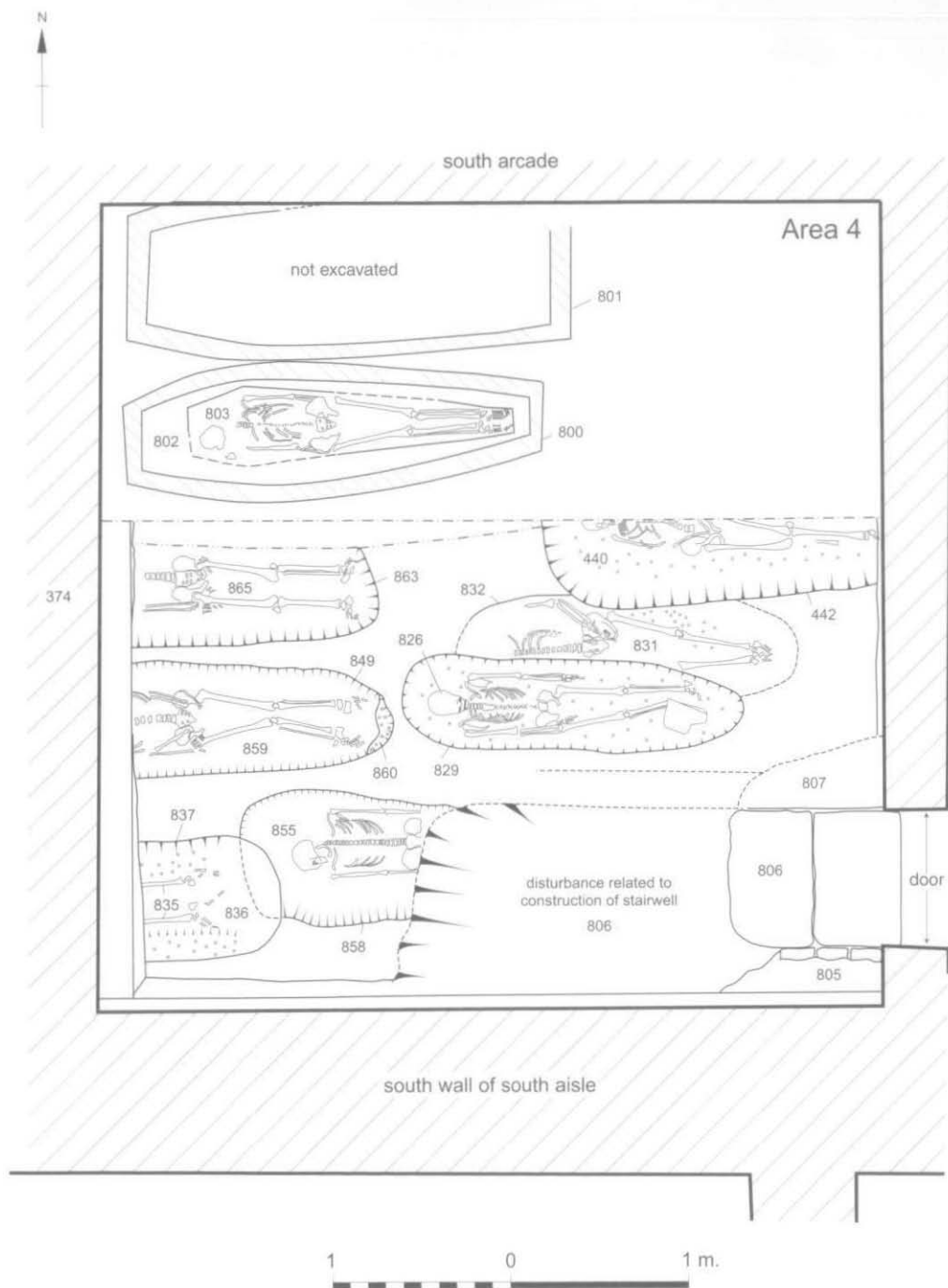


Fig. 21. Composite plan of early burials (Area 4).

discoloured by the surrounding deposits, displayed no evidence of burning. The precise arrangements for individual burials varied from grave to grave (see catalogue), and it is significant that one of the stratigraphically earliest graves (863) was of a 'non-charcoal' type. No evidence for former coffins was recorded, though in the case of grave 837 a clear, near vertical horizon between the charcoal 'packing' deposits (836, 838) and the earth fill (834) around the skeleton itself may indicate the original existence of some form of organic burial container or covering (?shroud) around which the charcoal was deposited. If it is accepted that deposit 359, exposed in Area 2, represents a contemporary ground surface, the original depth of the graves would have been in the region of 1.80 m.

Grave Catalogue by ANGELA BOYLE

The upper burials of the sequence were subject to a rapid on-site osteological evaluation. However, as the significance of the lower sequence became apparent, the strategy was revised; the earlier burials were fully excavated and removed temporarily from site and analysed in full prior to reburial within the church. The lower sequence of burials are summarised below.

Methodology

The methodology used to assess the burials was identical to that used for the Christ Church skeletal assemblage.³⁶

Grave Cut: 442. Skeleton Number: 440

Partially exposed, sub-rectangular grave; extends beneath N. baulk section of excavation and cut by construction of undercroft to E. Cut into natural gravel, the grave also cuts grave 832 to the S. Aligned W.-E. Maximum surviving plan dimensions 1.85 m. long x 0.50 m. wide. Skull (to right), right torso and legs of extended supine inhumation survive. Right arm flexed with hand over pelvis. The skeleton is laid upon very substantial (up to 0.30 m. deep) deposit of charcoal (441), which lines the grave.

Sex: male. Age: 20-25 y. Stature: 1.82 m. (5'9.5").

Preservation: good. Completeness: virtually complete.

Dentition:

8 7 6 5 4 / 2 1	1 2 3 4 5 6 7 8
8 7 6 5 4 3 2 1	1 2 3 4 5 6 7 8

Comments: Slight overbite. Medial rotation of upper left lateral incisor. Moderate calculus on molars.

Grave Cut: 829. Skeleton Number: 826

Well-defined, sub-rectangular grave with rounded ends. Aligned W.-E. Maximum plan dimensions; 1.92 m. long x 0.50 m. wide. Cut into natural gravel, the grave also cuts grave 832 to the N. Complete extended supine inhumation survives, left arm to side, right arm slightly flexed with hand over pelvis. The skeleton is laid upon a 0.05 m. thick layer of charcoal (830) and is covered by a further, substantial deposit of charcoal (827; 0.19 m. thick). A single stone was recorded immediately over the right foot.

