

NORTHAMPTONSHIRE COUNTY COUNCIL

NORTHAMPTONSHIRE ARCHAEOLOGY

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**ARCHAEOLOGICAL EVALUATION OF THE
FORMER EXPRESS LIFT COMPANY, ABBEY WORKS
WEEDON ROAD, NORTHAMPTON
1999-2000**

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ABSTRACT

A desk-based study and geophysical survey assessment was carried out by Northamptonshire Archaeology ahead of proposed redevelopment at the former Express Lift Company, Abbey Works, Weedon Road, Northampton. Examination of historic maps and an assessment of the documentary evidence showed that the Express Lift site lay within the precinct of the former Abbey of St James, but there was insufficient evidence to establish the location of any specific buildings.

Trial excavation, comprising a total 15 trenches, has established that remains of the abbey buildings and related archaeology survive at the northern end of the site. It clearly contains the potential to recover a near complete ground plan of all the major abbey buildings, including extensive areas preserved at or around the contemporary ground levels. It is possible to identify the likely location of the abbey church and the cloister and the main monastic ranges, at the Weedon Road frontage and the offices. A cemetery lies under the north-eastern part of the main works building, and a single building lies at its southern margin.

There has clearly been extensive robbing of the walls, but in places wall foundations and lower wall courses survive. A layer of demolition debris covers much of the area and isolated areas of original floors may survive below this. Some trenches show evidence for at least two phases of abbey building. Beneath the medieval levels most trenches showed the presence of an earlier soil horizon and in several trenches this sealed cut features of Roman date.

The finds recovered are appropriate to the status of the site. They include fragments of painted window glass and window lead, decorated ceramic floor tiles, stone and ceramic roof tiles and pieces of moulded architectural stone, including parts of a column capital and a window mullion.

At the northern end of the site abbey demolition levels lie as little as 0.20m below present ground level, while under the main works building archaeological levels lie 0.50m or more below present ground level. Recent building works and service trenches will have created areas of damage and destruction. However, the foundations of the main walls have been shown to bottom 1.50m or more below present ground level, so even in disturbed areas the basic ground plan would still survive.

The southernmost trenches within the main works building and the trenches excavated on the former sports field, have shown that in the area of the former meadows the old ground surface is overlain by 1.50m or more of recently made-up ground.

An assessment of the standing buildings of the former Abbey Works concludes that there is little to record of their use as a lift factory following the removal of the machinery. However, the use of the Abbey Works and the development of the buildings as a munitions factory during both World Wars is of exceptional interest.

1. INTRODUCTION

The site of the former Express Lift Company Abbey Works, Weedon Road, Northampton has become available for redevelopment (Fig 1: NGR SP 7375 6061). Northamptonshire Heritage advised that an archaeological and building evaluation should be undertaken prior to the determination of any application for development, and issued a brief detailing the work involved (Northamptonshire Heritage 1999, dated 1 June). Northamptonshire Archaeology was commissioned by Wilcon Development Group Ltd to carry out the archaeological and building evaluation, and a detailed specification was produced and approved by Northamptonshire Heritage (Northamptonshire Archaeology 1999, dated 25 August and revised 6 September).

Stage 1 of the evaluation comprised a desk-based study. A draft report was prepared and used as the basis for determining the requirements for Stage 2, the trial excavation. An interim report (Chapman 1999) summarised the results from the first eight trial trenches and provided the basis for a further series of trial trenches located within the main works building.

The present report provides both the full text of the desk-based assessment and a full account of the two episodes of trial trenching. It also provides an outline interpretation of the layout of the abbey buildings based on the results of the trial excavation. It should be noted, however, that while some amendments have been made to the text of the desk-based assessment, it was written prior to the trial trenching and cannot therefore take the excavation results fully into account.

STAGE 1: DESK-BASED ASSESSMENT

2. BACKGROUND

2.1 Location and topography

The former Express Lift site lies to the south of the Weedon Road and occupies the central part of what can be identified from the historic maps and documentary evidence as the precinct of St James' Abbey. The abbey lay at the western end of the suburb of St James End, which extended eastward to the river. Beyond the river lay Northampton Castle and the medieval town.

The site lies at approximately 60m above Ordnance Datum (aOD). The underlying geology, as mapped by the British Geological Survey, comprises Northamptonshire Sand and Ironstone and Upper Lias Clay, with Alluvium on the low-lying ground on the southern part of the site which lies on the margin of the flood plain of the River Nene.

2.2 Sites and Monuments Record

The Northamptonshire Sites and Monuments Record (SMR) held by Northamptonshire Heritage was consulted for data relevant to the site.

The following monuments are listed for the area:

1160/0/311	NGR SP7371 6058	Tower, Modern Express Lifts-Testing tower. Built 1980-2 The only lift testing tower in Britain and one of only two in Europe. Constructed of reinforced concrete.
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- 4959/1 NGR SP 7365 6065 St James' Abbey, Augustinian Monastery
The Abbey of the Augustinian or 'Black' Canons
Founded by William Peverel of Nottingham during the 12th century
The Abbey was surrendered to the crown in 1538.
- 4959/1/1 NGR SP 734 608 Precinct wall
A small portion of the abbey wall stood on the Weedon Road,
where the Duston and Upton Roads divide.
It was demolished in 1927.
- 4959/1/2 NGR SP7365 6065 Church buildings
Sometime after 1158 the church and abbey were rebuilt.
The monks were in possession of the new buildings in 1173.
There was a disastrous fire in the early 13th century, and
further rebuilding in the late 13th/ early 14th century.
Wetton (1849) stated that the church and abbey were considered
to lie in Fair-yard Close.
- 4959/1/3 NGR SP 7365 6065 Chapels
The chapel of the Holy Trinity stood near the abbey gate in the court
of the abbey. Other chapels are referred to including the Blessed Virgin
and St Margaret.
- 4959/1/4 NGR SP 7365 6065 Refectory
References to maintenance of refectory.
- 4959/1/5 NGR SP 7365 6065 Other buildings
References to out-houses once belonging to the abbey.
- 4959/1/6 NGR SP 7365 6065 Infirmary
References to maintenance and donations to an infirmary.
- 4959/1/7 NGR SP 736 607 Churchyard
- 4959/1/8 NGR SP 7365 6065 Barn
A great abbey barn, supported with twelve buttresses and with
two large porches on each side.
It was still standing well into the 17th century.
- 4959/1/9 NGR SP 7365 6065 Dovecote
Dovehouse or dove-houses stood within the abbey precinct.
- 4959/1/10 NGR SP 7365 6065 Malt kiln
- 4959/2 NGR SP 734 608 Chapel
The site of a Chapel dedicated to St Margaret is recorded as being
contiguous to the toll house, and situated within a walled close
known as Churchyard Close.
It was annexed to the parish of Duston in the 13th century.

- 4959/3 NGR SP 7365 6065 Fair
In 1268 the abbey obtained a licence to hold a fair on eve of festival of St James and for two days following. The fair was held in the abbey grounds long after the dissolution of the monastery. It is presumed to have been held in the 'Fairyard Close' within the abbey precinct.
- 4959/4 NGR SP 7365 6065 Mansion house
Following the surrender of St James' Abbey in 1538 the estate was granted to Nicholas Giffard who built a mansion on ground belonging to the abbey.
- 4959/5 NGR SP 737 606 Watermill
A watermill and mill-houses stood in an adjoining close and was supplied by the Abbey Spring.

3. ASSESSMENT OF HISTORIC DOCUMENTS

3.1 Historic Maps

While a number of maps survive for the site, three are basically the same (NRO: Maps2883, 3004, 583). These owe their origin to a map of Duston Manor made c. 1722, with later copies of c 1780. It was not made to scale. These sources have been collated to form a single composite map (Fig 2). It shows the overall extent of the abbey precinct (Abby land), and the water supply for both the abbey and the watermill.

The maps listed above contain some valuable fieldname information, but an unscaled map of 1932 provides the most comprehensive source of fieldnames (NRO Map 4387). This summarises the fieldnames of the period 1844-57 first collated in the sale of Duston Lodge Farm in 1919 by Lord Walter Kerr (Fig 2).

From the map evidence it can be seen that the application site takes in most of four former closes. The major part of the main Abbey Works building lies largely in Brickhill Meadow, and occupies most of the close. The northern end of this building and the car park and bowling green standing adjacent to the road, stand on the eastern part of Fairyard. The Express Lift

Tower and the sports ground lie within Middle and Duston Meadows, which were separated by a former watercourse. This must now be culverted as it still outflows at the southern limit of the application area.

3.2 St. James Abbey, Northampton: documentary sources Paul Courtney

3.2.1 Discussion

The main medieval sources for the estate formation are the Cottonian cartulary and its copies, also the Taxatio Ecclesiastica of 1291, the Valor Ecclesiasticus of 1535 and the various dissolution records in the PRO. The College of Arms rough cartulary is not catalogued by Davis (1958) so its usefulness is difficult to assess. It seems likely that any structural evidence in the Cottonian cartulary was extracted by the VCH. In regard to researching the medieval layout the most useful documents are liable to be the Dissolution records, especially

those in the PRO. These may only have cursory information on the 1530s layout but could include detailed descriptions of the site.

Another major problem is the Jewish properties granted to the abbey by the Crown after the expulsion of the Jews in 1290 (CPR 1313-17, 199; see also Jolles 1996). The VCH (2, 11) refers to recently calendared charters in the British Museum (now British Library) as indicating that the synagogue and adjacent houses were at the west side of Northampton, beyond the bridge. Unfortunately, no detailed reference is given. Other Jewish properties in c.1290 lay in the Cornrowe and Sheep Market (Jolles 1996, 97). The Jewish cemetery lay outside the north gate of the town (VCH, 2, 11). Possibly relevant charters for locating the synagogue from the period c. 1290-1350 are listed below. The 1630 will of William Raynsford refers to a property in Silver St. 'sometymes called the synagogue of the Jews' (Cox and Serjeantson 1897, 26fn).

A reference to A. J. Collins, 'The Northampton Jewry and its cemetery in the Thirteenth Century', Journal of the Jewish History Soc. of England 15, 151-64, was found but a copy has not been traced.

3.3.2 Resume of main printed sources

- a). G. Baker, The History and Antiquities of Northamptonshire. 2 Vols. 1822-41 vol. 1, 146-51

p.147 Extracts from Taxation of Pope Nicholas IV and Valor Ecclesiasticus

p.148 Dissolution minister's account

p.150. Mentions various copies of cartularies. Also original documents in possession of Rev Gifford, late rector of Russel in Wiltshire.

p.150 mentions finds of coffins 'these few years' in close of about 6 acres called the fair-yard close.

p.151 Site and demesnes of abbey granted in 1545 to Nicholas Gifford of Duston, gent In 1637 lands transferred from Giffords to John Parker of Olney.

" all that capital messuage or mansion here called St. James near Northampton, lately new built upon the ground.....together with the great barn called the abbey barn, with the water mill, mill houses, malt-floors, dove-houses, and out-houses thereto belonging", also the "closes or ancient-enclosures near the said house containing by estimation 40 acres called the Fair-yard close", also the profits of the fair and c. 7 yardlands in Duston.

p.151 The estate was alienated by the Parkers and the mansion destroyed prior to 1680 in which year Sir John Heron of Chipchace (Northumberland) mortgaged certain lands "near to a late mansion house called St. James"

- b). J. Bridges, The History and Antiquities of Northamptonshire, 1791, vol.1, 497-501

pp.501-2. Summary list of grants to abbey

p.503. Site of church and church-yard said to be about 2 acres. Demesnes are said to have lain either side of road going to Banbury. Bridges also notes a causeway going down to the abbey called Cut-throat Lane with the old wall lying on the left. In a close adjoining the abbey was a mill supplied by a spring. In this close was kept the fair. In this close was formerly a barn and dove-house "and here is supposed to have stood the abbey itself. They seem to have been situated on a descent from Duston, to the south and south-west. Westward is a wall of ashlar-stone, near which are the foundations of buildings"

- c). Monasticon Anglicanum, 6i, 115-6
Foundation by William Peveler (d.1112) who gave 40 acres plus mill and church at Duston.
Abstract of minister's account valuations from Dissolution
- d). Notitia Monasticon, T. Tanner, 1744 ed.
p.377-8. Various references from state calendars
- e). Calendar of Patent Rolls 1313-7, 199
In 1314 the grant was confirmed to St. James of the synagogue (schola) of the house, late the schola (synagogue) of the Jews of Northampton, together with the houses pulled down before the entrance of the synagogue, also of the houses late of Sarra of London (Jewess) adjacent to the school.
Another source describes Sarah's house as of one storey and with a cellar for which she paid 6s 8d to St. James (Jolles 1996, 97)
- f). The Itinerary of John Leland about the years 1535-1543 , vol. 1, ed L. Toulmin Smith, London 1964
p.8 "S. James standeth a little distant from the extreme part of the west suburbe. The waulle that cupasith the hole site of the house is highe, faire, and large, *ex lapide quadrato (ashlar)*"
- g). For foundation grant of 40 acres in Duston see:
Cartae Antiquae (Pipe Roll Series. NS 17), no. 250; Cal of Charter Rolls, 4, 376 and Monasticon Anglicanum, 6I, 116
- h). See for properties of St. James: 1291 Taxatio Ecclesiastica, pp. 53-5 and 1535 Valor Ecclesiasticus, 4, 319-20
- i). VCH Northamptonshire, 2, 127-30
Basic historical account of abbey. The following structural information is included:
p128
1173 - left former dwelling to use new stone church (citing BL Cott. cartulary f.234)
Rebuilding of abbey church in reign of Edward I for which indulgence granted in 1301.
In 1299- Henry III allowed 2 oaks towards building of church tower (cites Close Rolls)
In 1310- two altars were dedicated in the rebuilt church
Bequests in the cartulary relate to the lady chapel and infirmary
- j). Lands of Dissolved Religious Houses III3 (PRO lists and indexes): no 374 St James
Abstract of PRO SC6/Hen VIII/2783 (29-30 Hen. VIII- 1537-9)
Includes site of monastery, rent in Coton Mershe, Abbey Street, mill, farm of fair rolls and various rents and farms from Northampton and rural properties
- k). Cal of Charter Rolls, 2, 100
Of fair to St. James
- 3.4.3 Resume of Manuscript Sources in national archives
- a). British Library Cartulary
Cotton Ms Tib.Ev
Badly damaged in 1731 fire. Microfilm in Northants Records Office

- b). Bodleian Library, Oxford
 Pre fire extracts from cartulary in Top. Northants. CSC 16661, fos. 277-497
 According to Baker there are also abstracts in Bodl. Dodsworth MSS 61 and 102 and “in no 844 (?Dodsworth) in the Ashmolean’. He also mentions extracts in Vincent MSS 218 and 412 in College of Arms (see below)
- c). College of Arms
 Monastic Charters no. 166- listed as 12th century rough cartulary or memorandum of endowments in National Register of Archives (NRA 23441)
- d). Relevant dissolution documents in PRO
 SC6/ Hen VIII/2783 1537-9 account roll
 SC11/953 Hen 8. Rental of St. James
 SC12/26/34 17 Jas. I (1619-20) Rental of St. James
 SC12/18/44 28 Hen VIII (1536-7) Valor of site of St. James
 SC12/26/41 5 Jas. I (1607-8). Rental of St. James
 SC12/26/12 12 Jas. I (1614-5). Rents of St. James and St. Andrew
 E315/vol.399, p.286 28 Hen. VIII (1536-7). View of the site and demesnes of St. James
 LR2/vol. 182, ff.92-122 31 Hen. VIII (1539-40) Detailed rental of St. James
- e). Other Documents in British Library
 Grant in Northampton 1180-1205 to St. James: Harl 84F. 39
 Grant of fair at St. James, 1268: Harl 58I. 24 (copy) - See Calendar of Close Rolls, 2, 100
 Grant of Duston mill to St. James, temp Stephen: Additional 6037
 Terrier of Duston manor, temp. Hen 7-8: Sloane xxxi.17
 License for St. James to hold lands in Duston, 1362: Sloane xxxii.12
 Rental temp. Edward I-1332: Addition 6117
 Grant in St. Mary’s St. Northampton, temp Hen III, Additional 22344
- f). British Library charters c. 1290-1350 (Re Synagogue location)
Harleian
 50. H. 10 1295
Additional
 22356 1296; 22357 1296; 22359 1296; 22360 1316; 22361 1316; 22355 1321;
 22362 1334; 22363 1335; 22364 1337; 729 1337

3.3 **The descent of the abbey lands** Iain Soden

A Cartulary of St James' Abbey survived the dissolution only to be severely damaged by fire in 1731. While the original is in the Bodleian Library (Cottonian MSS), a microfilm copy rests with Northamptonshire Record Office. This was consulted but was found to show a document too badly burnt to have value for this enquiry without very protracted study. Before the fire the County Historian John Bridges took some notes from the Cartulary in about 1720 both in his research on Northampton and Duston; these were consulted in the NRO (M300, 342) but were found not to contain information which was relevant to the topographical reconstruction.