Sex: male. Age: ageing adult. Stature: 1.64 m. (5' 4").

Preservation: good. Completeness: virtually complete.

Dentition:

C	C	C
8 7 6 5 / 3 2 1	1 2 3 4 5 6 7 8	
8 7 6 5 4 3 2 1	1 2 3 4 5 6 7 8	

Comments: Hyoid body and bones are unfused. This is a rare occurrence in adults. Heavy calculus deposits.

³⁶ A. Boyle, 'The Human Skeletal Assemblage', in A. Boyle et al., 'Excavations in Christ Church Cathedral Graveyard, Oxford', *Oxoniensia*, lxi (2001), 358.

Grave Cut: 832. Skeleton Number: 831

Partially exposed, ill-defined cut, heavily truncated by later graves 829 to S. and 442 to N. Aligned W.-E. Cut into natural gravel. Maximum surviving plan dimensions *c.* 1.90 m. long x >0.50 m. wide. Left torso, pelvis and leg plus lower right leg survive of extended supine inhumation left arm flexed with hand over pelvis. The skeleton is laid upon 0.07 m. deep layer of charcoal (833), which lines the grave.

Sex: male. Age: ageing adult.

Preservation: fair, no complete bones. Completeness: missing skull and right half of skeleton.

Comments: Small cyst-like cavity on tubercle of left navicular and on anterior facet of right calcaneus.

Grave Cut: 837. Skeleton Number: 835

Partially surviving sub-rectangular grave, truncated to the W. by the construction cut for the W. wall of S. aisle. Aligned W.-E. Maximum surviving dimensions: 0.75 m. long x 0.65 m. wide x 0.18 m. deep. Cut into natural gravel, the grave also cuts into the fill of grave 858 to the E. Lower, extended legs only of supine skeleton survive. Skeleton is 'packed' to each side by discrete deposits of charcoal (836 and 838), both of which are *c.* 5 cm. deep.

Sex: ? . Age: adult.

Preservation: poor. Completeness: lower legs and feet.

Grave Cut: 840. Skeleton Number: 842

Partially exposed, ill-defined grave, truncated to the W. by construction of W. wall of S. aisle. Aligned W.-E. Cut into upper fills, and reusing southern edge of grave 849. Maximum surviving plan dimensions 0.50 m. long x *c.* 0.45 m. wide. Lower legs and feet only of extended supine inhumation survive.

Sex: male?. Age: adult.

Preservation: fair. Completeness: lower legs and feet only.

Comments: Left navicular and calcaneus are fused, possibly due to crush fracture.

Grave Cut: 843. Skeleton Number: ---

SW. corner only of ?sub-rectangular grave, cut into natural gravel. Maximum surviving dimensions 0.80 m. long x 0.58 m. wide x 0.21 m. deep. The grave has been heavily truncated and disturbed by the digging of grave 845 and by construction of lateral stair 806. No intact skeleton survives though disarticulated fragments of skull, pelvis and ribs recovered from fill 844, possibly representing original sub-adult inhumation.

Grave Cut: 845. Skeleton Number: 846

Partially exposed, irregular sub-rectangular grave, truncated to the E. by construction of lateral stair 806. Maximum surviving plan dimensions 0.73 m. long x 0.47 m. wide. Aligned W.-E. Cut through and into base of grave 843. Skull and upper torso only survive of extended supine inhumation, laid upon a primary deposit of charcoal (853), 0.04 m. - 0.08 m. thick, which lines the grave. Traces of charcoal were also recorded overlying the skeleton.

Sex: male. Age: mature adult

Preservation: poor, no complete long bones. Completeness: skull and upper body only.

Dentition:

C A

8	X	6	5	4	3	2	1	1	2	3	4	5	6	7	8
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Comments: Moderate periodontal disease. Heavy calculus deposits on anterior dentition. Abscess has an external drain.

Grave Cut: 849. Skeleton Number: 859

Partially surviving, well-defined sub-rectangular grave, truncated to W. by the construction cut for the W. wall of S. aisle. Aligned W.-E. Maximum surviving dimensions: 1.50 m. long x 0.63 m. wide x 0.31 m. deep. Cut into natural gravel. A charcoal deposit (860) was recorded at the E. (foot) end of the grave. Lower torso, lower arms and extended legs of supine inhumation survive, arms flexed with hands positioned over pelvis.

Sex: male. Age: mature adult. Stature: 1.76 m. (5' 8").

Preservation: fair. Completeness: missing skull.

Comments: Schmorl's nodes on bodies of 9th-12th thoracic vertebrae.

Grave Cut: 851. Skeleton Number: 862

Partially exposed, sub-rectangular grave, truncated to the W. by the construction cut for W. wall of S. aisle. Aligned W.-E. Northern edge of grave extends beneath baulk of excavation, full extent not exposed. Cut into the upper fill (864) of grave 863. Lower legs and feet only of an extended supine inhumation survive, laid upon a primary deposit of charcoal (861), maximum of 0.04 m. deep, which lines the grave. The skeleton is overlaid by distinct fill 852 containing small amounts of unarticulated human bone.

Sex: ?male. Age: adult.

Preservation: poor, no complete bones. Completeness: lower body only

Grave Cut: 854. Skeleton Number: 848

Ill-defined cut for much disturbed grave, cut to W. by grave 840. Aligned W.-E. Fragmentary skeletal remains; only lower left arm and hand survive.

Comments: this is a deposit of disarticulated material. At least two adults and one infant are represented.

Grave Cut: 858. Skeleton Number: 855

Regular, sub-rectangular vertical-sided grave, truncated to E. by construction of lateral stairwell 806. Cut to W. by grave 837. Aligned W.-E. Maximum surviving dimensions: 1.20 m. long x 0.75 m. wide x 0.50 m. deep. Cut into natural gravel. Body supine, skull to right - arms to sides. Upper part of body only, truncated at level of pelvis by construction cut for stairwell. The skeleton is covered by thin layer of charcoal (857) from the neck down; thin (0.02 m.) to the S., the deposit was markedly deeper to the N. side of the body.

Sex: female. Age: 20-25 y. Stature: 1.59 m. (5' 2").

Preservation: good. Completeness: upper body only.

Dentition:

E 7 6 5 4 3 2 /	/ 2 3 4 5 6 7 E
NP 7 6 5 4 3 2 1	1 2 3 4 5 6 7 NP

Comments: Medial rotation of upper right second premolar.

Grave Cut: 863. Skeleton Number: 865

Partially surviving, well-defined sub-rectangular grave, truncated to W. by the construction cut for W. wall of the S. aisle. Aligned W.-E. Northern edge of grave extends beneath baulk of excavation, full extent not exposed. Maximum surviving plan dimensions: 1.38 m. long x 0.55 m. wide. Cut into natural gravel. Lower torso, lower right arm and extended legs of supine inhumation survive, right arm slightly flexed with hands positioned over pelvis. Truncated to W.

Sex: male. Age: mature adult. Height: 1.72 m. (5' 6").

Preservation: fair. Completeness: lower body only.

Comments: Schmorl's nodes present on lower bodies of 10th and 11th thoracic vertebrae.

Results

A total of ten skeletons were analysed. Preservation was variable ranging from poor to good. Only two skeletons were virtually complete (440 and 826). The remainder were incomplete as the graves were quite densely intercutting. The assemblage comprised seven males, one probable male, one female and one adult of indeterminate sex. Age ranged from 20 years to 50+ (ageing adult).

The stature of five of the skeletons was calculated and ranged from 1.59-1.82 m.

Two skeletons exhibited vertebral degeneration in the form of Schmorl's nodes (859 and 865). The left calcaneus and navicular of skeleton 842 were fused and this may have been the result of a crush fracture.

Dental health was generally good. Skeleton 846 had one carious cavity and an abscess. Skeleton 826 had three carious teeth. Skeleton 440 had a rotated upper left lateral incisor. Irregularity and overlapping of

anterior teeth is so common as to be almost normal. Some are merely twisted out of position, but others are wholly displaced to lingual or to labial.³⁷ The upper right second premolar of skeleton 855 was also rotated and this is a slightly less common feature.

Discussion

The predominance of males in the group is of some interest. Six of the eight charcoal burials were males, one was female and one was of indeterminate sex. The possibility that this form of burial is mainly linked to male individuals was considered. Two charcoal burials were uncovered during excavations at Christ Church in 1972.³⁸ One was an adult male and the second was an adult of indeterminate sex. A group of 20 skeletons were excavated in the cloister in 1985 and two of these were charcoal burials, an adult male and an adult female.³⁹ The data is therefore inconclusive.

Dating

A series of bone samples were taken from three stratigraphically related burials (846, 855 and 835) and were submitted to Rafter Radiocarbon Laboratory, New Zealand for high precision radiocarbon dating. A discussion of the results and methodology can be found with the report on other radiocarbon-dated burials from Christ Church Cathedral graveyard (above).⁴⁰

The results confirm that the burials from St. Aldate's are pre-Conquest in date. Skeleton 855 was located at the base of the stratigraphic sequence and was overlain by skeleton 835, which in turn was overlain by skeleton 846. This would suggest that all the skeletons must be dated to the late 9th or 10th century. All three were charcoal burials. These radiocarbon dates add weight to the argument that St. Aldate's represents a Saxon foundation.

Charcoal Analysis by DANA CHALLINOR

A total of eight of the St. Aldate's burials were laid upon substantial layers of wood charcoal. Charcoal burials have been found at a number of sites in Anglo-Saxon Britain but since no detailed analysis of the charcoal has yet been undertaken, a comprehensive sampling strategy was implemented at St. Aldate's. Samples of the charcoal were taken across the burials to determine if there were any spatial differences. One grave (442) was intensively sampled, while a further four graves (829, 837, 845 and 857) were sampled at the head and feet (Table 2). Three of the skeletons have been dated by radiocarbon analysis and proved to be mid to late Saxon in date. The aims of the charcoal analysis were to shed light upon the purpose and function of 'charcoal burials' and to determine any variations between the burials.

Methodology

A total of twenty samples of charcoal were taken from the eight burials. These were wet-sieved onto a 2 mm. sieve to remove any adhering soil. The sample sizes varied considerably from 0.25 to 15 litres (Table 2). The samples were air-dried and divided into fractions using a set of sieves. In the first instance, they were assessed by scanning under a binocular microscope at x10 and x20 magnification. Fragments of charcoal were randomly extracted, fractured and examined in transverse section. In the case of large samples, a sub-sample of c. 20% was examined. On the basis of this initial assessment, it was decided to examine one sample from each context in detail. Samples which were particularly large in size were divided using a riffle box and a fraction of the sample was examined (Table 2). The charcoal was then sorted into groups based on the anatomical features observed at low magnification. Representative fragments from each group were then selected for further examination using a Meiji incident-light microscope at up to x400 magnification. Identifications were made with reference to Schweingruber⁴¹ and modern reference material. In addition to species identification, various analyses (e.g. the maturity of the wood and the growth rate) were undertaken, where the condition of the charcoal permitted it, to look for any other discernible differences/conditions in the charcoal between the burials.

³⁷ S. Hillson, *Dental Anthropology* (1996), 112.

³⁸ T.G. Hassall, 'Excavations at Oxford, 1972: Fifth Interim Report', *Oxoniensia*, xxxviii (1973), 270-4.

³⁹ C. Scull, 'Excavations in the Cloister of St. Frideswide's Priory, 1985', *Oxoniensia*, liii (1988), 21-74.

⁴⁰ P. Marshall, 'Radiocarbon Determinations', in A. Boyle et al., 'Excavations in Christ Church Cathedral Graveyard, Oxford', *Oxoniensia*, lxvi (2001), 350-5, Table 1, Figs. 12-13.

⁴¹ F.H. Schweingruber, *Microscopic Wood Anatomy* (3rd edn. 1990).