In 1545 the site of the Abbey was granted to Nicholas Gifford, apparently brother of George Gifford, the King's Commissioner for the Court of Augmentations (NRO Longden Baker I, 157-8). It is perhaps surprising that the Abbey ended up with this family as George had tried from 1537 to embezzle the crown by undervaluing the Abbey and gaining control of it himself (Baker 1830).

Nicholas died in 1546 and the estate passed to his son Roger (d1591) and thence to grandson Francis (d1625) and great-grandson Thomas, who sold the site in 1637 (NRO Longden Baker I, 157-8). It was bought by John Parker of Olney, Buckinghamshire and the main holding was described as "*a mansion house lately now built upon the ground sometime belonging to the late Abbey*". In his will John Parker divided the land between his sons Mark, John and Joseph (NRO: NPL 2554) whereupon the fragmented estate becomes more difficult to follow, just when traceable field names were beginning to be mentioned in documents. The mansion house was also known as "*The Hall House*" and "*St James' House*" and had 9 closes attached to it in the seventeenth century (NRO: X3449). It burnt down before 1680.

Dovehouse Close (6 acres)

In 1659, Mark Parker (of Weston Underwood, Buckinghamshire) passed 6a known as Dovehouse Close, to Matthew Sillesby who passed it to Messrs Lovell, Norwood and Wollaston, a group of speculators in 1662. It changed hands once more in 1663 when the owner became John Ventris of Suffolk, who left it to his son of the same name. Ventris the

younger sold it in 1707 to Joseph Woolston but not before he had split it into three parts, of which one part now became known as Churchyard Close, later described as constituting 2a 2r 13p, lying at the west end of Dovehouse Close (NRO NPL 2554). Churchyard Close appears on a map of 1919 with 1844-57 fieldnames (NRO Duston Lodge Farm estate sale 1919).

The ensuing descent of the remainder of the Abbey precinct appears to have become linked with that of Duston Manor which passed in 1582 to Sir Christopher Hatton I of Holdenby House, Lord Chancellor to Elizabeth I. This link must have happened after 1616 when it was surveyed for his grandson, Sir Christopher Hatton III of Kirby Hall (NRO: FH, M135, p71). His Duston lands were tenanted by the Griffin family who had had interests there since the mid-16th century, when the family patriarch, Edward Griffin, had been Attorney General. Their seat was at Dingley, Northamptonshire. In 1616 all of the Hatton manorial property was Griffin land when the Abbey lands were clearly still separate and part of the Gifford inheritance.

The Giffords appear in Bridges' notes, their names drawn from the Duston Parish register between 1625 and 1637 (NRO M300, p70) but with a break in the register from 1646, probably due to the vagaries of the Civil War, evidence of their presence comes to an end.

The Abbey estate re-emerges in documents in 1680 when John Heron of Chipchase, Northumberland mortgaged it, apparently re-uniting the Parker properties (NRO ZA 3449).

A manorial survey of 1692 (NRO 1296) puts the 40a Abbey site in the tenure of Mr John Rogers.

In 1726 an indenture (NRO x5225) recorded the former Abbey land in a series of plots totalling 40 acres, comprising:

Fair Yard Close
Cows Close
Calves Close
The Groves
Coney Green
Great Barn Close and outhouses. (Great barn gone by 1715 - Bridges)

The said closes were divided at this time into 9 parts and were described as having been lately in the tenure of one John Collett.

By 1739 the land was sold abroad to Monsieur Jean-Antoine Eynard, whose UK residing was not permanent. When he died in 1771 he left it to his nephew Alexandre Eynard of Geneva who leased it to his relatives Jean-Louis Eynard and Jean-Pierre Eynard. The latter was naturalised in 1771 and he moved to purchase it outright in 1788.

As ensuring indenture of 1791 (ibid) mentions the closes again, expanding the list to:

Churchyard Close (occupied by Hannah Hall)
Mansion House
Fair Yard Close

The Caves Close
The Groves
The Coneygree
Barn ground and outhouses

The land appears to have been released by Jean-Pierre Eynard to Jean-Daniel Lucadon and Joseph Debaufre who passed it in 1792 to Mr Robert Abbey and almost immediately then to a Mr Timms. Mrs Timms inherited from her husband; she died in 1812.

In an indenture of 1800 the Coney Green was of two parts, both of which lay between the Turnpike Road to Daventry and Cut-throat Lane. This may have been the two plots each known as Dry Close in 1844-1857.

Water management and the topography of the land

Bridges' manuscripts of c1720 include considerable notes on both the then surviving topography and the documents that survived from the dissolution (NRO m300).

He states that 5 springs lay in the area (p72)

- 1 Deadmans Spring
- 2 Conduit Spring (supplied the abbey and formerly drove a mill)
- 3 Hilliers Spring
- 4 Well-head Spring
- 5 Mermaiden pond (also supplied the abbey, formerly by pipes laid underground from a waterhouse there erected).

Elsewhere the document of surrender of the house, although in many ways formulaic, records the house's dependency on the well-watered asset of the Nene Valley: (M342)

"necnon omnia et singula man dominia messuag Gardin Curtilag toft terras senta prat pascua pastur boscos reddit. Revez con service molend papagparcos wareum vivaria aquas piscar vias chemina wharphos vacuos fund."

Map 583 indicates the position of Conduit Spring, and the watercourse emanating from it. Its course lay across the abbey land and can still be traced on the Express Lifts where it exits the site. It probably runs under the sports field (Fig 2). It is this single feature which makes it possible to reconstruct something of the landscape from the 19th Century. This watercourse is very likely to have fed directly the infirmary, kitchens and reredorter of the Abbey. The Abbey core almost certainly lies adjacent to it.

Transposition of the 1st Edition OS map suggests the watercourse lies further south-east, the exit similarly recorded today as a drain. This would imply the watercourse ran at the east of the monastery. Whilst possible, the east range would not normally contain any of the buildings mentioned above and this seems a lesser, subsidiary watercourse. In order to fit the plan, the Abbey core would need to lie under the pavilion of Franklins Gardens, which, while possible, does not fit the pattern of previous archaeological discoveries.

Serjeantson (1906, 245) records two churches belonging to the Abbey. The first was destroyed by fire in 1223. This would probably have been a Romanesque building. It was rebuilt soon after although the project was still incomplete in 1301. Altars were dedicated from 1310. There was an additional, separate chapel of the Holy Trinity near the Abbey Gate.

The following buildings are mentioned by Serjeantson as being recorded in documents:

Abbey Church:	Altars to:	St Maragret the Virgin	1311
		St Katherine	1311
		St Mary (Lady Chapel)	
		St Mary (2nd Chapel)	

Chapel of Holy Trinity near Abbey Gate in the Abbey Court (curia)

Infirmery (255)

Refectory (255)

Sacristy (255)

Hermitage (258)

Almonry (262)

The following nobility are recorded by Serjeantson as having been buried in the Church:

Reginald of Whitchurch (Lady Chapel)

Wm Peverel (founder)

Adelin, daughter of Norman de mont Faltrell (d 1158) (Baker I, 178)

Lady Elizabeth Borough wife of Thomas Borough and daughter of Sir Henry Percy; her son's will of 1496/6 provided for a stone over her grave with their family arms emblazoned on it.

Sir Richard Catesby 1485

Richard Woodville, Earl Rivers 1490/1

Richard Berde, Doctor of Law 1501

To these may be added Isabella Peche and William Tresham (Jackie Minchington pers. Comm).

Some local history has been published (Golby 1992). While this does contain some references not apparently traceable to other sources quoted in the current report, many of those which can be set against earlier sources have been seen to be inaccurate. Its references have not therefore been re-presented here. The earlier sources have been re-visited wherever possible.

4. THE PLANNING OF AN AUGUSTINIAN ABBEY Iain Soden

The layout of a monastery contained within it a concentric area hierarchy, centred upon the location of the high altar of the monastic church.

The monastery would have comprised a central cruciform church. An adjacent cloister garth would have lain to either the north or south, depending upon the dictates of the natural

topography, with a Slype/vestry to its east; together with a Chapter House and overshot

dormitory. Opposite the church would be the refectory and kitchens; and to the west lay brothers' lodgings over cellars or workshops.

Beyond the main claustral range may have lain an inner court in which guest quarters, the reredorter (latrines), further kitchens and entertainment halls and the Abbot's Lodgings were

based. North-east or south-east of the church probably lay a cemetery for lesser benefactors (the more important would qualify for burial in the Church itself or the Cloister Alley).

Beyond this lay an outer court in which lay the ancillary buildings indispensable to any monastic house. These may have comprised any or all of dovecotes, rabbit warrens, stables, bakehouse, brewhouse, barns, dairy, butchery, gatehouse, mason's workshops, carpenter's workshops.

This is the range of buildings expected in a fully developed Augustinian foundation. However, it is to be expected on any site that a progression of buildings will occur, wholly or partly superimposed and no site would ever have consisted of a single-phase plan at any time. Development was a constant progression (or sometimes contraction) commensurate with the fortunes of the house.

There are two prime examples of Augustinian Priors in England and these form the basis of this conjectural layout: Norton Priory, Cheshire which has been extensively excavated in modern times (Green 1989) and Haughmond Abbey, Shropshire. The remains of the latter are largely upstanding and major excavations were carried out on the cloister, slype and chapter house between 1975 and 1979 (Soden, in West and Palmer, in preparation).

Synthetic work on houses of this order in Scotland was done by Gallacher (1994). He concluded that the typical and ideal Augustinian plan concentrated on an architectural canon which closely related the proportions of the church to those of the cloister. A simplified summary of his conclusions indicates that the outer cloister length = cloister internal diagonal = length of nave to screen; also that cloister internal side = choir length from screen = width across transepts and crossing.

Gallacher has suggested that the proportions of the cloister sizes have a traditional geometric relationship, based on the sides of a square of 41, 82 and 164 feet or 12.5, 25 and 50m (Gallagher 1994, 179). These figures seem to be remarkably well founded when based upon eleven Scots Augustinian houses (ibid, 180) and provide a good working hypothesis for a modular system for the laying out of the cloister at St James' Abbey, Northampton.

A caveat for this hypothesis lies in the acceptable tolerances in the calculation. Gallacher's eleven monasteries vary either side of the 'standard' dimensions by up to 9.6% (although the mean deviation is only 4.3%). By comparison, of the two best English examples, both Norton and Haughmond deviate from the standard by 12%, the former over and the latter under the 41 foot / 12.5m module (Green 1989; Webster & Cherry 1980, 241). There is also no evidence that the earliest phases of layout on any Augustinian cloister would conform in any way to this modular system; it merely relates to their eventual, planned apogee, effectively the plan at dissolution in 1539.

5. ASSESSMENT OF THE INDUSTRIAL BUILDINGS

5.1 The Express Lifts Co., Abbey Works, Northampton Dr Barrie Trinder

5.1.1 Introduction

This assessment is based on a site visit with Iain Soden on 16 September 1999, on examination of the Express Lifts Co collection at the Northamptonshire Record Office, and an investigation of the context of the lift industry in the library of the Ironbridge Gorge Museum.

The report is concerned principally with the three phases of the main building of the works, constructed in 1910, 1917-18 and 1940-41. No attempt is made to analyse the office blocks to the east of the main building, which date from 1910 and from 1937-38, nor the buildings of post-World War 2 date, which include the test tower of 1982, a Grade 2 listed building.

The site can be interpreted in two contexts, as part of the lift industry and as a munitions factory.

5.1.2 The Lift Industry

There were primitive lifts called teagles in some early nineteenth century British textile mills, but the origin of the passenger lift industry was the invention in the United States in 1854 by Elisha Graves Otis of a safety device to prevent a lift platform from falling if the ropes holding it should break. The industry expanded rapidly in the United States in the closing years of the nineteenth century, an expansion that has been succinctly described by Vogel (below). The lift (in North America an 'elevator') made possible the building of skyscrapers, and, in a rather grandiloquent term, the 'colonisation of the sky'.

Making a lift involves a wide range of metal-working technologies, none of which, within a lift factory, is likely to be practised on a particularly intensive scale. Castings, pressings and sheet metal are all likely to be used in a lift, together with quite complex gearing mechanisms, steel ropes and associated pulley systems and electric control systems.

British lift manufacturers have varied origins, which can be illustrated by a selection of examples.

The Waygood company was established by Richard Waygood, a maker of agricultural implements who moved to London from Beaminster, Dorset in 1842, and later in the nineteenth century turned to making lifts. His company merged with the American Otis company in 1914 and was known as Waygood Otis until the 1980s. Waygood moved in 1863 to premises in Roberts Place, off Falmouth Road near the Elephant and Castle, which was the headquarters of Waygood Otis until the 1950s. In 1956 the company moved to a 28 acre manufacturing site at Kirkby, Liverpool, which was fully operational by 1961. It remains one of the principal lift manufacturing sites in Britain, and concentrates on supply top-of-the-range models world-wide.

The company of Jonathan Pickering of the Globe Elevator Works, Stockton on Tees, originated in 1854, and initially provided lifts for textile mills. The company made its first electric lift in 1896, and subsequently specialised in industrial hoisting equipment.

William Wadsworth & Co of Bolton likewise produced lifts for textile mills when first established in 1864, but made electric lifts from 1905, and became the principal suppliers of

lifts to London Transport. The company was taken over by Otis in 1982 and the factory was closed without being recorded.

Ernest Hammond and Harold Champness established an enterprise in London in 1905 making safety curtains for theatres, and from 1910 began to make electric lifts. The firm took over various other companies in the 1960s, including Alexander & Peter Steven, a Glasgow concern which originated in 1854. The company is now part of the Dover conglomerate.

Marryat & Scott were established in London in the 1860s, and took over the Newcastle firm of Austin & Co in the 1960s. They are now part of the Finnish Kone Lift Co, as is the Glasgow firm of John Bennie, which also originated in the 1860s

The company originally known as Archibald Smith & Stevens claimed origins in the eighteenth century, and in the late nineteenth century was operating from the Janus Works in Battersea. The company began construction of the Abbey Works in Northampton in 1909, by which time it was known as Smith, Major & Stevens, and opened the new factory the following year. The company merged in 1930 with the Express Lifts Co, part of the General Electric Co., and was thereafter known as Express Lifts. Otis decided to close the factory in 1996, and to concentrate production in the UK at their plants at Kirkby and Leicester. The closure of the Northampton plant has to be seen in the context of an industry which has contracted since the boom years of tower block construction in the 1960s. In 1971 more than 13,000 people were employed in the UK lift industry, a total which had diminished to 8,500 by 1994.

As far as the lift industry is concerned the main shops of the Abbey Works are now simply an envelope, with little archaeological evidence of the technologies employed therein. It is understood that plans showing the activities carried on in particular bays survive in the collection of documents relating to the company deposited in the Northamptonshire Record Office.

The original factory which bears the inscription 'Abbey Works, London, 1770, Northampton 1910' is a seven-bay structure, with a saw-tooth roof. The brickwork is of high quality and patterned within each gable. Internally most of the works appears to have been one largely undivided steel-framed shop, although doubtless there were ephemeral partitions between the various sections. The original office block is a detached building with some Baroque Revival features, and utilised some white faience in the main western elevation.

5.1.3 A Munitions Factory

Many of the techniques used to make lifts can easily be adapted to the production of munitions and in both the world wars of the twentieth century the Abbey Works was enlarged

at government expense in order to expand armaments manufacture. Fortunately pictorial records were made of work undertaken at the factory in both wars, and two albums of photographs are now deposited in the Northamptonshire Record Office (Box 404).

The album relating to World War 1 was completed in January 1919. It shows that activities during the war included the manufacture and rectification of shells, ranging in size from 4.5 to 9.2 inches, the production of Stokes Bombs, shell nose bushes, ammunition boxes, fuse trays, wheelbarrows, mine sinkers, kite balloon transferring winches and aircraft parts. The factory clearly had a good deal of woodworking capacity. It produced 17,500 wheelbarrows, which at one time emerged at the rate of 800 per week, and some 15,000 fuse boxes. These were

about the size of garden seed trays, well made with lapped joints at the corners, and were used for transporting fuses around filling factories. At doorways they had to be placed on a hatch while the person carrying them passed through the door, so that there was no danger of a collision which would cause the fuses to drop. Hatches of this kind in buildings of World War 2 date were recorded by RCHME at the Royal Ordnance Factory, Featherstone, near Wolverhampton. Boxes made at the Abbey Works in World War 1 went to Woolwich Arsenal, which retained a substantial filling capacity.

The main purpose of compiling the album was to show how effectively the company had adapted and installed machine tools so that they could be operated by female and unskilled labour. Photographs show how the flow of materials was designed to minimise lifting, and many of them depict women workers in mob caps, some in long skirts but some in trousers. The system of power transmission, from a main shaft in the apex of the roof of one of the bays to pulleys on either side of the bay, and thence to machines is well illustrated. The introduction to the album claims *'we have learnt a great deal from our war experience of which we expect to make effectual use now our normal activities are resuming'* and noted that *'our buildings and plant have been largely increased'*.

According to the album the factory was extended by the construction of a new shop 220 ft x 60 ft, completed during 1918. The information about the size of the extension is slightly ambiguous and needs to be checked with the archaeological evidence. The exterior of the extension is of good quality brickwork, although it lacks the patterning of the original building. Internally the factory provides convincing archaeological evidence of the practice during World War 1 by which the Ministry of Munitions made money available to companies for extensions, but the companies themselves were responsible for the construction work.