TABLE 2. CHARCOAL SAMPLES FROM THE BURIALS

Grave no.	Sample no.	Context no.	Volume (litres)	% of sample identified
442	4	441	1	—
	5	441	15	—
	6	441	11	—
	7	441	12	1.6
	8	441	2	—
	9	441	2	—
829	10	827	2.5	3.1
	11	827	0.25	—
832	12	833	2	1.6
837	13	836	1.25	—
	14	836	1.5	6.2
	15	838	1.25	6.2
	16	838	1.25	—
845	17	853	1.25	—
	18	853	1	—
	19	853	1	12.5
849	22	860	1.25	12.5
851	23	861	1.5	25
857	20	857	0.25	100
	21	857	0.5	—

Results

Species composition: Four taxa were positively identified – *Quercus* sp. (oak), *Corylus avellana* (hazel), *Maloideae* (hawthorn, apple, pear etc) and *Prunus* sp. (blackthorn, cherry). It is not always possible to identify to species level, although it may be said that the *Maloideae* charcoal was more characteristic of *Crataegus monogyna* (hawthorn) and the *Prunus* consistent with *P. spinosa* (blackthorn). It was apparent from the initial assessment that all of the samples were dominated by *Quercus* and there were no great spatial differences in species composition between samples from the same grave or indeed between graves. This pattern was confirmed by the more detailed analysis. Only three samples produced non-oak taxa and in small quantities (Fig. 22). In all samples, there were some charcoal fragments categorised as indeterminate, which were not identifiable either because of poor preservation or because their cell structures were unusual. A number of these fragments were burr wood. Since some burrs were identifiable as oak, it is likely that many of the indeterminate fragments were of the same species. Certainly, burr wood was conspicuously present in most samples.

Maturity: Oak heartwood was identified in all of the samples and some sapwood was also positively identified in most samples.

Growth rate: Ring counts were made on oak fragments >9.5 mm. in size and the average ring width calculated. Fig. 23 shows that the charcoal from all but one of the graves (837) exhibited similar slow growth rates. A number of the larger fragments also exhibited similar patterns of growth – with narrow rings getting wider, then narrowing again.

Quantity of material: The number of oak fragments per litre of excavated material was calculated in an attempt to look at the variations between the graves. While it is acknowledged that there are differential rates of fragmentation in charcoal and that fragment counts are not usually reliable, it was considered permissible in

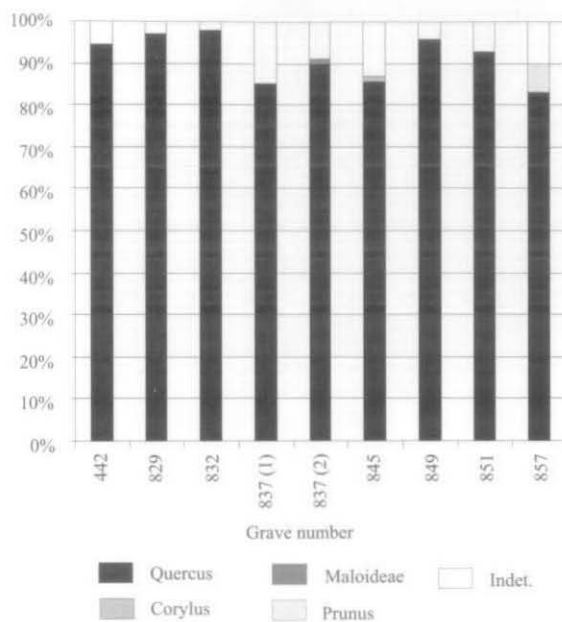


Fig. 22. Species composition of charcoal by grave number.

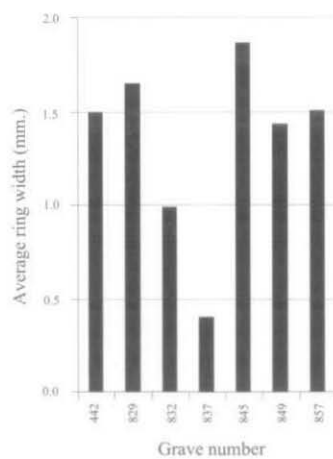


Fig. 23. Average growth ring width of charcoal by grave number.

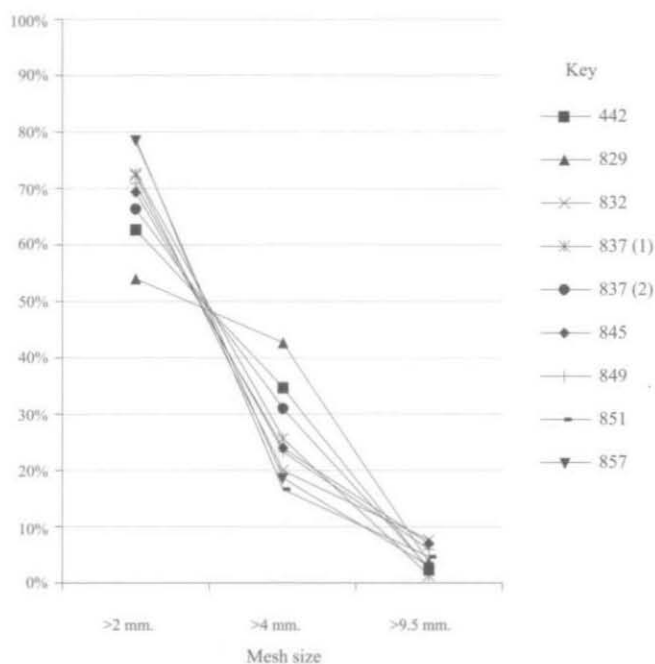


Fig. 24. Distribution of charcoal by sieve size.

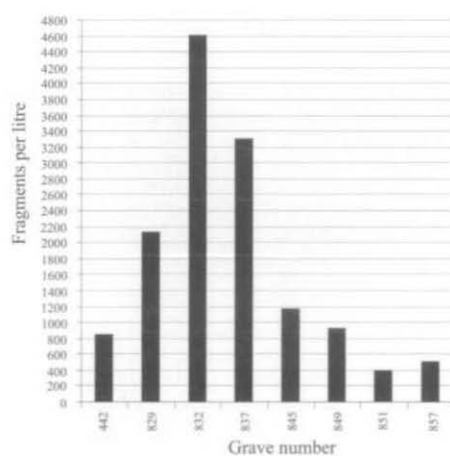


Fig. 25. Number of charcoal fragments

this case, since the charcoal was all of the same species and there was little variation in the distribution of charcoal between sieve sizes (Fig. 24). Calculating the number of fragments per litre showed clear variations in the quantity of charcoal that was deposited with the human remains into the grave (Fig. 25).

Discussion

Comparison of the charcoal from different graves show that there are more similarities than differences; there are minimal differences in the taxa found in the assemblages (Fig. 22) and there is a clear predominance of oak charcoal in all of the samples. This is in keeping with the charcoal from the burials excavated at Christ Church which were also largely identified as oak.⁴² Given the context of the burials, it is apparent that the charcoal was deliberately deposited as charcoal, rather than as a fuel residue which is the most common occurrence of wood charcoal in the archaeological record. It is likely, therefore, that the presence of small quantities of non-oak species (all of which are typical of scrub/hedgerows) may be explained by their use as an aid to ignition in charcoal burners or as an accidental inclusion; traditional methods for making charcoal utilise shallow pits with layers of straw, grass or bracken to shut out the air.⁴³ Certainly, oak does have good burning properties as a charcoal, although there are other taxa which make superior charcoal, such as *Frangula alnus* (alder buckthorn), *Alnus glutinosa* (alder) and *Salix* sp. (willow).⁴⁴ The choice of species would usually depend upon several factors, such as the intended purpose for the charcoal and the availability of resources. This leads to two questions: was the charcoal at St. Aldate's custom-made for the burials and, if so, was there any significance in the choice of oak? Certainly, the burning properties of the taxon are irrelevant if the charcoal was custom-made for the purpose of deposition with the human burials.

The presence of burr wood in the majority of the samples may shed light on the issue of custom-made charcoal. Burrs are produced in oak trees in two situations; either the tree has been pollarded or the tree is of considerable age.⁴⁵ If the latter were the case, then the wood used for the charcoal burials would have come from valuable timber stocks and as such suggests that the individuals concerned were of high status. Alternatively, the occurrence of burrs could be the result of trimmings from large trees, cut for timber, being used for charcoal. If this were the case, the charcoal is not likely to have been carefully selected as an indication of status.

Without complete segments of roundwood, it is very difficult to construe woodland management from charcoal; that said, the distinctive pattern of growth rings noted in some samples could well be from managed wood being cut on a regular cycle.⁴⁶ Grave 837 is distinctive for the slow rate of growth exhibited in the charcoal, but the significance of this is difficult to define.

The Lateral Stairwell

The fill of the southern 1.25 m. of the excavated area was distinct in that it comprised loose rubbly backfill datable to the 19th or early 20th century. The deposit was deeper towards the eastern side of the area, suggesting an infilled lateral stairwell giving access to the 14th-century vaulted crypt via a doorway within the west wall of the crypt.⁴⁷ The head of this door is formed to the south by the rising transverse wall rib of the western wall of the crypt. This rib displays no chamfer to its western face, a fact that would appear to invalidate the argument for the former existence of a third, western bay to the undercroft. The fact that the primary masonry of the southern aisle wall within the third bay is founded on gravel some 0.64 m. above the level of the undercroft floor also implies an original two-bay crypt. The existence of a former stairwell was confirmed at the base of excavations when three *in situ* stone steps (806) were exposed immediately west of the doorway (Fig. 26). The implied stairway was 0.75 m. wide and flanked to north and south by stone walls, the northern wall having been robbed out. As noted above, the stairwell would appear to have remained in use until at least the early 19th century; a small doorway within the western aisle wall, presumably giving access to the stair, is visible in Buckler's 'South-west view of St. Aldate's Church' (Fig. 7). It would appear that when the stairwell went out of use it was initially only partially infilled and possibly used for a period as a 'coal

⁴² Hassall, *op. cit.* note 38, pp. 270-1.

⁴³ H.L. Edlin, *Woodland Crafts in Britain: An Account of the Traditional Uses of Trees and Timbers in the British Countryside* (1949), 160.

⁴⁴ *Ibid.* 165.

⁴⁵ M. Robinson, *pers. comm.*

⁴⁶ P. Rasmussen, 'Pollarding of Trees in the Neolithic: Often Presumed - Difficult to Prove', in D.E. Robinson (ed.), *Experimentation and Reconstruction in Environmental Archaeology* (1990), 77-99.

⁴⁷ This doorway has been unblocked as a part of the current works and incorporated into the new arrangements of the undercroft.

hole' serving the boilers which were housed in the crypt; a horizontal deposit rich in coal was encountered at a depth of c. 1.50 m. and this correlates well with the reduced opening formed by the partial blocking of the lower doorway. The find of a long-handled iron shovel associated with the coal rich layer would appear to support such an interpretation. It is unclear exactly when the lateral stair was finally decommissioned though it would seem reasonable to assume that the westwards extension of the south aisle during the Christopher reordering would have made access unfeasible. Significantly, the current stair against the south wall of the aisle giving access via the eastern bay of the undercroft is first shown in Christopher's post-works plan of 1862-3.



Fig. 26. Area 4; doorway to crypt and lateral stair.

AREA 5 (Fig. 27)

A two-phase strategy was employed within Area 5 in advance of the creation of a new entrance range. Firstly, the new building, to ascertain the nature and extent of deposits surviving within the area. The trench measured 4.60 m. long x 1.00 m. wide and was hand excavated to a maximum depth of 1.20 m. The results of the evaluation trench indicated that the main phase of ground reduction was likely to reveal, though not impact upon, a series of earth-cut burials and brick-built funerary structures. Accordingly, a watching brief was maintained during the main ground reduction exercise.