The steel frame is almost identical with that of the original 1910 building, and only detailed examination of the walls reveals where one building ends and the other begins. There are no stone pads at the seatings of the roof trusses in the 1910 phase, and there is a minute difference in roof height. The principal rolled steel joists which form the frame of the 1910 building are inscribed in three lines 'Dorman Long & Co. Ltd./Middlesbrough/England', while those of the 1917-18 extension are inscribed in a single line 'Dorman Long, Middlesbrough. Some steel from the Shelton Bar works in Stoke on Trent and from the Lanarkshire Steel Co was also used in the extension.

A building at the north end of the site was probably built as a staff canteen during World War 1 when refreshment facilities had to be provided at all factories employing large numbers of

people. The bricks appear to be identical with those used in the 1917-18 extension of the factory shops. The fenestration appears to reflect the division of the building into cooking and dining areas. This appears not to be the canteen built during World War 2 illustrated in the album on the day of its inauguration in August 1940.

The second album is less well captioned than the first. Most of the photographs appear are dated from 1940, 1941 and 1942. In addition to the Abbey Works it illustrates factories numbered 2, 3 and 4 which appear to have been operated by Express in other parts of Northampton. The principal extension during World War 2 was used to make 7.2 inch shells, although part of it appears to have been known as the Shot Shop, and some 6 inch shells were manufactured. Photographs show a partially erected wall blown down in a gale on 7 December 1940, machine tools being installed in March 1941, and, sometime after the extension was completed, about 180 7.2 inch shells loaded on to an eight-wheel truck owned by B & C Transport of Wood Street.

The extension of the building is clearly recognisable from fieldwork. Internally the detailing of the frame is considerably different from that of the 1910 and 1917-18 phases, principally in the use of lattice-work uprights. Externally the brickwork is of execrable quality, consisting of low quality Flettons, some severely overburned, of a kind only previously noted by this author in the garden walls of houses in the vicinity of brickworks. The bricks are clumsily-laid, with excessive quantities of mortar which has been only crudely pointed. While the factory has been stripped of almost every item of equipment, a number of Tannoy loudspeakers with square mouths, apparently of World War 2 date, remain in place, affixed to the steel frame.

Wartime products other than shells included splined layshafts for tank gearboxes, timing gears, shell hoists, portable hoists for 4.5 inch shells, mountings for 20 mm Oerlikon guns, deck selectors (control apparatus for lifts in ships), the leading edges of wings for Wellington bombers, and cockpit dashboards and bomb aiming panels for aircraft.

Several ancillary buildings were constructed during World War 2, among them the single storey structure which now serves as a lodge, but was originally the ARP, First Aid and Decontamination Centre. Several of the smaller buildings at the north end of the complex have poor quality brickwork similar to that of the 1940-41 phase of the main factory, but most have been altered and their original purpose is difficult to identify.

5.1.4 Conclusions

Little remains to be recorded of the Abbey Works as a lift factory following the removal of the machinery. Plans and photographs form a basic record.

The Abbey Works is much more remarkable as a munitions factory, whose archaeology reflects many aspects of both World Wars. The similarity of the constructional methods used in the original factory of 1910 and the extension of 1917-18 is clear evidence of the way in which the Ministry of Munitions in World War 1 financed extensions that were carried out by contracting companies. The crude detailing of the World War 2 extension carried out just

after the Battle of Britain and during the principal winter of the Blitz is evidence of very different circumstances.

Many other engineering plants, notably the Austin car factory at Longbridge, similarly saw their principal extensions carried out during the two world wars. Interest in the munitions industry is growing through the Defence of Britain programme, and will doubtless be stimulated by the publication, scheduled for November 1999, of a book on the explosives industry by Wayne Cocroft of English Heritage.

5.2 **Building use, construction and materials** Iain Soden

5.2.1 The original factory

The earliest part of the Abbey Works factory, that of 1910, is the most northerly (Fig 3). It is of brick throughout, with all its main walls distinguished by blind arcades dividing the bays on both axes. The floors are mostly modern reinforced concrete with the original wooden floors surviving in part of the woodworking shop. The roof is of asbestos sheet but is not original; the truncated ends of the original iron girder trusses can be seen along the east wall.

5.2.2 First World War

The 1918 extension was built onto the south end of the existing sheds in the same materials, namely brick walls with brick pilasters but not blind-arcaded, wooden planked floors; as in the earliest building the original roof has been replaced.

The first floors and those put in during the First World War were wooden planking. Iron vee-grooves marked the lines of passage for sliding large calibre shells and casings (made of heavy brass) from one work station to the next. Large brick varnish-baking ovens were situated within the building to varnish the artillery shells and cases to seal them from the formation of verdigris which might otherwise foul breeches and barrel rifling and cause disastrous misfires. The original wooden floors survive only in the woodwork shops, with some small patches in the 1918 sheds.

5.2.3 Second World War

Three new sites were put to work for the war effort on behalf of Express Lifts: The No 2 Factory lay on the western corner of Fetter Street and St John's Street, where now there lies a small surface car park. It has not been possible to ascertain the whereabouts of sites 3 and 4.

Construction of a new shed at the Abbey Works was begun by December 1940 specifically for production of the new 7.2" naval shells. This was in production by March 1941 and comprised brick within a steel RSJ framework; the windows were of iron frames with concrete sills and lintels.

During the Second World War spacious concrete air raid shelters were provided for staff. A picture taken late in the war or soon after suggests that these lay to the south of the main

factory. Their interior was also photographed. ARP, First Aid and Decontamination facilities lay in brick buildings with concrete roofs next to the existing gate-house adjacent to the Rugby Football Ground.

The last main production facility to be built was a store comprising a single 30 feet-long bay beyond the machine shop in 1958.

5.2.4 Workers' welfare

From 1918 there was a staff bowls club adjacent to the main road, together with numerous tennis courts next door to the bowls (latterly the visitors car park). In May 1952 a sports ground was opened in the south-west of the site, and it was still in use as a cricket field when the operation closed in the 1990's. From 1982 the Express Lift Tower stood at 'deep fine leg / long off', dependent on the batsman's end! It presumably provided much interest if struck by the ball.

Photographs indicate that by 1940 there was a worker's club and bar, with reading room, general room, and committee room and darts room. This was situated in the roadside house, later converted into flats when a purpose-built club was erected behind it in the post-war period.

Mess-canteen and kitchen facilities were present on site from at least 1918.

From at least the early 1950's regular children's parties were held for staff families, photos of which appeared in the post-war staff magazine "The Contactor".

5.2.5 Workers' protection

In place by November 1940 was No 5 Headquarters platoon, 12th Northamptonshire Battalion Home Guard. Photographs show them drilling in the angle of the 1930s offices.

An ARP (Air Raid Protection) post, along with a First Aid Post and Decontamination facilities stood along the boundary with the Rugby Football Ground (Franklin's Gardens) throughout the Second World War. They became the medical centre in the post-war period. In addition the site had its own Fire Brigade, which is believed to have been based in a purpose-built garage.

Two air raid shelters survive close to the frontage and can be traced on the ground from their entrances. A further line of shelters was photographed in a wartime or just post-war brochure and is believed to lie at the extreme south end of the site, beyond the southernmost building. Nothing is now visible above ground amid thick undergrowth and they may have been removed.

6. EXISTING ARCHIVAL RESOURCE

6.1 Northampton Museum

A search of the museum record cards in the archaeological archive by Robert Moore, has located records of several archaeological finds made at the factory from 1921 to 1970, including material that is now held by the museum, as listed below.

Catalogue of finds held by Northampton Museum

Y.483	A decorated, glazed floor tile, 14 th or 15 th century, 122mm square. Scallop shell in yellow on a red background (The scallop shell was the pilgrim's badge for St. James' shrine at Compostella. Illustrated Northants Nat. Hist. Soc. & Field Club, Vol XIII, No.107, frontispiece Currently on display in Museum
D.104.1965	A decorated, glazed floor tile, 145mm square. Quarter circle with radial lines in cream on a black background. Donations Book 1962-7, donated by Mr AG Burton, 28 Bowden Road, St James
Unnumbered	A fragment of medieval window tracery, in sandstone with lime washed surfaces. Stands c. 350mm high and is within glass display case (as formerly displayed in the offices at the Abbey Works). Label in display case states that it was discovered along with other relics in 1921.

Two further record cards listed under St James suggest that further architectural fragments and floor tiles have been held in the Museum, but Robert Moore is not aware of them in the present collection.

6.2 The finds made in 1970

The house journal of the Express Lift Co. Ltd, "The Contactor", for September 1970, No. 107, contained a one page account of "Historic Finds" with the following text:

“Recent excavations in the factory by workmen preparing a base for a piece of heavy machinery have brought to light relics of the past.

These finds have included bones from two human skeletons and a decorated stone coffin lid, and after an inspection Mr. Robert Moore, the Archaeological Assistant at the Northampton Museum, has confirmed that these were from the cemetery of St. James’ Abbey. This was founded in 1090, dissolved in 1538, and probably stood somewhere near the site of the present factory buildings, and it is thought that the relics found were of the thirteenth century.

Also discovered were some pieces of Roman pottery from the first century, and it is likely that these came from the Roman settlement which existed on the same site from about the first to third century.

The coffin lid, which is engraved with an ornate cross, has now been laid in the lawn in front of the Office Block and is being kept by the Company as an addition to the items displayed in the reception area which were discovered on a previous excavation.”

Three photographs accompanied the article:

The first photograph appears to show a partially articulated, supine extended inhumation, with a heap of displaced human bones lying beside it. However, it can be seen that both femurs are inverted, and the humerus has been placed as the lower arm bone. The bones have therefore been laid out to create the photograph, and it can only be assumed that this represents the original burial position. It is difficult to be certain, but the bones visible in the photograph might represent only a single individual, as there is no evident duplication. The bones lie on soil within the excavation and there is soil visible in the sides of the hole to a height of c. 0.4m, but the ground level is not visible. To the left there is a brick wall down the same level as the burial.

The second photograph shows the fragments of the decorated gravestone reassembled on the concrete floor of the factory adjacent to the excavation. The stone was then largely complete. In 1997 Robert Moore measured the surviving pieces as laid out in the lawn at the offices, but it was evidently much degraded by then. The stone was trapezoidal in plan, 680mm wide at the head end and 315mm wide at the foot; the length was not recorded probably because it was incomplete. The decoration comprises a raised longitudinal spine set on a triple-stepped, rectangular base and, at the head end, four semicircular arcs with expanded, circular terminals form a cross.

The third photograph shows someone holding several sherds of pottery. One sherd has clear curvilinear decoration and does appear to be from a Samian bowl of Roman date.

The only reference to the actual location of these finds is in a note made by Robert Moore. He was informed by John Morris, an employee of Express Lifts who was involved in the work, that they were found “50 yards down centre of works”. This is presumed to mean 50 yards southward from the northern end of the main works building.

6.3 **The Express Lifts Archive**

The small Express Lifts Archive at the Northamptonshire Record Office comprises four boxes, as yet uncatalogued. It has been consulted for relevant information. It is particularly valuable as containing a superb and quite remarkable black and white official scrapbook photographic record of the munitions facility during both World Wars. This will be of social-historical value for local

historians and industrial archaeologists far into the future. Its value cannot be overstated. Every entry in this archive was consulted for this report and it provided all of the wartime information.

6.4 **Wills** Jackie Minchington

Few unpublished medieval wills survive in Northampton which even mention St James' Abbey. Of these most contain merely bequests to monks for the celebration of masses etc. The will of Isabella Peche, dated 1479, whose first husband was William Tresham, states that she was to be buried next to his tomb in St James Abbey Church. The will of John Buckby, dated 1485

similarly states that he was to be buried in the Abbey Church. However, of the 80 wills examined only seven make reference to St James' and the two quoted above are the only ones with topographical details.

7. **GEOPHYSICAL ASSESSMENT**

7.1 Geophysical survey Peter Masters

Resistivity survey was carried out on the only areas of open grass within the application site; on the bowling green at the frontage and on the sports field to the rear of the Lift Tower.

The survey was carried out using a Geoscan RM15 resistance meter with a twin electrode configuration in a mobile probe spacing of 1.0m. Transects were spaced 0.5m apart and were walked in a 'zig-zag' fashion with readings logged at 0.5m intervals. The data were analysed using the Geoscan computer program Geoplot (V.2.01) and Geoplot 3.0 for windows (Beta version).

The resistivity survey was carried out at two locations within the proposed development site, which partly indicated significant anomalies.

Area 1 – the bowling green - an area 37m long by 38m wide was surveyed in order to locate possible remains relating to the abbey of St James. The grids were surveyed from south to north. No significant anomalies were detected.

Area 2 - Express Lift Tower – nine 20m x 20m grids were surveyed from the north-west to south-east. At the south-east end of the resultant plot is a low resistance linear anomaly running from the north-east to south-west direction denoting a former stream channel. Immediately to the north-west of this is a broad linear low resistant anomaly possibly indicating another channel. The linear strip on the north-east side of the plot is the concrete cricket pitch. No other significant anomalies were detected.

7.2 Ground Probing Radar

A test was carried out for Northamptonshire Archaeology by Utsi electronics, GPR subcontractor. The areas extensively tested were the car park at the Weedon Road frontage and runs inside the lift works. The former detected regular undulations parallel with the Weedon Road which may relate to possible buried ridge-and-furrow earthworks of a former field system. Within the lift works the test results were dominated by the pattern of concrete-reinforcement bars which obscured much of the underlying stratification. The original plots are held in archive as they do not copy satisfactorily.

STAGE 2: TRIAL EXCAVATION

8. INTRODUCTION

The archaeological evaluation of the site took place in two stages. Trenches 1-8 were excavated in December 1999. Three trenches lay between the former offices and the Weedon Road (Fig 4, Trenches 1-3) and a single trench was excavated in the only piece of open ground between the offices and the main works building (Trench 4). These were located in the area considered to have the highest potential for producing remains of former abbey buildings. A further four trenches lay on the sports ground at the rear of the site to test an area located of the former meadows (Trenches 5-8).

Trenches 1-4 demonstrated that substantial remains of former abbey buildings did survive across virtually the entire area between the Weedon Road frontage and the main works building. It was therefore seen as a necessity to determine the nature and the extent of any surviving archaeology beneath the floor slab of the main works building. Seven trenches were excavated within the main works building in February 2000 (Fig 4, Trenches 9-15).

All trenches were excavated using a JCB with a 6' foot, toothless ditching bucket. For trench 2 a toothed bucket was used to remove the tarmac and hardcore in the car park. For trenches 9-15 the concrete floor slab was cut with a floor saw and then broken using a JCB with a breaker.

9. THE ARCHAEOLOGICAL EVIDENCE

This section provides an overview of the site chronology and an interpretation of the probable arrangement of the Abbey buildings.

9.1 Geology and topography

In Trenches 1 and 2 the undisturbed natural comprised bright orange brown silty sand with sparse small chips of ironstone. In Trenches 9-14 the natural comprised a typical Northampton Sands deposit of dense ironstone chips in a matrix of orange brown sand. Undisturbed natural was not reached on the sports ground trenches (5-8).

At the northernmost end of Trench 1, next to the Weedon Road, the natural lay immediately below the topsoil at a depth of 0.45m, 63.00m aOD. In the northernmost trench within the main works building (9) it lay 1.20m below present ground level, at 61.15m aOD. In Trench 12, on the margin of the former meadows, the natural lay 2.00m below present ground level, at 60.36m aOD. The natural ground level therefore drops by a total of nearly 3.00m in a distance of 165m between the Weedon Road frontage and the northern edge of the former meadows. The level of the buried soils in the sports ground trenches indicates that the natural here would lie at least 2.00m below present ground level, and no higher than 59.50m aOD.

While the level of the present ground level also falls to the south, the level of both the sports ground and of the floor slab within the main works building has been raised by making-up the ground with dumped soils and building debris. It is for this reason that the depth of burial of the natural progressively increases from north to south. The present ground levels at the bowling green and car park on the Weedon road frontage are at 63.45m aOD. There is a fall of nearly a metre to 62.50m aOD at trench, 4 between the offices and the main works

building. However, within the main works the floor slab is at a constant level of 62.33m aOD, while the sports ground is at 61.60- 61.75m aOD, only falling to 61.25m aOD towards the western boundary of the site.

9.2 Roman settlement remains

Trenches 1-4, 9-11 and 13-14 all produced sherds of Roman pottery. In fact a total of 335 sherds were recovered, compared to only 60 sherds of medieval pottery.

Cut features of Roman date were only located in Trenches 1 and 11 (Fig 4). There were several cut features in Trench 1, including pits, probable ditches and a small circular domestic oven. The intercutting of features at the northern end of the trench indicates some duration of occupation. Some contemporary soil horizons also appeared to survive in part of Trench 1, and in Trench 2 there was an area of worn limestone metalling. There was a single pit in Trench 11. Given the widespread pottery distribution and the fact that many trenches were not excavated below medieval levels, there is no doubt that Roman features are likely to occur across the entire area occupied by the main abbey buildings.