The Evaluation Trench

The earliest deposit encountered within the excavated trench comprised a 0.28 m. deep layer of mid orange-brown sandy clay (2071) which yielded a small amount of disarticulated human bone and a single sherd of medieval green-glazed ceramic (14th-/15th-century in date). The layer was observed over most of the trench and was absent only where it had been cut by later features. Overlying 2071 (and again surviving except where cut by later features) were two superimposed compacted gravel surfaces (2064=2065 and 2068=2069). The upper limit of surface 2064=2065 was located at a level of 60.21 m. OD. The surfaces were undated by artefactual evidence. However, it appears reasonable to interpret the superimposed compacted layers as yard and/or path surfaces related to the churchyard arrangement with north-eastern entrance as shown in Logan's map of 1675. A tentative 15th-century *terminus post quem* for the laying of surface 2064=2065 is provided by the sherd of Brill/Boarstall ware recovered from layer 2071. The lid fragment is of a distinctive

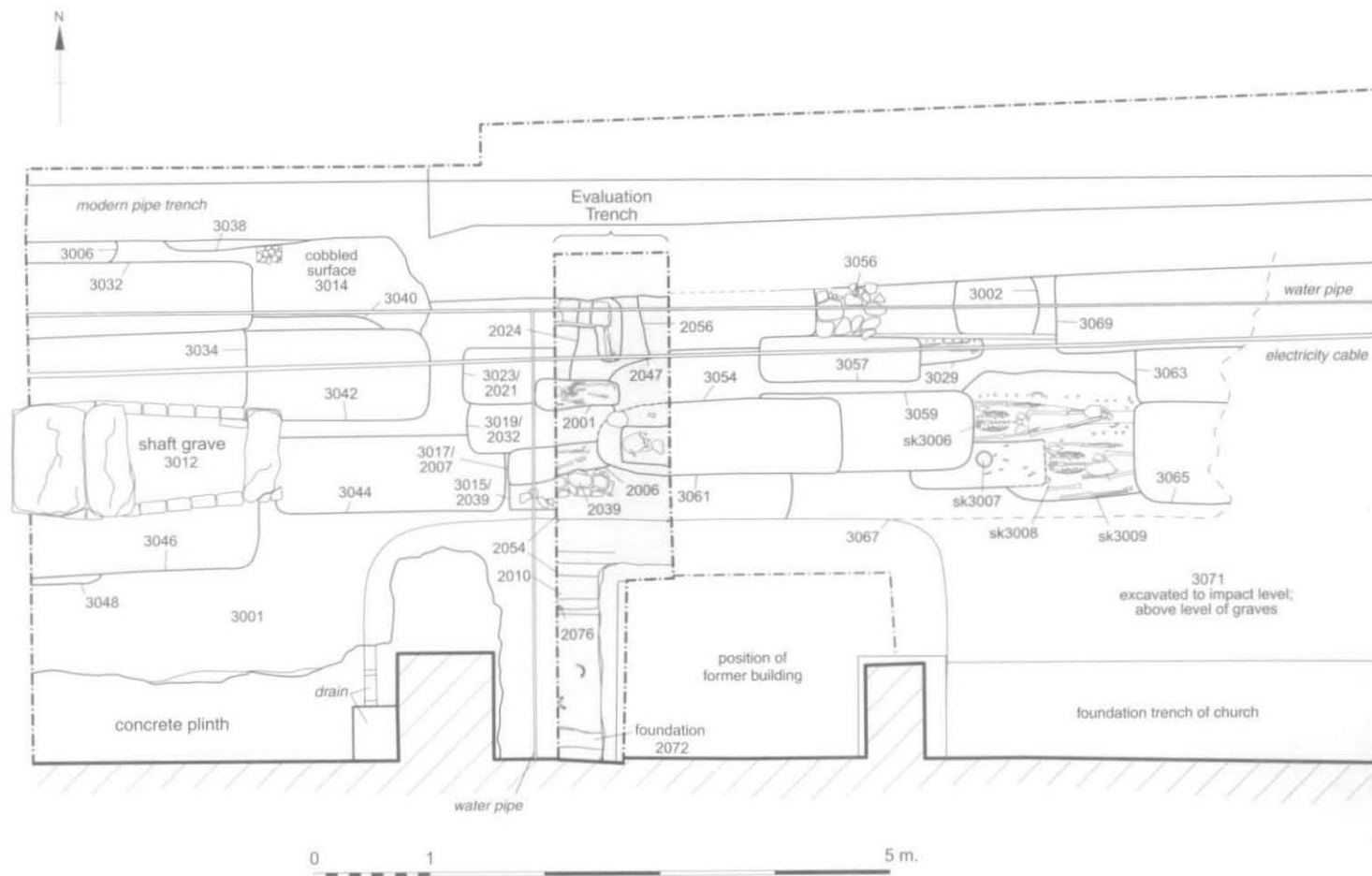


Fig. 27. Area 5 excavations.

form mainly in use during the 14th and 15th centuries.⁴⁸ The sherd is a little abraded, however, and could easily have been redeposited, and to draw firm conclusions from a single sherd is difficult.

The extent of 2071 exposed during the evaluation was insufficient to ascertain whether any intact graves were cut into the lower layer, and thus whether this area of the church enclosure was used as a burial ground prior to the laying of metallised surfaces. However, the presence of charnel material within this layer suggests that this was indeed the case.

Graveyard Deposits

The upper metallised surface (2064=2065) was sealed by a 0.54 m. deep layer (2063/2075) representing an imported graveyard soil post-dating the disuse of the yard surface (?late 17th century). Dug into 2063/2075 were a total of 11 definable burials (Group Nos. 2001, 2006, 2010, 2015, 2020, 2024, 2031, 2043, 2047, 2056 and 2059), a number of which were cut through the underlying metallised surfaces.

The relatively low concentration of burials encountered within the trench, combined with their close stratigraphic grouping, would appear to be consistent with a fairly limited timespan for the use of the area for burials and implying a correspondingly long-term use of the compacted surface. It is clear from the depth of a number of the burials that truncation of the upper layers of the graveyard has occurred (the base of grave cut 2007 (Group 2006), for example, is only 0.60 m. below the current slabbed yard surface), probably during the reorderings of the late 19th/early 20th century.

Later Disturbance

At the southern end of the trench, burial group number 2010 was truncated by the substantial (1.60 m. wide) cut 2076 associated with the construction in 1862 of the north chancel aisle. Likewise, at the northern end of the trench, structure 2036/2039 (a possible table monument base) was disturbed by cut 2029, the construction trench associated with the basemented buildings to the north of the development area, fronting onto Pembroke Street. Cuts 2076 and 2029 were sealed by a 0.20 m. thick make-up layer (2000) which contained both water and electrical services at the north of the trench. In the centre of the evaluation trench, cutting through layer 2000, was an east-west aligned drainage pipe and associated trench (2054).

The Watching Brief

In advance of the laying of a new slab for the new entrance range, ground level was reduced over the full area of the proposed new building. During this operation, a total of 21 earth-cut graves and a single brick-lined shaft grave were identified, though none were impacted by the groundworks. The excavation of the foundation trenches for the new linking range were located entirely within previously disturbed ground, namely the foundation trenches for the north chancel aisle to the south and for the basemented range of buildings fronting onto Pembroke Street to the north. No significant archaeological remains were encountered during the excavation of these trenches.

DISCUSSION

Evidence for Saxon occupation of the site has been recorded in three forms: the identification of a small area of Saxon 'floor' surface, the excavation of a series of 'charcoal burials' within the area of the new baptistery and the retrieval of a fragment of 10th-century cross-shaft from the south wall of the nave.

The identification of the small area of Saxon compacted occupation or 'floor surface' is putative. The 'Saxon' dating of this feature, in the absence of any artefactual evidence, is based purely on comparison with closely similar deposits recorded at other sites within Oxford where secure dating has been retrieved, most recently during excavations at Lincoln College. This said, the distinctive nature of the deposit combined with its stratigraphic location immediately overlying a lightly disturbed subsoil makes the Saxon designation

⁴⁸ M. Mellor, 'Oxford Pottery: A Synthesis of middle and late Saxon, medieval and early post-medieval Pottery in the Oxford Region', *Oxoniensia*, lix (1994), 17-217, Fig. 53. 8-12; *ibid.* p. 177.

likely. Its survival amidst the concentration of later features is remarkable and it is useful in providing a datum level against which to relate other early features such as the series of charcoal burials.

The 'Charcoal Burials' by A. BOYLE, D. CHALLINOR and R. TYLER

The exposure of the series of charcoal burials at the base of Area 4 represents a particularly interesting and unexpected discovery. The practice of charcoal burial is first documented in the 4th century in a letter by Sulpicius Severus relating to the burial of St. Martin of Tours⁴⁹ and became fairly widespread from the 9th to the 12th century. Charcoal burials are known from a number of sites in England, and a number of examples have been recorded in Oxford, most notably at Christ Church where two burials were discovered in the south-east corner of the Great Quadrangle.⁵⁰ The bases of the graves were covered by a layer of charcoal measuring up to 0.10 m. deep. Two further charcoal burials were recovered in Christ Church cloister during excavations in 1985.⁵¹ They were part of a group of 20 inhumations which were cut into a layer lying directly above natural. All were orientated west-east, supine extended and unaccompanied by grave goods. The importance of the cemetery at Christ Church is twofold: it demonstrates the existence of a 9th- or 10th-century religious community and it may imply the existence of a contemporary religious foundation.⁵² The longevity of the burial rite is illustrated by a single charcoal burial and a burial on a bed of ash excavated at All Saints, whose cemetery is believed to date from the 12th or early to mid 13th century.

Examples beyond Oxford include Romsey Abbey in the periods AD 800-950 and AD 900-1100,⁵³ St. Guthlac's Minster, Hereford⁵⁴ and in the 10th-/11th-century cemetery at Old Minster, Winchester.⁵⁵ In his discussion of the cemetery at St. Nicholas Shambles, White concludes that burials of this type are comparatively rare in early medieval parish church cemeteries and most known examples are associated with cathedral churches.⁵⁶

The current project has provided the valuable opportunity to undertake considerable analysis of the charcoal burials; the analysis of the charcoal deposits themselves has proved particularly useful and, while the origin and significance of the burial rite remains to an extent obscure, allows for a number of broad conclusions to be proposed.

The results from the analysis suggest that the presence of charcoal in the burials represents the use of valuable timber resources in the form of a one-off burning of specially felled oak, which would support the theory that the burial rite is a reflection of high status. Certainly, the relative rarity of the burial rite in Saxon Britain and its apparent exclusivity to religious foundations implies such a significance. That the quantity of charcoal within the graves varies widely (Fig. 25) suggests that the amount of charcoal was of less significance

⁴⁹ P. Daniell, *Death and Burial in Medieval England 1066-1550* (1997), 158.

⁵⁰ Hassall, *op. cit.* note 38, p. 270.

⁵¹ Scull, *op. cit.* note 39, p. 33.

⁵² The relationship with Christ Church, in the light of recent discoveries, is discussed in A. Boyle et al.,

'Excavations in Christ Church Cathedral Graveyard, Oxford', *Oxoniensia*, lxvi (2001), 366.

⁵³ J. Schofield and D. Palliser, *Recent Research in English Towns* (1981), 81.

⁵⁴ R. Shoosmith, *Excavations at Castle Green* (Hereford City Excavations I, 1980), 27.

⁵⁵ B. Kjolbe-Biddle, 'A Cathedral Cemetery: Problems in Excavation and Interpretation', *World Archaeology*, 7 (1975), 89-91.

⁵⁶ W. White, *Skeletal Remains from the Cemetery of St. Nicholas Shambles* (1988), 25.

than its actual presence and its function may have been of a symbolic nature, possibly related to the well-documented practice of laying the dying body on a bed of penitential ashes.⁵⁷ However, a number of practical possibilities exist and should be considered.

Analogies may be drawn with the use of other materials, such as calcium and quick and slaked lime, included within burials at various points in history, for a range of different reasons. Some Jewish authorities permitted calcium to be sprinkled over the body in order to stimulate decomposition, and the application of quick or slaked lime which is attested in London would have either speeded the decay of soft tissues or absorbed moisture on putrefaction.⁵⁸ During the post-medieval period cholera victims were regularly buried in quicklime although it was regarded as unseemly and faced strong opposition.⁵⁹

Perhaps the most plausible functional interpretation, however, is that the charcoal acted as an absorbent layer, designed to minimise the effects of putrefaction and thus promoting the preservation of the corpse. Certainly, in the Roman period, gypsum or plaster are known to have been used for this purpose and the use of plaster is thus often interpreted as an attempt to preserve the body. Such a function may have had a practical or symbolic end. The practical necessity for such treatment would be intensified in the case of bodies that had become bloated or were poorly preserved, due either to disease or natural decay. Such circumstances would readily arise in the case of delayed burial, for example where a corpse required transportation over a considerable distance to the place of interment. Alternatively, the desire for preservation of the corpse may have been driven by contemporary beliefs regarding the Resurrection and the Last Judgement when the body of the dead would rise from the grave.

As Daniell concludes in his discussion of the practice, the significance of the burial rite most probably represents a combined reflection of social status and religious belief.⁶⁰

A Saxon Church at St. Aldate's?