The pottery assemblage contains no early Roman material, comprising wares dating to the 2nd to 4th centuries AD. From the features and material recovered it is difficult to characterise the nature of the Roman occupation in this area. The absence of any ceramic building materials suggests that there were no major Roman buildings here, and that it is most probably minor domestic settlement represented by timber buildings within associated ditched plots, containing pits and ovens. The metallised surface in Trench 2 may represent either a yard surface or a length of road or track aligned north-south.

9.3 The post-Roman soil horizon

The Roman features were all overlain by a soil horizon, or horizons, up to 0.50m thick in places, and typically comprising a homogeneous compact grey brown loam with few stone inclusions. Such soil horizons were seen in either plan or section in trenches 1-3, 9-11 and 14. Much of the Roman pottery from the site was recovered from this soil horizon as residual, and often abraded, sherds. No later pottery was recovered.

It is most likely that this soil horizon represents a plough-turned soil resulting from Saxon and earlier medieval agricultural exploitation of the area. This would have truncated the existing Roman deposits, and brought up quantities of Roman pottery.

9.4 The Abbey of St James

This section provides an overview of the evidence obtained from the trial excavation and provides an outline interpretation of the arrangement of the principal abbey buildings (Fig 5). This interpretation is speculative, being based on the location of only relatively short lengths of wall or robber trench. However, given the predictable arrangement of an abbey complex, as outlined earlier (see 4.1), it is likely that the broad definition of the location of the abbey church, the cloister and the cemetery are correct. The full details of the excavated evidence, the finds and the environmental evidence are provided in the following sections (10-12, Figs 6-15, and Plates 1- 19)

9.4.1 The Abbey Church

The foundations or robber trenches of two major stone walls aligned E-W were located

respectively in Trenches 1 and 2 and in Trench 3 (Plates 2, 4 and 5). They are presumed to represent the north and south walls of the nave of the abbey church. As this building was 15m wide there is no doubt that it would have been aisled, but no evidence for this was recovered. It is possible that to the east of Trench 2 there may have been transepts extending to the north and south, while the chancel probably lay beneath the access road at the eastern end of the site. The abbey church may have been some 75m long.

From the robber trenches it can be determined that the walls were c. 1.5m wide and they were founded in deep construction trenches. The surviving foundations, in Trench 1, were of unmortared stone, while the wall itself comprised a core of mortared rubble faced with roughly squared ironstone blocks.

Among the stone rubble and architectural fragments ironstone was most common, but limestone was also well represented. Fragments of circular mouldings from door or window surrounds or from columns were fairly common, and some still had whitewashed surfaces. A few larger pieces were also recovered, including part of a decorated capital from a column and a moulded window mullion. Further evidence for the quality of these buildings came from the recovery of decorated glazed floor tiles and painted window glass and window lead. In addition, the building had been roofed in limestone but with ceramic ridge tiles.

No intact floor surfaces were found, but thin layers of clean sands and sandy clays appeared to be sub-floor make-up layers. This suggests that some areas of intact floor might survive, as might any below-ground structures such as crypts, undercrofts or burial vaults.

The walls had largely been robbed, most probably in the mid-16th century, soon after the dissolution, and this robbing had been carried well down into the construction trenches. It suggests that little of the standing walls, or even the foundations, of the abbey church will have survived, although the plan will be clearly defined by the robber trenches.

A distinctive demolition layer comprising sand and crushed mortar and including the unwanted smaller fragments of stone rubble covered the entire area of the abbey church. This deposit also contained fragments of ceramic floor tile, window glass and some larger pieces of architectural stone (Figs 14 and 15, and Plates 16-19).

9.4.2 The northern yard

The area to the north of the abbey church was investigated in Trenches 1 and 2. It can be characterised as comprising an open yard with areas of metalling. It also included at least one group of burials. It may have been bounded to the north by a building or buildings set adjacent to the precinct wall on the Weedon Road frontage.

In Trench 1 a thick layer of redeposited ironstone natural abutted the north wall of the presumed abbey church, and formed a metallated yard surface extending at least 16m to the north.

In Trench 2 there was a more complex sequence of activity. An inhumation burial and a further two probable graves (which were not excavated) lay to the immediate north of the abbey church, perhaps as part of a group of inhumations located in the angle of the nave and a northern transept (Plate 6). To the north of this there was a probable yard surface of mixed soil and ironstone chips. This abutted a narrow, unmortared wall that might be the southern wall of a building. The pottery from this latter area all dates to the 13th and 14th centuries.

9.4.3 The cloister and associated buildings

Information relevant to the cloister area was obtained in Trenches 3, 4 and 13. They show that there was more than one phase of building within this area, and that a substantial, stone-lined drain served the building ranges on the southern side. The finds indicate that the buildings in this area possessed decorated tile floors, glazed windows and were roofed in stone with ceramic ridge tiles, although the walls were both narrower and less deeply founded than those of the abbey church.

In Trench 3 a wall robber trench ran southward from the abbey church, but into an area containing far less demolition material. This is probably related to either the cloister or to buildings surrounding the cloister.

In Trench 4 there was two distinct phases of building. A 1.0m wide north-south wall had replaced an east-west wall. It had been totally robbed, but was abutted by a mortared plinth that may have supported a flight of steps with ashlar treads (Plates 8 and 9). A narrower, unmortared wall stood to the west, it survived up to 4 courses high and appeared to be abutted by an intact floor surface. The preservation of the abbey remains in Trench 4 was better than in Trenches 1-3, as there appeared to have been less intensive robbing, particularly of the lesser walls.

In Trench 13 there was a sequence of successive stone-lined drains (Plate 14). The later drain was lined with large slabs of limestone. It was not capped, although a capping may have been removed, and the gritty silts produced an assemblage of smaller bone that included

both fish and bird bone, indicating their importance of these in the diet of the monks. These drains presumably served the buildings standing on the southern side of the cloister, and they therefore mark their southern extent. In Trench 14, further to the south, there was a smaller stone-lined drain but no evidence for any nearby buildings (Plate 14).

9.4.4 The Abbey Cemetery

The presence of an abbey cemetery lying to the south-east of the cloister has been established by the recovery of several inhumation burials in Trench 9 (Plates 11 and 12). Further burials and a decorated grave slab had been previously found in this area during building works in 1970 (see 6.2).

A total of six probable inhumation burials were located in Trench 9. Parts of four individuals were exposed, and a further two probable graves were identified; they were all clustered together forming a tight group occupying the northern two thirds of the trench. The absence of burials in the remainder of the trench indicates that the density of burial is variable. In addition, the disarticulated long bones from a further two individuals were recovered from the disturbed soils underneath the factory floor slab. This indicates that some burials had been disturbed during construction works relating to the present factory.

It is known that the burials do not extend as far west as Trenches 13 and 14, while to the east they may well extend almost to the present property boundary, although this has not been demonstrated.

The southern limit of the cemetery appears to be defined by the absence of burials in Trench 10, and the presence here of the corner of a substantial stone building (Plate 13). The wall appears to be ground laid, rather than founded in a construction trench, and its roof had

ceramic ridge tiles. This is the southernmost building located, and it is presumably an ancillary building situated immediately outside the abbey cemetery.

9.5 **The extent and preservation of the abbey remains**

The excavation of the evaluation trenches has shown that substantial structural remains of the former abbey of St James occupy an area of approximately 1.4ha at the northern end of the Express Lift Company Abbey Works site (Fig 5). They span the full width of the site, 100-114m, and extend some 140m back from the Weedon Road frontage. In this area there is clearly the potential to recover a near complete ground plan of all the major abbey buildings, including extensive areas preserved at or around the contemporary ground levels.

As has been noted above, the main walls of the abbey church itself have been very thoroughly robbed. However, the foundation trenches are so deep that the plan must largely survive. The interior is only at or just below floor level, so it may still be possible to recover much evidence of its internal arrangement, and some vaults and burial chambers may be intact. A contemporary yard to the north still partly survives and includes at least one group of intact burials.

In at least parts of the cloister area there are still lengths of standing wall, and some intact floor levels, and also lengths of abbey drains which are substantially intact. There is also evidence for at least two phases of building, and a correspondingly complex stratigraphic sequence.

In the cemetery area there has clearly been some disturbance of burials, but many others clearly survive in-situ, and they will represent a range of burial practices from earth-cut graves up to stone-lined and covered vaults and, perhaps, stone coffins and further decorated grave slabs. The cemetery may have occupied an area of 0.10-0.12ha, measuring some 25-35m E-W by c. 35m N-S. An area of this size is likely to contain at least 200 burials, but a figure of 300 or more is possible given the limited knowledge of the overall density of the burials.

In terms of the modern topography, the medieval levels at the frontage, under the bowling green and the car park, lie close to the present ground level, typically between 0.25-0.45m. The offices will certainly have done extensive damage, but it is still likely that the lower parts of foundation/robber trenches will survive, so that the building plan could be recovered. Between the offices and the main works there is an area of well-preserved stratigraphy, but again quite shallowly buried, at a depth of 0.65m, although to the south of this the service trenches under the present access road will have done much damage (Fig 1). The former air raid shelters and the services will also have destroyed areas of archaeology towards the eastern end of the abbey church and the cloister.

Under the floor slab of the main works building there will have been localised areas of damage and destruction, but in between there are clearly extensive areas of well-preserved stratigraphy, including the cemetery, and further building remains including upstanding walls.

9.6 **The post-medieval manor**

From the documentary evidence it is known that following the dissolution the abbey lands were acquired by Nicholas Gifford, and by the earlier 17th century a mansion house had been built on the former abbey ground (see 3.3). In the excavated trenches the only features disturbing the abbey demolition levels were the pits seen in Trenches 10 and 14. There is

therefore no indication that a substantial post-medieval building lay within the area occupied by the main abbey buildings.

9.7 **The meadows**

The former sports ground to the south of the Lift Tower and much of the main works building lie on the area of the former meadows, as identified from the historic map evidence (see 3.1). Six trenches lay within the area of the former meadow; four on the sports ground (Fig 4, Trenches 5-8) and two within the main works building (Trenches 12 and 15).

The trenches on the sports ground were intended to be between 25m and 50m in length. However, when 1.5m or more of recently built-up ground was encountered they were shortened to become elongated test pits some 4.0-6.0m in length. In the main works building

Trench 12 was 6.0m long and Trench 15 was 3.0m long.

In three of the four trenches a pre-1960s soil horizon was located at 1.50m-1.70m below present ground level, between 59.60 and 60.03m aOD. Between 100 and 400mm of this

layer was excavated without reaching natural or any earlier deposits. The homogeneous, stone-free loam indicates that at least much of this area had been open ground in recent decades, and presumably earlier when it lay within Middle Meadow and Duston Meadow. There is no evidence to indicate any earlier usage of this area, but it can be stated that any medieval deposits will lie a minimum of 1.50m, and typically 1.70m or more, below present ground level.

Former employees of the Express Lift Company have described how the ground level on the sports field was raised by several feet in the mid-1960s. Victorian terraced houses in the area of Abbey Street, to the immediate east of the Rugby ground, were being demolished (the area is now occupied by blocks of low-rise flats). The lorry drivers were apparently paid a bonus per lorry load to dump the building rubble on the sports field, rather than taking it to the dump at Duston.

This description is consistent with the results of the trial trenching. The mixture of brick rubble and other building debris, earthenware pipes and concrete kerb stones, and plastics evidently no earlier than the 1960s in date, is all evidently derived from the demolition of brick buildings and also associated paths and access roads. The deposits of ashes, cinders and bottles and china dating to the late 19th/early 20th century presumably come from rubbish deposits perhaps in the yards or gardens of these buildings.

It can therefore be concluded that mixed deposits of building debris cover the entire area of the sports ground to a depth of at least 1.50m, and often approaching 2.0m. These deposits also continue at least partly under the tarmac to the north of the sports field.

10. THE ARCHAEOLOGICAL TRENCHES

The individual evaluation trenches are briefly catalogued below.

10.1 Trench 1

Trench 1 ran N-S across the former bowling green lying between the offices and the Weedon Road; it was 31.5m long by 1.5m wide (Fig 6).

Roman Features

Undisturbed natural of orange gritty silts was exposed only at the northern end of the trench. It was cut by two successive ditches or large pits (Fig 7, 1/21 & 1/31). These were both steep-sided and at least 0.60m deep, but neither was bottomed. A shallow circular pit (1/20), 0.90m in diameter by 0.30m deep, was cut into the upper fill (1/19) of the earliest pit (1/21).

In the central part of the trench Roman features were exposed in two test pits, each 2.0m long, cut through the later deposits down to undisturbed natural of pale yellow silty clays. In the northern test pit

there was a small oven, with a clay-lined chamber, 0.5m in diameter, and a stokehole extending to the west (1/15). In the southern test pit there was a circular pit, 0.60m deep with undercutting sides (Fig 8,

Section 6; 1/22). Immediately adjacent to the pit there was a layer of yellow/white crushed mortar and fragments of limestone (1/11).

Both the oven (1/15) and the pit (1/22) cut through 0.25-0.30m thick soil horizons of, respectively, light grey silty sand (1/14) and brown sandy loam containing some small pieces of limestone (1/13).

The Roman features were all overlain by a homogeneous soil horizon of compact grey brown, slightly clayey, loam that varied in thickness from 0.25-0.40m (1/10, 1/12). A few sherds of Roman pottery were recovered from this layer. A similar loam (Fig 8, Section 2; 1/30) was also located in the side of the robber pit at the southern end of the trench.

Medieval and later deposits

At the southern end of the trench there were remains of a major, mortared stone wall running E-W (Figs 7 & 8, Section 1; 1/4). Its foundation trench was 1.70m wide and at least 0.70m deep with respect to the contemporary ground level; bottoming 1.20m below modern ground level. The foundations comprised unmortared, flat-laid slabs and blocks of limestone and ironstone in a matrix of light brown sandy loam. Above this up to 0.40m of standing wall survived. It comprised irregular blocks of ironstone set in a pale brown mortar, the whole forming a solid mass of stonework. The outer face had been partly robbed, but the lowest two courses of facing stone survived; they were in squared ironstone blocks.

On the southern side of the wall there was a near vertical-sided and flat-bottomed robbing pit, of which only the eastern edge was located (1/5). It ran southward, indicating the presence either of a return wall or a major supporting respond.

Remnants of sub-floor levels were seen in the side of the robber pit (Fig 8, Section 2). They included layers of clean sand (1/26 & 1/28), sand and mortar (1/29) or mortar spreads with burning (1/23), and a small posthole or slot (1/24).

The northern face of the wall was abutted by a metalled yard surface of clean orange sand and ironstone chips (Fig 8, Section 1; layers 1/7 and 1/17). Adjacent to the abbey wall it was up to 340mm thick, with a thin layer of grey clayey loam (1/16) separating successive ironstone layers. It

overlay a mixed construction layer containing chips of ironstone and mortar (1/18) and abutted the surviving part of the standing wall (1/4). It extended at least 19.0m to the north of wall 1/4, where it survived as a single layer of ironstone chips 100mm thick (Fig 8, Section 6; 1/7)

The metallated surface was cut by circular pit 1.10m in diameter by 0.85m deep (Section 3; 1/6). The bulk of the fill comprised a loose deposit of large, irregular blocks of ironstone building stone, with voids between the stones. It included a heavily worn and damaged limestone block from an elaborately carved column capital.

The minimum depth of archaeological deposits below present ground level was 0.26m.

10.2 Trench 2

Trench 2 lay to the east of trench 1; it ran N-S through the tarmac of the former visitor car park; it was 25.5m long by 1.5m wide (Fig 6).

Roman Features

In the centre of the trench the natural orange silts were overlain by successive ironpanned layers of worn limestone metallating separated by a layer of orange gritty sand (Figs 7 and 9, Section 7; 2/10). This surface was also seen at the northern end of the trench (Section 9; 2/20).

To the south the metallating was overlain by a soil horizon of grey brown loam (2/5), which contained a scatter of Roman pottery. Similar soil horizons were seen to the south below the medieval deposits (Fig 9, Section 8; 2/15 & 2/17)

The medieval and later deposits

At the southern end of the trench the robber trench of a major wall ran E-W (2/13). It was vertical-sided and up to 1.70m wide, narrowing to 1.50m at a lower level. It was not bottomed, but was in excess of 0.80-0.90m deep with respect to the contemporary ground level, and more than 1.70m deep from the surface of the car park tarmac.

To the south, a thin layer of clean orange sand (2/14), was probably a survival of sub-floor layers. To the north, a mixed layer of brown sandy loam containing scattered pieces of mortar (2/15) may be a construction level.

The fill of the robber trench and the layer of rubble overlying the floor remnant (2/7) comprised a mixture of friable light brown sand and pale yellow/white crushed mortar. It contained disordered and irregular pieces of ironstone ranging from small chips up to large blocks. The layer included a localised dump of large fragments from a window mullion, of which a single block was recovered. The best-preserved pieces of painted window glass from the excavations were also recovered from near the base of this layer, and on top of the underlying sub-floor level (Fig 15).