Blair has suggested that the burials discovered in Christ Church form part of the cemetery relating to St. Frideswide's. Anglo-Saxon minsters sometimes had enormous cemeteries later invaded by urban development and some finds of stray burials from Oxford are worth considering in this context even though they are at a considerable distance from the minster church (Fig. 1).⁶¹ These may include, for example, 'the great numbers of human skeletons... some 16 feet deep, many with their feet inverted to the south which were found while digging the vault under Pembroke College chapel in 1732'.⁶² Christian-orientated burials have been found in Beef Lane, adjacent to Pembroke College gate,⁶³ while a burial in a stone coffin, accompanied by an elaborate, 11th-century gold finger ring,⁶⁴ was discovered in the late 19th century under the road on the east side of St. Aldate's churchyard, opposite Tom Tower.⁶⁵

⁵⁷ Daniell, *op. cit.* note 49, p. 159.

⁵⁸ R. Philpott, *Burial Practices in Roman Britain. A Survey of Grave Treatment and Furnishing AD 43-410* (1991), 93.

⁵⁹ R. Richardson, *Death, Dissection and the Destitute* (1988), 227.

⁶⁰ Daniell, *op. cit.* note 49, p. 160.

⁶¹ J. Blair, 'St. Frideswide's Monastery: Problems and Possibilities', *Oxoniensia*, liii (1988), 233.

⁶² A. Wood, *The Ancient and Present State of the City of Oxford*, ed. J. Peshall (1773), Addenda p. 29.

⁶³ *Oxoniensia*, xxv (1960), 134.

⁶⁴ J.A. Graham-Campbell, 'The Gold Finger-ring from a Burial in St. Aldate's Street, Oxford', *Oxoniensia*, liii (1988), 263-6.

⁶⁵ *Proc. Soc. Antiq. London*, 2nd ser. xix (1901-3), 221.

It is becoming increasingly clear that important minsters often had two or more subsidiary churches, and that these were frequently set out on axial alignments.⁶⁶ If, as Blair has proposed,⁶⁷ the Anglo-Saxon minster stood on the site of the north transept and north-east chapels of the priory church, then it can be seen that St. Aldate's and St. Ebbe's further west would lie on much the same topographical axis forming a line of three churches on the northern bank of the Thames just within the limits of the defended Saxon town. The early 12th-century 'Life of St. Frideswide' makes reference to an 'original' dedication to the Holy Trinity, St. Mary and All Saints, of which St. Mary's (where the saint was believed to have been buried) is the predecessor of the priory church.

The acceptance of such a theory obviously depends upon defining more precise dates for the churches of St. Aldate's and St. Ebbe's, and establishing the contemporaneity of the three foundations. While the first documentary reference to St. Aldate's Church occurs in the second quarter of the 12th century, its origins are no doubt older and it has been argued that it represents a Saxon foundation. Activity from the 8th century onwards on the line of St. Aldate's Street, the main river crossing and perhaps the 'Oxenford' has been demonstrated archaeologically.⁶⁸ The identification during the current watching brief of a small area of early occupation surface, the discovery of a section of 10th-century carved cross-shaft and the excavation of the series of charcoal burials, firmly dated to the 10th century, can be seen to support the argument for an early origin. The recovery of the cross-shaft fragment is of intrinsic value and adds significantly to a small assemblage of comparable sculpture from Oxfordshire.

The Development of the Church

Evidence for the development of the church has been disappointing. No substantial remains related to earlier phases of the church have been recorded, the result partly of the limited extent of ground reduction work and partly of the extensive reordering schemes and internal burial undertaken in the past.

If, as seems likely, the metalled surfaces exposed within the external evaluation trench relate to the layout of the church precinct as depicted by Loggan in 1675, then all burials recorded during the evaluation post-date this arrangement. The relatively low concentration of burials may thus be evidence for the longevity of the metalled yard surfaces. The presence of charnel within layer 2071 implies that the underlying soil represents a graveyard soil predating the laying of the metalled surface.

Evidence recorded during excavations for the new baptistery (Area 4) has established that the 14th-century crypt was not originally furnished with a third, western bay as has previously been assumed.

18th- and 19th-century Burials

The practice of intra-mural burial (i.e. burial within the church) in brick-lined shaft graves and vaults was common throughout the 18th and early 19th centuries and structures of this type are common features of parish churches particularly within well-populated towns and cities. Shaft graves can frequently be up to between 8–10 ft. in depth and are often furnished with iron 'stacking' bars to allow for the superimposition of one coffin on top of another (up

⁶⁶ Blair, *op. cit.* note 61, p. 235.

⁶⁷ *Ibid.* p. 239, Fig. 95.

⁶⁸ B. Durham, 'Archaeological Investigations in St. Aldate's, Oxford', *Oxoniensia*, xlii (1977), 83–203; 'The Thames Crossing at Oxford', *Oxoniensia*, xlix (1984), 57–100.

to four coffins per shaft). Although legislation was passed in London in 1852 forbidding the practice in the light of health concerns, intra-mural burial is known to have continued outside the capital until the late 19th century. The range of grave structures exposed at St. Aldate's represents an interesting but unremarkable cross section of 18th- and 19th-century grave structures.

It is of interest to note that shaft grave 627 within Area 3 was dug into the footings of the west aisle wall as extended in 1832-4. The implication is, of course, that the grave was excavated after that wall had become redundant (1862) and as such, the grave represents the latest burial exposed within the church and indicates that intramural burial was being practised in Oxford at least 10 years after the introduction of the Burial Boards Act.

CONCLUSION

The archaeological watching brief maintained during refurbishment has served to significantly enhance our understanding not only of the origins of St. Aldate's itself but of the early development of the City of Oxford.

The excavations clearly illustrate the potential for significant, and unexpected, archaeological remains to be encountered during fairly limited interventions within churches, and the exposure of nearly 50 grave structures of 18th- and 19th-century date should serve as a cautionary tale in relation to church refurbishments entailing substantial ground reduction. However, the adaptable approach employed at St. Aldate's has shown that close integration and co-operation between the archaeologist and contractor can work smoothly with minimal adverse effects upon the construction programme. Indeed active dialogue with and involvement of archaeologists at an early stage can be beneficial in developing acceptable and effective solutions to complex engineering problems.

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