Between 6.0m and 10.0m to the north of the wall evidence for three inhumation burials was recovered. To the south the inhumation of a juvenile aligned W-E lay in a grave pit at least 0.35m deep (2/4). The grave cut through layers 2/15 and 2/5, with the burial resting on the earlier metallated surface (2/10). To the north two probable grave pits (2/11 & 2/12) were cut through the metallated surface; they were not excavated.

To the north of the burials there was a metallated surface of mixed brown loam and ironstone chips (2/6). It ran up to the southern side of an unmortared wall, 0.75m thick and surviving as a single course of flat-laid ironstone and limestone (2/3). A brown loam containing only sparse small pieces of ironstone (2/8) abutted the north face of the wall.

The medieval levels were all overlain by a layer of brown sandy loam containing a sparse scatter of

irregular or roughly squared fragments of building stone (2/2). To the south this interleaved with the upper part of the demolition deposit (2/7) overlying the wall robber trench.

The minimum depth of archaeological deposits below present ground level was 0.45m.

10.3 Trench 3

Trench 3 lay to the south of trench 1; it ran N-S in an area of grass and shrubs between the former offices and the bowling green; it was 11.0m long by 1.5m wide (Fig 6).

No undisturbed natural was located, even in the lower sides of the main robber trench.

Earlier soil horizons of medium grey brown loam lay beneath the medieval deposits, they were in excess of 0.60m deep; no dating evidence was recovered (Fig 9, Section 10; 3/7).

Medieval and later deposits

The robber trench of a major wall ran E-W across the trench (Fig 10, 3/8). It was 1.80m wide with near vertical sides, and was in excess of 0.90m deep with respect to the contemporary ground levels, but it was not bottomed. The deepest point reached lay 1.60m below present ground level. On the inner edge of the ditch there were remnants of sub-floor levels. A layer of clean orange sand (3/10) was overlain by a layer of compact greyish yellow sandy clay (3/9); both layers were 50mm thick.

At the lowest excavated level the robber trench was filled with a grey sandy loam. However, the bulk of the fill of the robber trench, and the layer of demolition rubble over the sub-floor levels to its west (3/2), comprised a clean pale yellow sand and crushed mortar containing ironstone building rubble, including a few fragments of moulded stone. The layer was up to 0.54m thick.

A further robber trench (3/5) ran southward from the E-W wall. Its western edge was near vertical-sided and it too was filled with mixed sand, mortar and ironstone rubble. It was not bottomed, but was excavated to the same depth as the robber trench of the E-W wall. A further possible E-W robber trench branched off to the west (3/6). It was up to 1.0m wide, but narrowed in rapidly to only 0.60m wide at a depth of 0.25m, and was clearly a less substantial feature.

Robber trenches 3/5 and 3/6 were both overlain by a 0.20-0.30m thick layer of light brown to yellow brown sand containing some crushed mortar and small pieces of ironstone (3/4). Whilst containing some building debris, it did not contain the larger stone rubble present in 3/2. An E-W linear feature filled (3/3) had destroyed its relationship to the main mass of demolition rubble.

The demolition rubble lay as little as 0.20m below modern ground level, and was directly overlain by the turf and topsoil (3/1).

10.4 Trench 4

Trench 4 lay to the south of the former offices, it ran E-W across a triangular flowerbed and was 11.6m long by 1.5m wide (Fig 6). There was a complex stratigraphic sequence that was only partially resolved by the limited excavation of the exposed features.

Medieval and later deposits

No undisturbed natural was located. The earliest feature was the foundations of an E-W wall, at least 1.0m wide, constructed in small fragments of flat-laid ironstone bonded with a light brown sandy mortar (Fig 10, Section 11; 4/11). The southern face of the was either abutted by or had been against a soil horizon of compact grey brown sandy loam (4/12). Deposits of clean yellow sand and grey sandy loam containing small fragments of ironstone and limestone (4/16 & 4/15) seen in the bottom of the robber trench of a N-S wall (4/9) were probably contemporary with this wall. They were overlain by a layer of dark brown sandy loam (4/17) that appears to mark a division between two separate

building phases.

The second phase of building comprised the robber trench of a substantial wall aligned N-S (4/9). It was 0.95m wide by 0.80m deep and contained a loose fill of ironstone rubble, including blocks up to 400mm in length, in a matrix of yellow sand and mortar.

To the west of the robber trench there was a mass of mortared stone rubble 1.90m wide by at least 0.40m thick (4/13). The outer part included three well-dressed rectangular stone slabs that were flat-laid and set partly overlapping at different levels, rising progressively from south to north. They may have been the treads for a flight of steps abutting the wall face.

A narrow wall (4/7) lay 3.8m to the west of the robber trench (4/9) and 2.0m west of the possible stair base. It rested directly on the earlier deposits and was 0.53m wide by 0.24m high; comprising two or three courses of unmortared, roughly squared stone blocks. The western face was largely in limestone, and the eastern face was largely in ironstone. The western face was abutted by a possible floor surface of mixed yellow sand and brown loam with scattered pieces of mortar and charcoal flecking (4/6). There was an area of reddened, burnt, floor and the adjacent wall face was also burnt. This floor was exposed but was not excavated.

Demolition rubble from 0.10-0.20m thick extended along the entire length of the trench (4/2, 4/3, 4/5 and 4/8). It comprised yellow to pale brown sand and mortar containing irregular fragments of ironstone. Pieces of decorated floor tile, including examples of both geometric and figurative designs, were also recovered from the demolition rubble (Fig 14).

The demolition rubble was overlain by up to 0.50m of medium brown sandy loam (4/1), and to the east this was cut by a recent shallow, circular pit (4/4), 2.0m in diameter by 0.65m deep. The uppermost 0.20-0.50m of soil was the soft grey loam of the recent flowerbed.

Archaeological levels lay within 0.65m of the present ground surface.

10.5 Trenches 5-8

These four trenches were located on the sports ground (Fig 4).

Trench 5

Trench 5 was approximately 5.5m long by 1.5m wide. It lay on the northernmost corner of the sports field, to the immediate south-east of the Lift Tower. It was excavated by machine to a total depth of 2.10m below present ground level.

The surface of a pre-1960s soil horizon, comprising a grey brown friable loam, was located at a depth of 1.70m below ground level, at 60.03m aOD. It was excavated to a depth of 0.40m but neither natural or any other earlier deposits were located.

Between 1.70m and 0.95m below ground level there was a 0.75m thick layer of black ash and cinders containing occasional pieces of brick and other building debris, including pieces of plastic no earlier than the 1960s in date. Above this there was a 0.65m thick layer of light brown sandy loam containing mortar, brick rubble, pieces of concrete and pieces of ironstone. The topsoil and turf was 0.35m thick.

Trench 6

Trench 6 was approximately 5.5m long by 1.5m wide. It was the southernmost trench, lying towards the south-eastern boundary of the sports field. It was excavated by machine to a maximum depth of 1.70m below ground level, 59.90m aOD.

Below a depth of 1.55m there was a mixed and loose layer comprising blocks of redeposited yellow brown sticky clay, containing ironstone fragments and lenses of grey sandy loams which included pieces of window glass. The bottom of this deposit was not reached. From 1.55m up to between 0.55m-0.90m below ground level, there was a layer of brown to grey brown friable sandy loam with ashes and charcoal. It contained quantities of Victorian to early 20th century bottles, china, window glass, and some more recent debris including plastics. It was sealed by a 0.15-0.50m thick layer of tenacious light brown clay (redeposited natural clay). There was a 0.20m thick layer of topsoil and turf.

Trench 7

Trench 7 was approximately 3.5m long by 1.5m wide. It lay toward the western edge of the sports field. It was excavated by machine to a depth of 1.9m below ground level.

A pre-1960s soil horizon of compact dark grey brown loam was encountered at a depth of 1.80m, 59.60m aOD. The upper 0.10m was removed, but the layer was not bottomed. Above this there was a 0.70m thick layer of mid brown silty sand. It did not contain any building debris but some fragments of black plastic sheeting were present. The upper layer was 0.90m thick and comprised orange brown silty sand containing pieces of limestone and brick rubble. The topsoil and turf was 0.20m thick.

Trench 8

Trench 8 was approximately 5.5m long by 1.5m wide. It lay on the southern corner of the tarmac surface to the immediate north of the sports field. It was excavated by machine to a depth of 1.75m below ground level.

A pre-1960s soil horizon of dark grey brown loam was encountered at a depth of 1.50m below ground level, 59.75m aOD. It was excavated to depth of 0.25m but was not bottomed. Above this there was 1.25m of grey brown sandy silt containing brick rubble and pieces of earthenware water pipe. The upper 0.25m comprised hardcore and tarmac.

10.6 **Trench 9**

This trench lay within the main works building to the immediate north-west of the burials located in 1970, it was 6.0m long by 2.0m wide (Fig 6).

A small area of natural ironstone was exposed at the southern end of the trench, at a depth of 1.20m below present ground level. Along the entire length of the trench it was overlain by a grey brown, stone-free sandy loam (Figs 11 and 12, 9/10). This was up to 0.50m thick at the southern end of the trench, but had been truncated further north. It contained only Roman pottery and pre-dates all abbey deposits.

A broad, flat-bottomed cut, 1.75m wide x 0.30m deep, ran obliquely across the trench (9/6). It was filled with a compact brown sand containing small chips and limestone and flecks of mortar, and may have been a laid path or track.

A stone-lined burial vault cut through one edge of the path (9/3). It was lined with five courses of mortared limestone, making a chamber 0.60m wide, although the eastern end comprised a single upright slab. It was capped with several large rough-hewn limestone slabs, some of which had fractured. A single capping stone was removed to reveal the knees of the interred individual, an adult laid supine with its head to the west. Soil had filled the lower half of the chamber, but there was still a void in the upper half.

The eastern end of the vault cut the end of a further grave (9/4). This had been roughly lined with steeply pitched slabs of limestone, and further slabs pitching steeply into the fill were slumped capping

stones. It was partially excavated to reveal a single lower arm bone, confirming the presence of an inhumation burial. The head end of a further probable grave lay immediately adjacent to it (9/7).

To the north the upper half of a small adult was fully exposed (9/5), and this lay within the upper fill of a probable earlier grave (9/12), although this was not confirmed by excavation. Immediately to the north there was the head end of a further grave (1/13), of which only the top of the skull was exposed. All of these burials were left in-situ. However, the disarticulated, partial remains of at least two adult individuals were recovered at approximately 0.50m below present ground level during machine excavation.

In the north-western corner of the trench there was a mass of mixed ironstone and limestone rubble forming the foundations of a N-S wall of unknown width (9/14).

10.7 **Trench 10**

This trench lay to the south-east of the burials located in 1970, it was 6.0m long by 2.0m wide (Figs 11 and 12). Only the central part of the trench was taken down to natural, which was cut by a ditch at this point (10/14). The ditch fill contained Roman pottery.

The ditch was overlain by a scatter of irregular pieces of ironstone and limestone in a matrix of mottled grey brown sandy loam (10/15 and 10/13). This may have been a levelling layer shortly pre-dating the construction of the overlying wall (10/4). The wall was well built in flat-laid courses of limestone. Five courses survived, to a height of 0.46m. There was no evident construction trench or change in build, and the wall would appear to have been ground-laid. Its lowest two courses were abutted by a layer of grey brown sandy loam, (10/12). A layer of light brown sandy loam abutted the next two courses, and this included a setting of flat-laid ironstone slabs (10/5). Fragments of ceramic ridge tiles were recovered from this trench

The levelled wall top was sealed by a layer of demolition rubble containing pieces of ironstone and limestone and pieces of mortar (10/7).

The demolition layer was cut by a large circular pit, which had probably been stone-lined (10/11). It contained a small group of 16th century pottery and denotes activity in this area following both the dissolution and the probable levelling of the abbey buildings.

10.8 **Trench 11**

This trench lay immediately outside the southern extent of the original works building. As a result, the underlying ground showed more recent disturbance than had been present in trenches 9,10, 13 and 14 (Figs 11 and 13). The northern end of the trench contained deep brick foundations that were not fully removed.

The southern end was excavated by machine down to the undisturbed natural of ironstone chips in a sand matrix. This lay 1.70m below the surface of the floor slab (60.62m aOD). A sub-square pit was cut into the natural (11/1). It was 0.30m deep and produced a small assemblage of Roman pottery. Ground water accumulated within the excavated feature.

The pit and the natural were overlain by successive soil horizons of red brown and grey brown sandy loams, each 0.20m thick (11/2 and 11/3). These represent the post-Roman soil horizon, similar to the deposits seen further to the north, and similar to the old soil horizon seen on the meadows to the south.

Above these there was a 0.40m thick soil horizon of brown sandy loam containing sparse small pieces of limestone (11/4). This layer is undated but its general character is most similar to deposits broadly contemporary with the abbey. This interpretation is supported by the presence of a thin sealing layer heavily flecked with stone chips and mortar (11/5, sealed by a thin layer of brown loam (11/7). These deposits might relate to the levelling and abandonment of the abbey. This marks the southernmost

extent of any deposits containing material evidently related to the abbey.

The upper 0.80m of the deposits comprised a layer of coal dust and cinders, and layer of stone and brick rubble used to make-up the ground level prior to the laying of the concrete floor slab.

10.9 **Trench 12**

According to the historic map evidence this trench lay on the margin of the former meadow. It was 6.0m long by 2.0m wide and was excavated by machine down to undisturbed natural (Fig 13). The natural comprised ironstone chips in a sand matrix. It lay at a depth of 1.95m below the surface of the floor slab (60.36m aOD). Ground water was oozing up through the natural at this level.

Above the natural there was a 0.45m thick soil horizon of grey brown slightly clayey loam, with red brown mottles, almost free of stone inclusions (12/6). This was similar to the old soil horizons seen in the trenches on the sports field.

Above this old soil horizon there was 1.50m of made-up ground. The successive layers comprised soil containing cinders and brick fragments (12/5), black coal dust and cinders (12/4), clay layers (12/3 and 12/2) and a layer of coal dust and cinders (12/1) directly under the brick rubble and the floor slab.

10.10 **Trench 13**

This trench was located to the south-east of trench 4 to determine whether the buildings located in that trench continued southward under the main works building. It was 6.0m long by 2.0m wide. Undisturbed natural was not reached due to the density of later activity (Figs 11 and 12).

The stone-lined drains and the finds, which included a plain glazed floor tile, indicated the nearby presence of substantial buildings.

At the northern end of the trench stratified deposits lay at a depth of 0.80m below the floor slab (at 61.50m aOD). Earlier soil horizons (13/7 and 13/5) were cut by a linear feature aligned N-S (13/4). Slabs of limestone were steeply pitched against one edge of the steep-sided cut, and flat-laid slabs of ironstone lay on the adjacent surface. To the south it had been filled with ironstone and limestone rubble. It was probably a stone-lined drain that had been disturbed and blocked at the introduction of a new E-W drain to the south.

The new drain possessed a 0.70m wide channel with a well-built lining in roughly squared limestone blocks (13/9 and 13/11). The stone structure filled a construction trench 3.20m wide in total, and the 1.50m wide foundations on the southern side may have been this width to support an adjacent standing wall. The southern wall cut through earlier deposits at the southern end of the trench (13/12). It survived to a maximum of three courses, 0.50m deep, but had been truncated to both the south and east.

The gritty drain fill produced a small bone assemblage containing both bird and fish bone (13/10, see section 12).

In the south-east corner of the trench the drain was cut away by a steep-sided pit, this was not bottomed (13/14). This is undated, but it may be contemporary with the 16th century pit in Trench 10. Above this

level there was a continuous layer of brown sandy loam heavily flecked with mortar and small pieces of stone (13/2 and 13/3) that probably represents a levelling layer post-dating the demolition of the abbey.

10.11 Trench 14

This trench lay to the south-east of trench 13, it was 6.0m long by 2.0m wide (Figs 11 and 13). Stratified deposits lay at a depth of 1.00m below the floor slab (at 61.30m aOD).

Natural ironstone lay 1.60m below the floor slab (at 60.70m aOD). It was overlain by a soil horizon of grey brown loam, up to 0.40m thick and containing Roman pottery (14/7).

A linear ditch, with a near vertical side and in excess of 0.60m deep (it was not bottomed) ran obliquely across the trench (14/5). It was filled with a homogeneous grey brown sandy loam, and was undated. It was overlain by a 0.20m thick soil horizon of brown friable loam (14/4).

A stone-lined drain ran obliquely across the trench (14/2). The channel was 0.15m wide by 0.20m deep, and was lined with two courses of flat laid limestone. It was capped with limestone slabs, several of which had heat reddened edges and had evidently been reused from an oven. The fill of the drain was a brown loam showing no indication that it had been derived from water borne sediments (14/3).

A circular pit, 1.00m in diameter by 0.60m deep with vertical sides and a flat bottom (14/6), lay adjacent to the drain. Its secondary fill contained a dense deposit of small irregular fragments of limestone and ironstone.

10.12 Trench 15

The southernmost trench within the main works building. It was 3.0m long by 2.0m wide and was excavated to a depth of 1.85m below the surface of the floor slab (not illustrated). At this depth the trench was still within recently made-up ground, comprising various layers of coal dust and cinders, and brick rubble with other demolition debris, including corrugated asbestos sheet.

This confirmed the results obtained in trench 12 and excavation was not continued to natural.

11. THE FINDS

11.1 The Roman Pottery Tora Hylton

In total there are 335 sherds of Roman pottery, weighing 5,418g, from 37 separate deposits. Much of it was derived from soil horizons overlying the Roman features and pre-dating the abbey deposits, and this accounts for fragmentation and abrasion of the material. However, small groups were recovered from the excavated features of Roman date. The presence of locally manufactured fine and coarsewares, together with small amounts of non-local and imported table and kitchenwares suggests settlement activity in the area.

Diagnostically early Roman material is not apparent, although there is a small amount of hard-fired grog-tempered ware. There are a small number of undiagnostic Samian sherds, which span the 1st and 2nd centuries AD.

Most of the pottery is second to fourth century AD in date. Greywares and shell-tempered fabrics predominate, and there are smaller quantities of soft pink grog, and colour coated wares from the Nene valley. Greyware forms include necked and neckless jars, a poppy head beaker and plain rimmed dishes. Most of the Greywares are unsourced, but there is a small quantity of lower Nene Valley grey ware. Other forms include shell-tempered storage jars. Vessels manufactured in the Nene Valley include colour coat beakers decorated with rouletting and barbotine trails and a flanged bowl, all post date 250AD. In addition there is a fragment of white ware mortaria with reeded rim (Howe et al, fig 8, 102).

Identifiable non-local wares include, a fragment of white ware mortaria with a 'hammerhead' rim, possibly

manufactured at the Manceter Hartshill kilns (Tyers 1996, page 124, fig 119,6), together with undiagnostic fragments of Oxford ware and a ?Colchester ware colour coated beaker decorated with barbotine dots.

11.2 The medieval pottery, Paul Blinkhorn

The pottery assemblage comprised 395 sherds with a total weight of 6,174g. Of these, 335 sherds (5,418g) were Romano-British, the rest (60 sherds, 756g) early medieval or later. In the case of the post-Roman wares, the minimum number of vessels (MNV), by measurement of rimsherd length, was 1.28. The pottery occurrence by number and weight of sherds per context by fabric type is shown in Appendix 1.

The post-Roman pottery was quantified using the chronology and coding system of the Northamptonshire County Ceramic Type-Series (CTS), as follows:

- F330: *Shelly Coarseware*, AD1100-1400. 12 sherds, 253g, MNV = 0.69.
- F360: *Miscellaneous Sandy Coarsewares*, AD1100-1400. 1 sherd, 4g, MNV = 0.
- F324: *Brill/Boarstall ware*, 1200-1600. 12 sherds, 80g, MNV = 0.19.
- F320: *Lyveden/Stansion 'B' ware*, AD1225-1400. 3 sherds, 19g, MNV = 0.
- F329: *Potterspury ware*, AD1250-1600. 13 sherds, 127g, MNV = 0.24.
- F322: *Lyveden/Stansion 'D' ware*, AD1400-?1500. 1 sherd, 6g, MNV = 0.11.
- F325: *Lyveden/Stansion 'E' ware*, AD1450-?1500. 1 sherd, 22g, MNV = 0.
- F365: *Late Medieval Reduced ware*, AD1400-?1500. 1 sherd, 4g, MNV = 0.
- F401: *Late Medieval Oxidized ware*, AD1450-?1550. 1 sherd, 7g, MNV = 0.
- F403: *Midland Purple ware*, AD1450-1600. 1 sherd, 126g, MNV = 0.
- F404: *Cistercian ware*, AD1470-1550. 12 sherds, 63g, MNV = 0.05.
- F407: *Red Earthenwares*, AD1600+. 1 sherd, 25g, MNV = 0
- F426: *Iron-glazed earthenware*, 18th-19th century. 1 sherd, 25g, MNV = 0.

Chronology

The medieval pottery is dated using the relative seriated phase chronology (RSP) as specified in the County Type-Series. The system attributes to each ceramic group a phase date rather than absolute chronology. The phases are based on the presence and absence of 'major wares' within each individual assemblage, with the earliest known date of the chronologically latest ware within each group defining the Phase date. The chronology and the defining wares are shown in Table 1.

Table 1: Chronology of the RSP Ceramic Phasing System

RSP Phase	Defining Wares	Chronology
Ph0	Shelly Coarsewares, Sandy Coarsewares	-1150
Ph1	Lyveden/Stansion 'A' Ware	-E13thC
Ph2/0	Lyveden/Stansion 'B', Brill/Boarstall ware	13thC
Ph2/2	Potterspury Ware	400
Ph4	Lyveden/Stansion 'D' Ware	-1450
Ph5	Late Medieval Oxidized Ware, Cistercian ware, Midland Purple	-1500

It is highly likely that some of the context-specific pottery dates given in Appendix 1 are earlier than the actual date of the deposit. The most probable groups are the earlier medieval assemblages (Phases 0 – 2/0) which only produced one or two sherds of pottery, especially as most of the sherds from these groups are rather small, and likely to have been redeposited.

Table 2: Pottery occurrence, by number and weight of sherds and MNV per RSP phase.

Phase	No	Wt	MNV
Ph0	8	197	0.52
Ph1	0	0	0
Ph2/0	7	45	0
Ph2/2	9	75	0.19
Ph4	0	0	0
	30	232	0.57
16thC	4	64	0
Total	58	613	1.28

The data in Table 2 indicate that the majority of the pottery came from features which are dateable to the mid-15th or later. This is not untypical of sites of this type. At Eynsham Abbey, Oxfordshire, large quantities of pottery of such date were noted, particularly in the yard areas. They are thought to represent either yard middens dating to latest use of the Abbey, or possibly material which was discarded at the dissolution of the ecclesiastical house, and disturbed by later stone-robbing (Blinkhorn in print). Further excavation will be required before this can be confirmed here, however, as this assemblage is far too small to allow such an interpretation to be advanced with confidence.

The lack of pottery groups of Ph1 or Ph4 groups cannot be seen as significant, and are more likely to be due to the small assemblage size.

Assessment

The range of medieval fabric types noted at this site is typical of contemporary sites in Northampton and its environs, and the chronology of the assemblages is consistent with the nature of the remains discovered during the excavation. Other than this, the small size of the assemblage makes it difficult to carry out any meaningful analysis beyond providing context-specific dating.

Appendix 1: Pottery occurrence by number and weight (in g) of sherds per context by fabric type

Tr	Cntx	RB		F330		F360		F320		F324		F329		F365		F322		F403		F404		F325		F401		F407		F426		
		No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	
1	2									1	5									1	12									Ph5
1	5	4	227							2	15									5	39								Ph5	
1	7	1	16					1	7																				Ph2/0	
1	8	4	59																										RB	
1	12	35	396																										RB	
1	13	16	274																										RB	
1	15	24	283																										RB	
1	20	5	58																										RB	
1	21	22	323																										RB	
2	2	2	37																										RB	
2	5	46	777																										RB	
2	6							1	8																				Ph2/0	
2	7									1	2																		Ph2/0	
2	8			1	4																								Ph0	
2	9											1	4																Ph2/2	
2	10	9	97																										RB	
2	14	1	6																										RB	
2	16	2	13																										RB	
2	17	8	86																										RB	

Tr	Cntx	RB		F330		F360		F320		F324		F329		F365		F322		F403		F404		F325		F401		F407		F426		
		No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	
2	19	1	3					1	4																				Ph2/0	
2	20	2	9																										RB	
3	2	1	5																										RB	
3	3	1	14																										RB	
3	5																1	126											Ph5	
3	7	3	33																										RB	
4	1	1	2																							1	17		18th	
4	2	1	5																										RB	
4	3	6	20																										RB	
9	2	1	5																										med?	
9	4	6	66																										RB	
9	6	4	40																										RB	
9	8	10	65																										RB	
9	10	11	151																										RB	
9	11	2	20																										RB	
10	1	57	1220																										RB	
10	5	8	150	1	17																								Ph0	
10	6			3	54																								Ph0	
10	8									1	14																		Ph2/0	
10	9	7	176	1	15					1	21						1	3								1	25		16th	
10	12	3	16																										RB	
11	1	7	518																										RB	
13	2	3	41									1	17							2	2			1	7				Ph5	
13	3	2	29	1	15					1	1	8	72	1	4	1	6						1	22					Ph5	
13	4	6	85																										RB	
13	10	2	3							1	5									3	10								Ph5	
13	12			1	104																								Ph0??	
13	14									2	10																		Ph2/0	
14	1	1	17							1	3	2	24																Ph2/2	
14	3	1	10																										RB??	
14	4			3	30					1	4	1	10																Ph2/2	
14	5	1	4			1	4																						Ph0??	
14	6			1	14																								Ph0??	
14	7	6	48																										RB	
14	8	2	11																										RB	
		335	5418	12	253	1	4	3	19	12	80	13	127	1	4	1	6	2	129	11	63	1	22	1	7	1	25	1	17	

11.3 Other finds Tora Hylton and Pat Chapman

Small Finds

A total of 44 objects of copper alloy, iron and lead were recovered. It is dominated by 25 iron objects, primarily nails together with undiagnostic rod and sheet fragments. The nine copper alloy objects comprise a small collection of dress accessories, including 2 lace chapes and a pin with a large globular head, together with undiagnostic fragments. There are 10 lead objects. These include three

pieces of window came from Trenches 1, 2 and 4, offcuts of lead sheet and a possible writing lead from Trench 13.

The medieval floor tiles

There are 36 fragments of glazed ceramic floor tile, ranging from small fragments to almost complete tiles. Fifteen pieces came from Trench 4; most of the remainder are from Trenches 1 – 3, although three pieces are from Trench 13.

Decorated tiles comprise a third of the total, they are all of slip inlaid in stamped impressed designs (Plates 18 and 19). They include both figurative and geometric patterns. A further twelve pieces were heavily worn and had lost all glaze from the surface. At least some of these may also have been decorated. A further twelve pieces are plain glazed tiles either in yellow, green or black.

The majority of the tiles are square, but there are two examples of plain triangular tiles, both split from diagonally scored square tiles.

Mortar adhered to the backs of most tiles and all showed signs of surface wear.

The Illustrated Tiles (Fig 14):

- 1) Green glazed tile, incomplete, 20mm thick; slip inlay 1-5mm deep. Figurative, depicting a horse facing left with a right raised foreleg and left raised hind leg. A rider's foot shows beneath its belly. A quatrefoil border frames the picture. Trench 2/7.
- 2) Green glazed tile, incomplete, 18mm thick, slip inlay 1 - 2mm deep. The design comprises three concentric circular arcs, the outer two with a serrated outer edge. Radiating lines bisect the arcs to form a series of panels. The outer panel contains a stag, and the lower two a dove or pigeon and an indeterminate shape. It forms part of a four tile design that would have comprised two concentric circles with figures set within the panels around a central figure. Trench 4/3
- 3) Green glazed tile measuring 130 x 132 x 20mm. Slip decoration in strips 8mm wide inlaid to depths of 1-5mm. Geometric design based on a saltire cross with each diagonal arm terminating at double arcs enclosing three pellets (Plate 18 and frontispiece). The rest of the pattern forms a series of small squares. The presence of a linear border on one side only suggests that the tile formed part a larger nine-tile design. Trench 4/3
- 4) & 5) Two fragments with the same style of design, possibly the same tile. Green glazed, 17-20mm thick, slip inlaid 1mm-3.5mm deep. A complex curvilinear design with corner arcs enclosing three pellets. Trench 4/2

The medieval window glass

A total of 119 fragments of window glass were recovered. 106 fragments are from Trenches 1-4, and a further 13 from trenches 10, 13 and 14. They are generally in poor condition, being opaque and brittle. Some are also flaking and others are pitted. They were recovered within the demolition layers, and many have small patches of mortar adhering to their surfaces.

As far as could be ascertained, the glass was probably a natural green, varying in thickness from 2-5mm. There were two complete small quarries, one plain rectangular (not illustrated) and one polygonal (Fig 15, 7). The grozed edges were variable in form from well smoothed to scalloped, with many quarries possessing both smoothed and scalloped edges.

Approximately a quarter of the fragments showed evidence of painted decoration, executed in a reddish-brown, iron oxide-based pigment. It mostly comprises linear and curvilinear bands, at least one with cross-hatch filling (1), while the more irregular patterns appear to include flower designs (4 & 5).

About two thirds of the glass is from Trench 2, including all the best preserved decorated pieces. Most of the rest came from Trench 1, including most of the small plain quarries of rectangular and triangular shape.

Catalogue of illustrated glass (Fig 14)

- 1) Sub-square quarry, 4mm thick, with smoothed edges.
 Decoration of fine curvilinear lines enclosing an elongated panel containing square with a cross-hatched fill. This may represent a recessed window opening.
 SF 68, Trench 2/14.
- 2) Square quarry, 3mm thick, smooth edges.
 Decorated with linear bands, one panel enclosing line of ring-and-dot motifs.
 Similar decorative scheme to 3) and probably from same light. SF 66, Trench 2/7.
- 3) Quarry with both straight and curved edges, respectively smoothed and scalloped, 3mm thick.
 Decorated with parallel linear bands, one 'panel' infilled. SF 63, Trench 2/7.
- 4) & 5) Two pieces probably from same or associated quarries, 2mm thick, all edges scalloped.
 Background in red forming 'daisy' flower shapes. SF 60 & 61 Trench 2/7
- 6) Triangular quarry, 4mm thick, smooth and scalloped edges.
 Curvilinear decoration of indeterminate nature. SF 62, Trench 2/7
- 7) Complete, polygonal quarry, 4mm thick, long edges scalloped, others smoothed.
 Decorated with linear bands. SF 65, Trench 2/7.
- 8) Irregular quarry, 2-3mm thick, with straight and scalloped edges.
 Decorated with curvilinear bands making part of an unknown design.
 SF 67, Trench 2/7.

The architectural stone

28 fragments of architectural stone were recovered. They are predominantly small fragments of rounded mouldings from door and window surrounds, or columns. A majority of the pieces are in local Ironstone, but limestone is also well represented; ironstone predominated in Trenches 1 – 3 and limestone in Trench 4.

Specific architectural features represented are part of an ironstone voussoir and a fragment of elaborately decorated, but badly damaged, limestone capital, both recovered from a pit in Trench 1 filled with stone rubble. A well-preserved length of a moulded window mullion from Trench 2; further parts of the same mullion were left in-situ.

The mouldings from Trenches 2, 3 and 4 were often limewashed, and one limestone moulding shows evidence of several applications.

Ceramic and stone roof tiles

There were 46 fragments of ceramic roof tile. Nearly a half of this total came from Trench 10, and the remainder was more evenly distributed between Trenches 1, 4, 9, 13, and 14. The evident curvature on a majority of the recovered fragments indicates that they mainly derived from ridge tiles. Green

glaze predominated, but with some yellow glazed. Splashes of glaze often survived only on the protected inner face of the tiles, having been completely eroded from the exposed outer surfaces.

Nine fragments of perforated limestone roof tiles were recovered; seven from Trench 1 and one each from Trenches 2 and 13. The two largest tiles from Trench 1 had surviving top and bottom edges, and were both 165mm long by 20mm thick, with the single perforation set 44mm from the top edge.

There was a maximum width of 130mm but no example survived to its full width. A small rectangular tile from Trench 13 was virtually complete, measuring 100mm x 70mm x 5mm thick, with a single perforation 24mm from the top edge.

The combination of ceramic ridge tiles and stone roofers indicates that the buildings were typically roofed with stone tiles surmounted by an earthenware ridge. This has also been seen at the Greyfriars

within the centre of medieval Northampton (Williams 1978, 124) and in the Augustinian Friary in Leicester (Mellor and Pearce 1982, plate 8).

12. FAUNAL AND ENVIRONMENTAL DATA

12.1 Animal and Human Bone

Small quantities of animal bone were recovered by hand collection. It contains examples of the main domestic species but given the small sample size no further analysis has been undertaken. The general indication is that the bone preservation on the site is good. The presence of both bird and fish bone in the abbey drains has been confirmed, and these sealed contexts clearly possess a high potential (see below).

The burials in Trench 9 have been left in-situ. The only human remains retrieved from the site comprise the legs of a partially exposed burial in Trench 2, and a deposit of disarticulated bone from Trench 9.

12.2 Environmental remains Karen Deighton

A single soil sample of 20 litres was taken from the fill of the drain in trench 13. It produced the following remains:

Frequency of ecofacts

Potential/ Ecofact	High	Medium	Low
Animal bone	Yes	----	----
Fish	Yes	----	----
Bird	Yes	----	----
charcoal	Yes	----	----
Charred seed	----	----	Yes
Shell	----	Yes	----

The animal bone comprises mainly fragments from larger mammals, although it does include some rabbit bones and a mandible probably from a cat. In addition, there was a good assemblage of both bird and fish bone, and a possible fish scale, although these have not been identified to species.

There was only a single charred seed, together with quantities of charcoal fragments. There are numerous pieces of oyster shell.

This single sample clearly demonstrates the high environmental potential of the accumulated silts within the abbey drains, particularly in terms of the faunal assemblage from smaller mammals, birds and fish, which often survive poorly in more open contexts.

BIBLIOGRAPHY

Chapman, A, 1999 Evaluation of the archaeological potential of the former Express Lift Company Abbey Works site, Weedon Road, Northampton. Stage 2: Archaeological Evaluation, Interim Report

Blinkhorn, PW, in print The Post-Roman Pottery, in Excavations at Eynsham Abbey, OAU Thames Valley Monog. Ser.

Cox, J C, and Serjeantson, REM, 1897 A History of the church of St-Sepulchre's, Northampton, Northampton

English Heritage 1998 Monuments of War: the valuation, recording and management of twentieth century military sites, London: English Heritage

Gallacher, D B, 1994 The planning of Augustinian monasteries in Scotland, in Locock, M.P,1994 Meaningful Architecture: social interpretations of buildings, World Archaeology Series , **9**, 167-87

Golby, F, 1992 History of Duston

Green, P, 1989 Norton Priory, CUP

Howe, M D, Perrin, J R, and Mackreth, D F, 1980 Roman Pottery from the Nene Valley: a guide, Occ. Pap. 2, Peterborough City Museum and Art Gallery

Jolles, M, 1996 A short history of the Jews of Northampton 1159-1996

Mellor, J E, and Pearce, T, 1982 The Augustinian Friary in Leicester, Excavated 1973-1978

Northamptonshire Archaeology 1999 Specification for Archaeological Evaluation: The former Express Lifts Site, Northampton

Northamptonshire Heritage 1999 Former Express Lifts Abbey Works, Weedon Road, Northampton: Archaeological Evaluation Brief

Serjeantson, R M, 1906 The Abbey of St James in Northampton, Jnl. Northampton Natural History Soc. & Field Club Vol 13, no 107, 243-66.

Tyers, P, 1996 Roman Pottery in Britain, Batsford

Webster, L, and Cherry, J, 1980 Medieval Britain and Ireland in 1979. Medieval Archaeology , **24**, 240-1.

West, J J, Woods, H, and Palmer, N, (in prep) Excavations at Haughmond Abbey, Salop 1975-9, English Heritage Monograph.

G.R.C. 1958 Medieval Cartularies of Great Britain, London

Williams, J, 1978 Excavations at Greyfriars, Northampton 1972, Northamptonshire Archaeol., **13**, 96-160

Jolles, M, 1996 A Short History of the Jews of Northampton 1159-1996, London

Vogel, R, 1988 Vertical Transportation in Old Back Bay: a Museum Case Study: the acquisition of a small residential hydraulic elevator, Washington DC: Smithsonian Institution Press.

Desk-based assessment:	Iain Soden, Paul Courtney and Barrie Trinder
Resistivity Survey:	Peter Masters
Ground Probing Radar:	Utsi Electronics
Wills:	Jackie Michington
Fieldwork:	Andy Chapman and Rob Atkins
Fieldwork text:	Andy Chapman
Roman Pottery:	Tora Hylton
Medieval pottery	Paul Blinkhorn
Other finds:	Tora Hylton and Pat Chapman
Illustrations:	Mark Roughley and Andy Chapman

Northamptonshire Archaeology
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Environment Directorate

9 March 2000



Plate 1: Trench 1 on bowling green



Plate 2: Trench 1, wall 1/4, looking south



Plate 3: Trench 1, pit 1/6



Plate 4: Trench 1, wall 1/4, looking south



Plate 5: Trench 2, demolition rubble,
looking north



Plate 6: Trench 2, inhumation burial 2/4



Plate 7: Trench 3 looking south



Plate 7: Trench 3 looking north



Plate 8: Trench 4, looking east



Plate 9: Trench 4, showing possible stair base



Plate 10: Excavating within main works



Plate 11: trench 9, looking north showing burials



Plate 12: Trench 9, Inhumation in stone-lined and covered grave



Plate 13: Trench 10, wall 10/4



Plate 14 Trench 13, stone-lined drain



Plate 15, Trench 14, stone-lined drain



Plates 16 & 17: Building stone from Trenches 10 and 9 (not retained)



Plate 18: Decorated floor tile



Plate 19: Fragments of decorated floor tiles

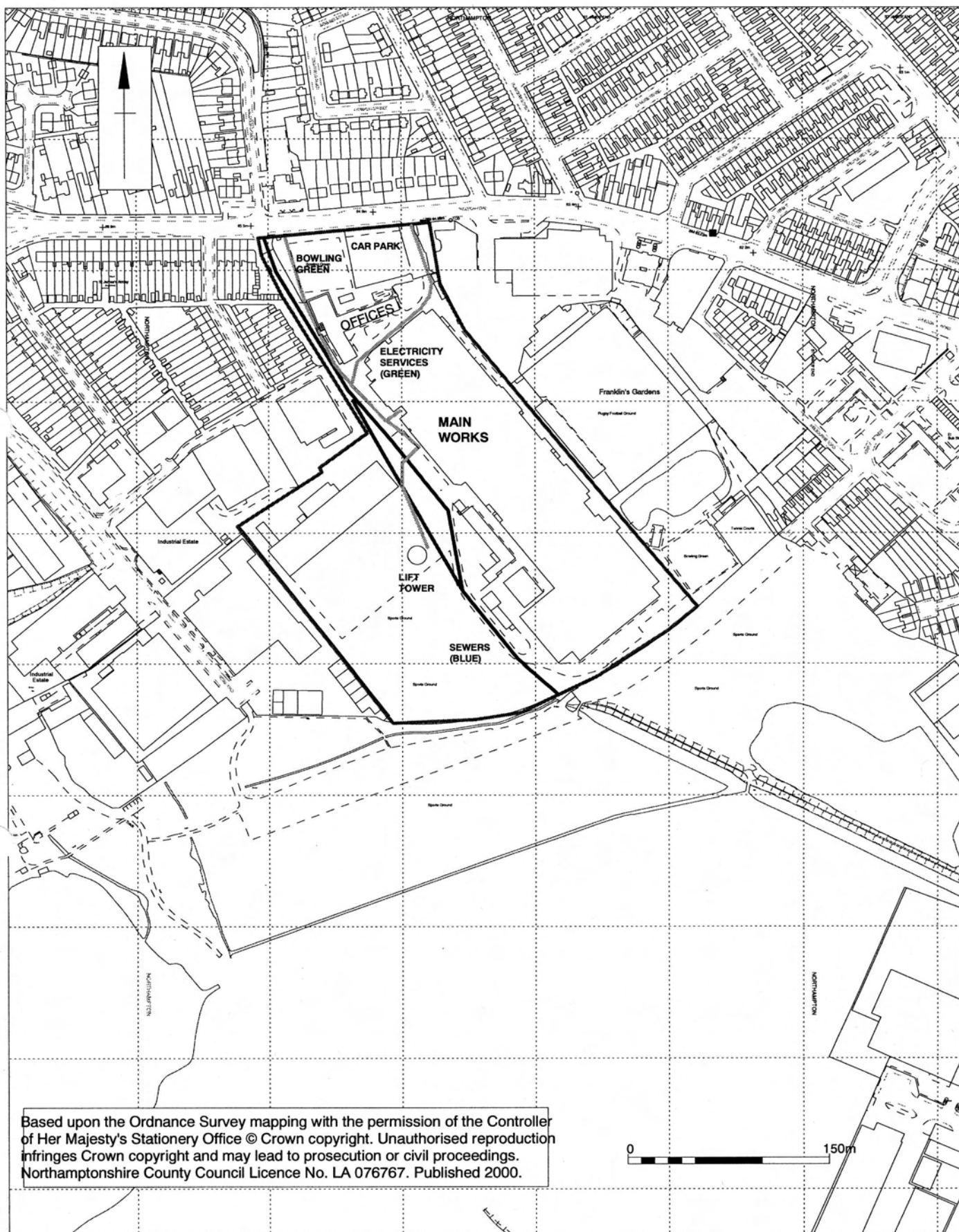


Fig 1: The Express Lift Co., Abbey Works

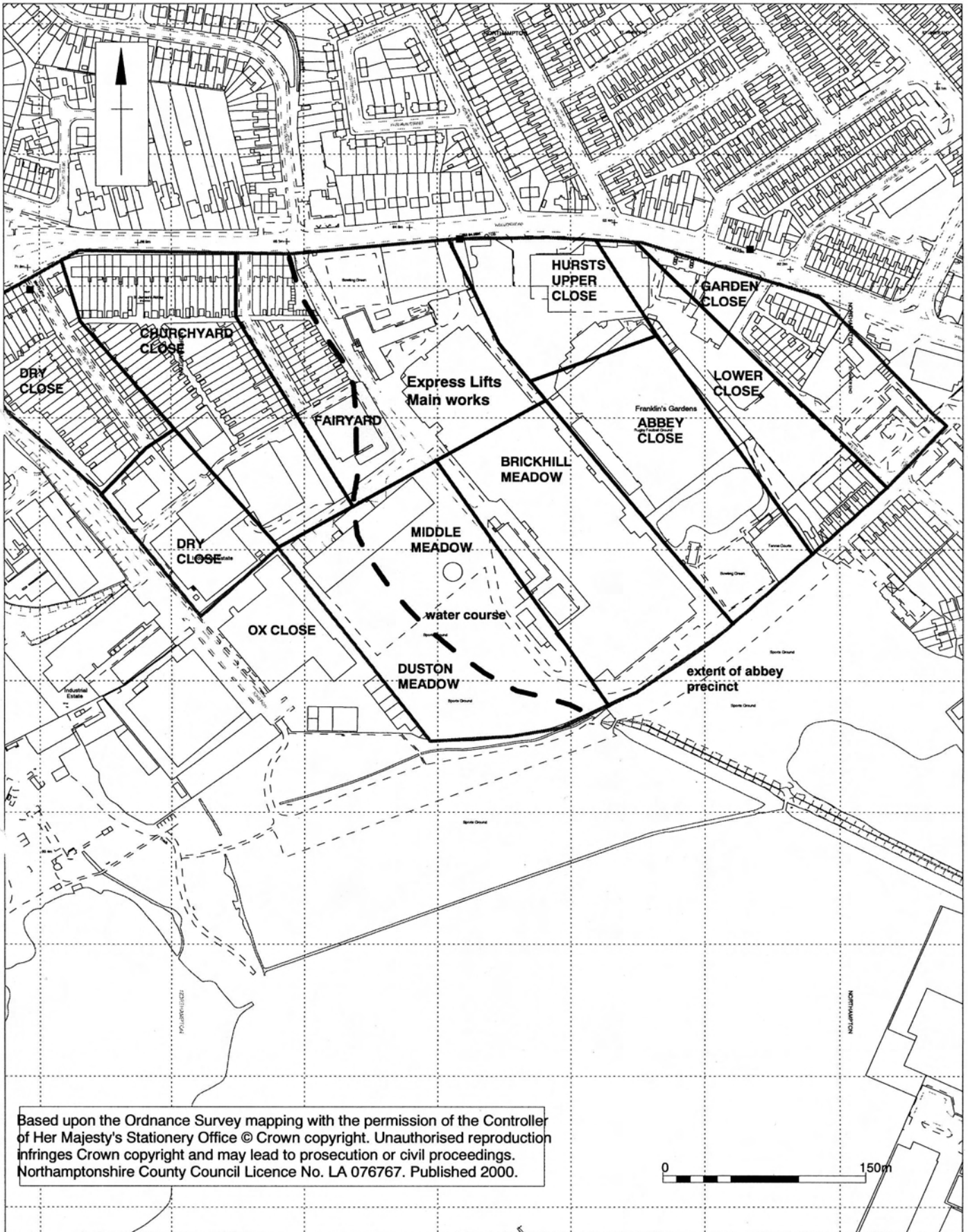


Fig 2: The abbey lands, based on historic map evidence

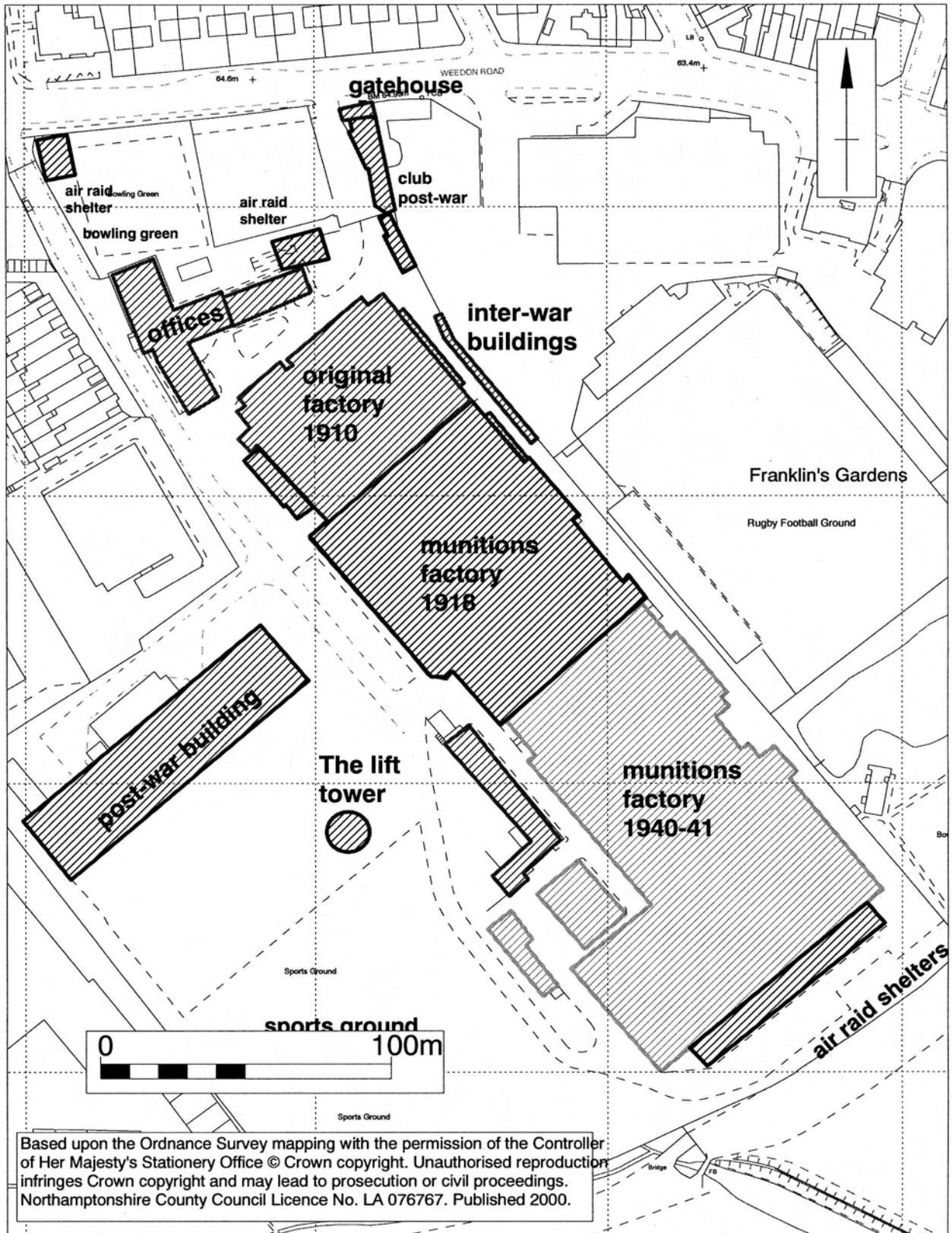


Fig 3: The development of the Abbey Works

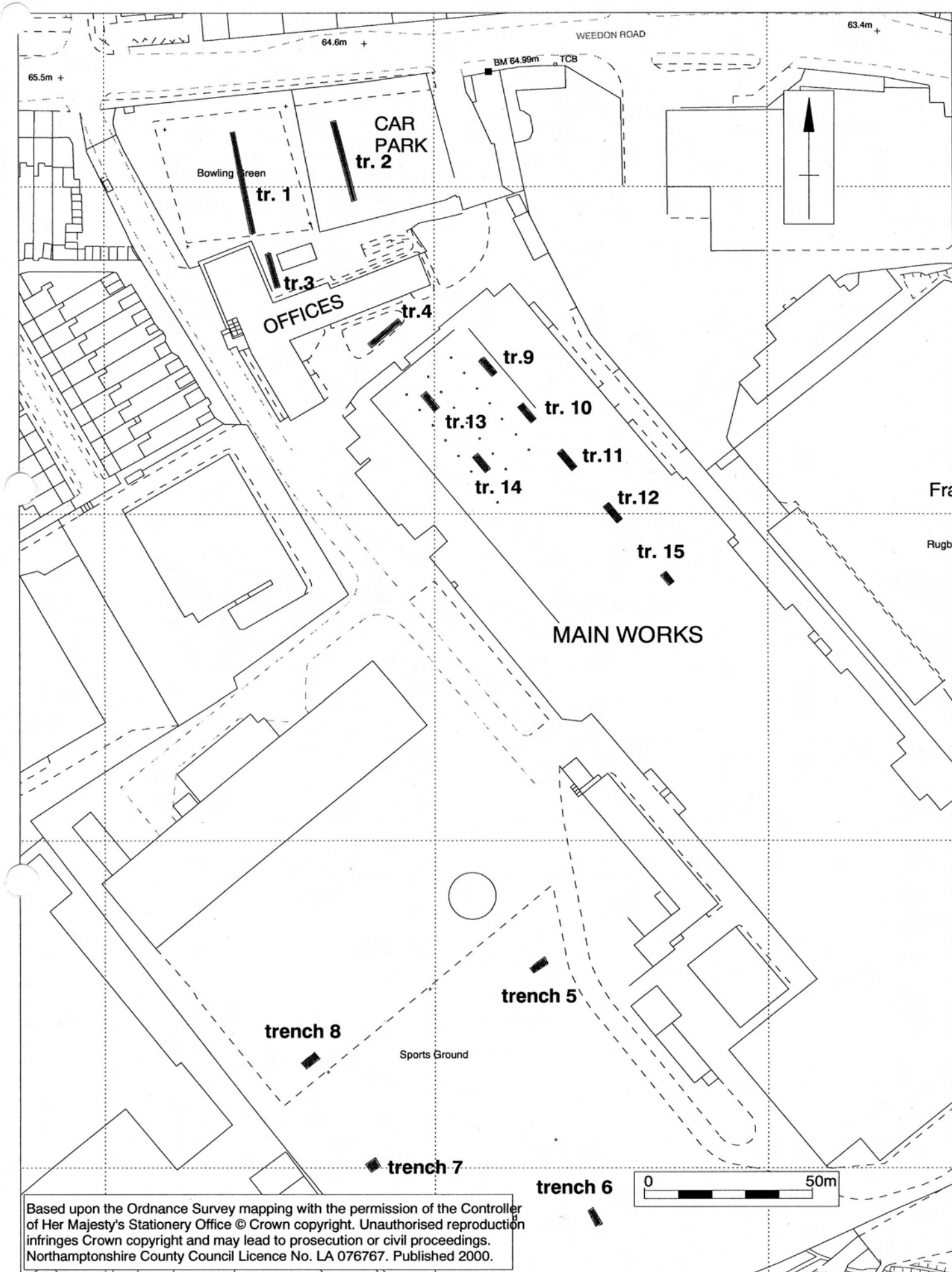


Fig 4: Location of evaluation trenches

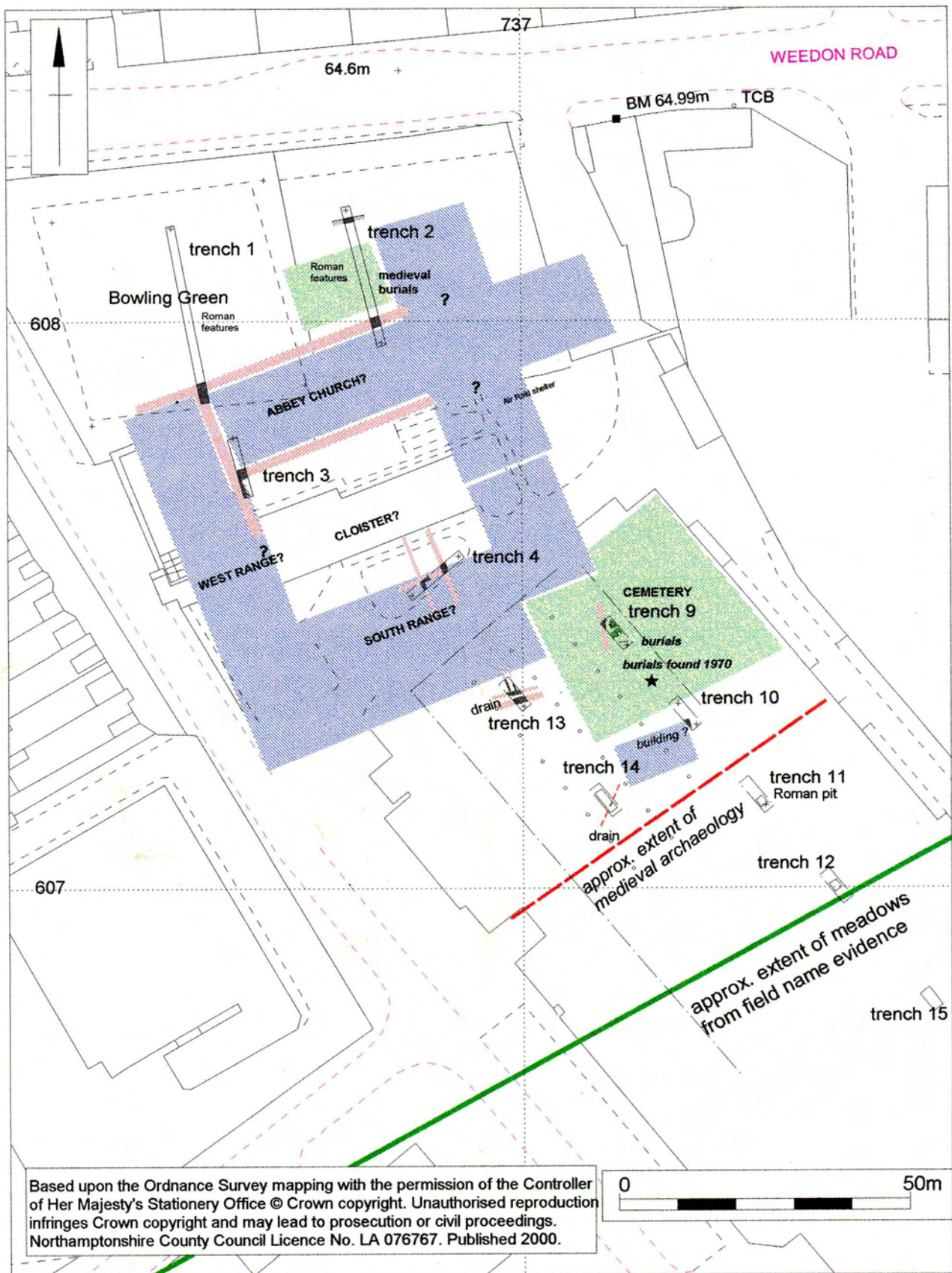


Fig. 5 Reconstruction of the Abbey plan

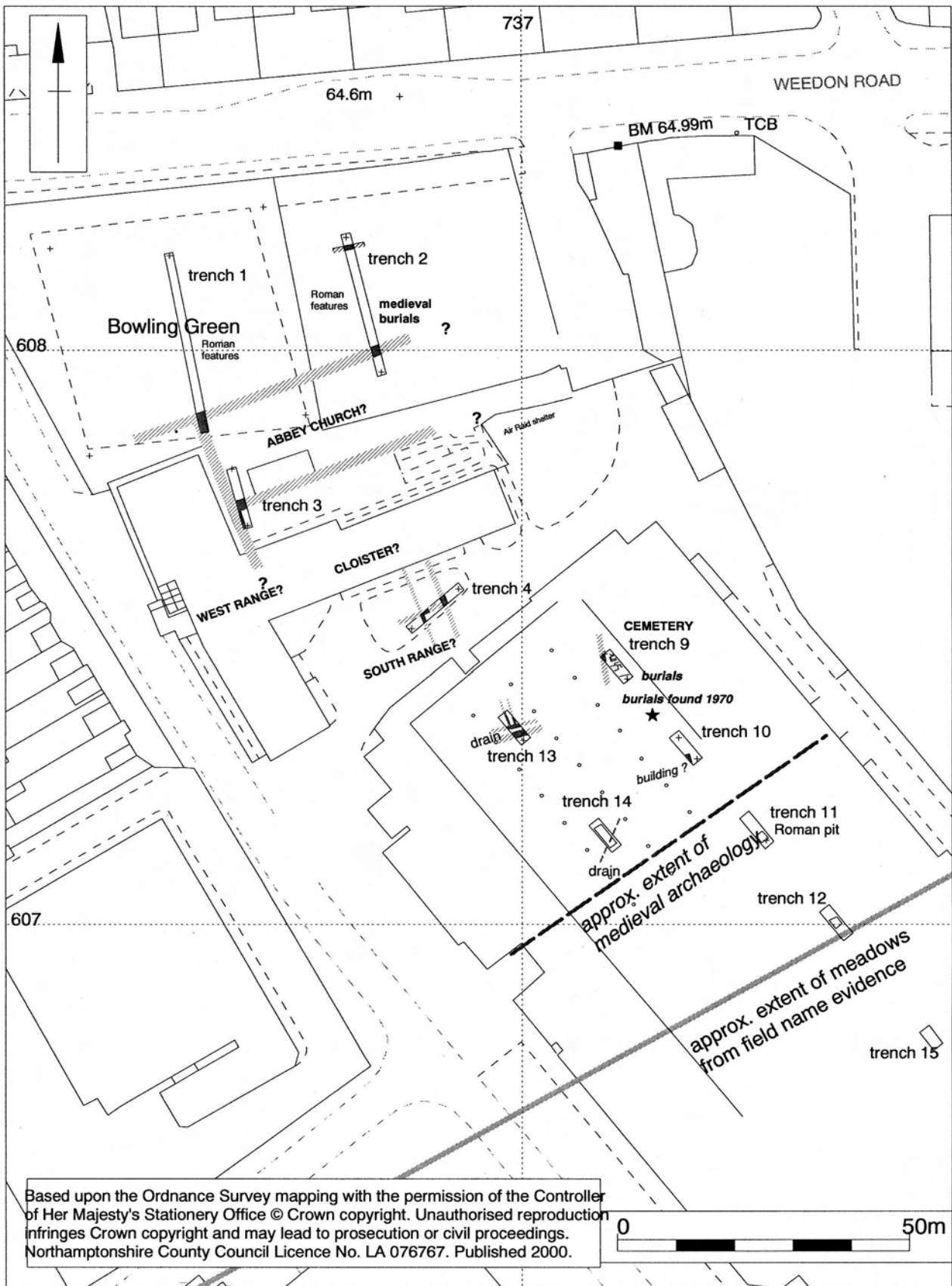
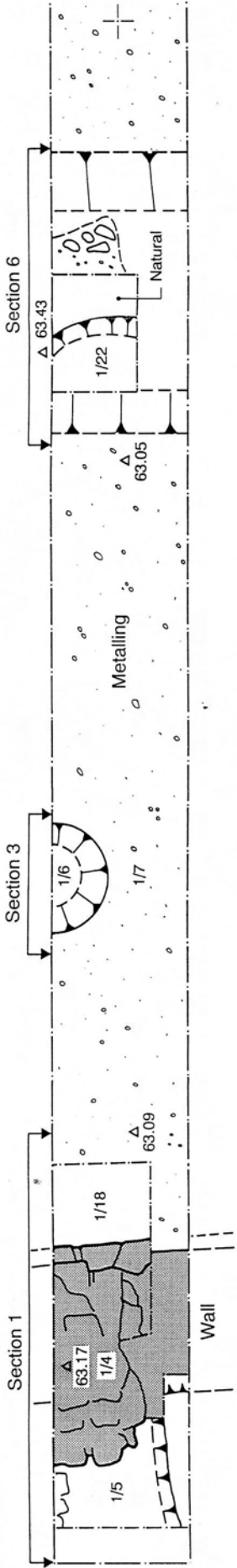


Fig 6: Evaluation trenches 1-4 and 9-15

TRENCH 1



TRENCH 2

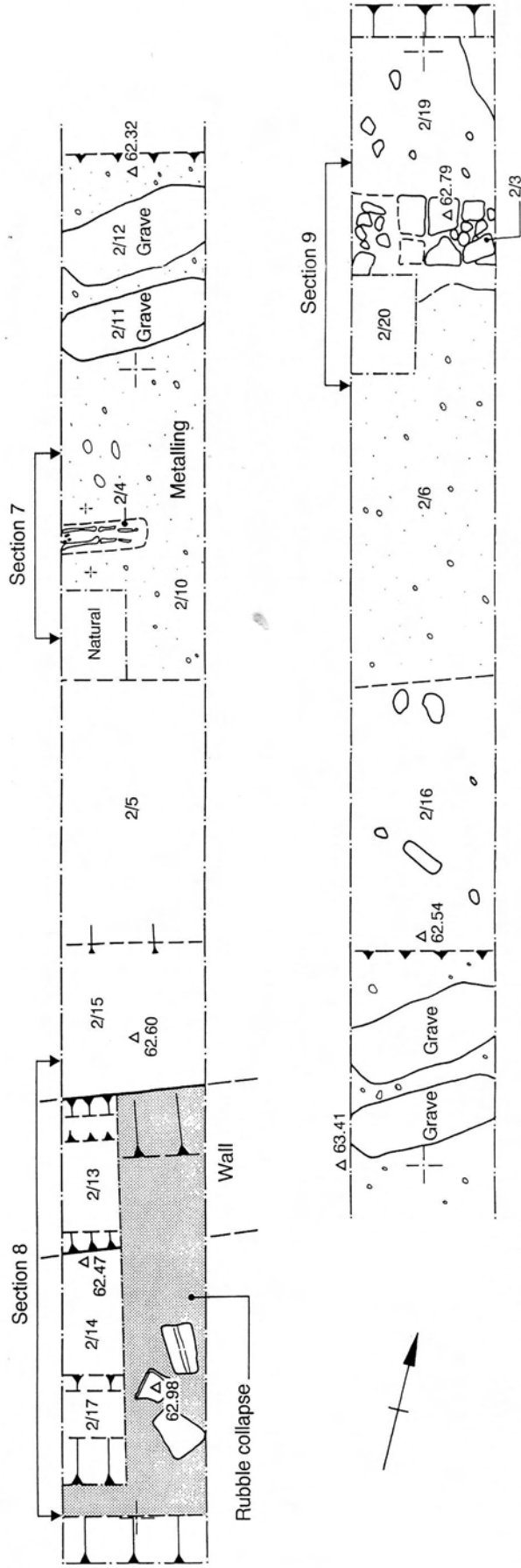
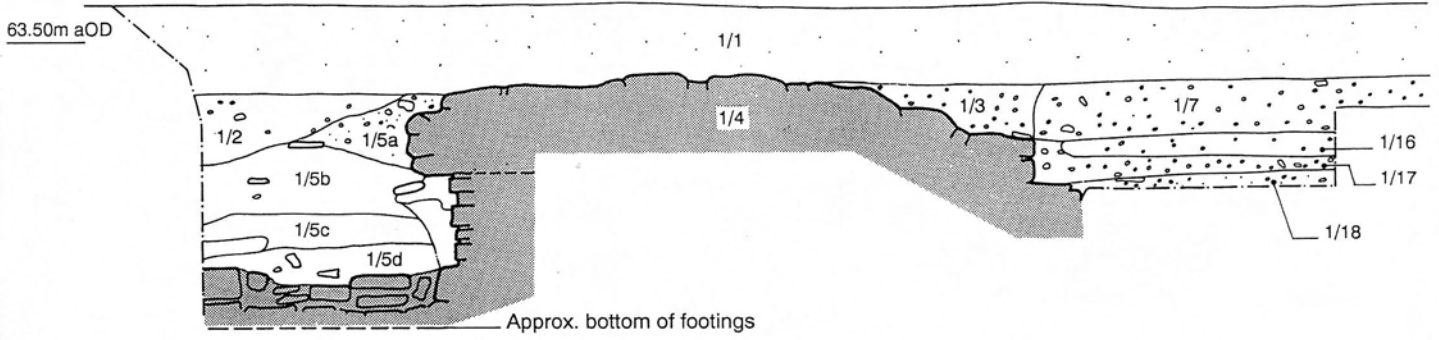
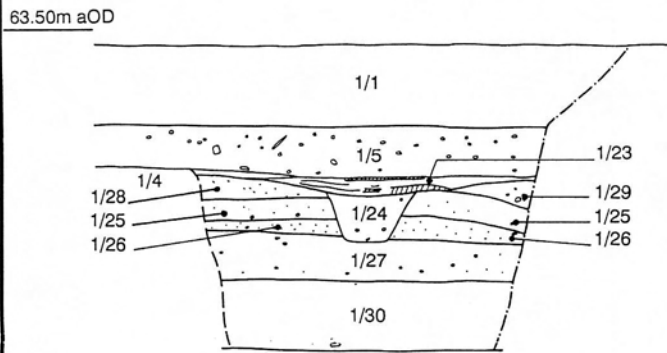


Fig. 7

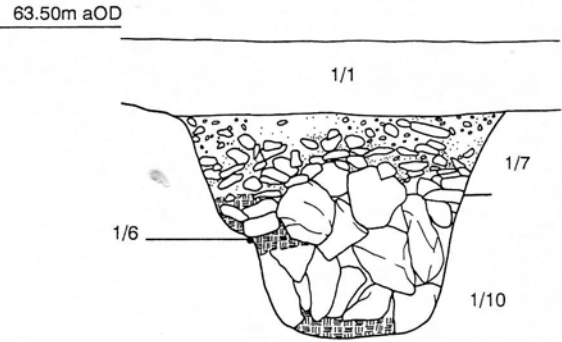
TRENCH 1 – Section 1



TRENCH 1 – Section 2



TRENCH 1 – Section 3



TRENCH 1 – Section 6

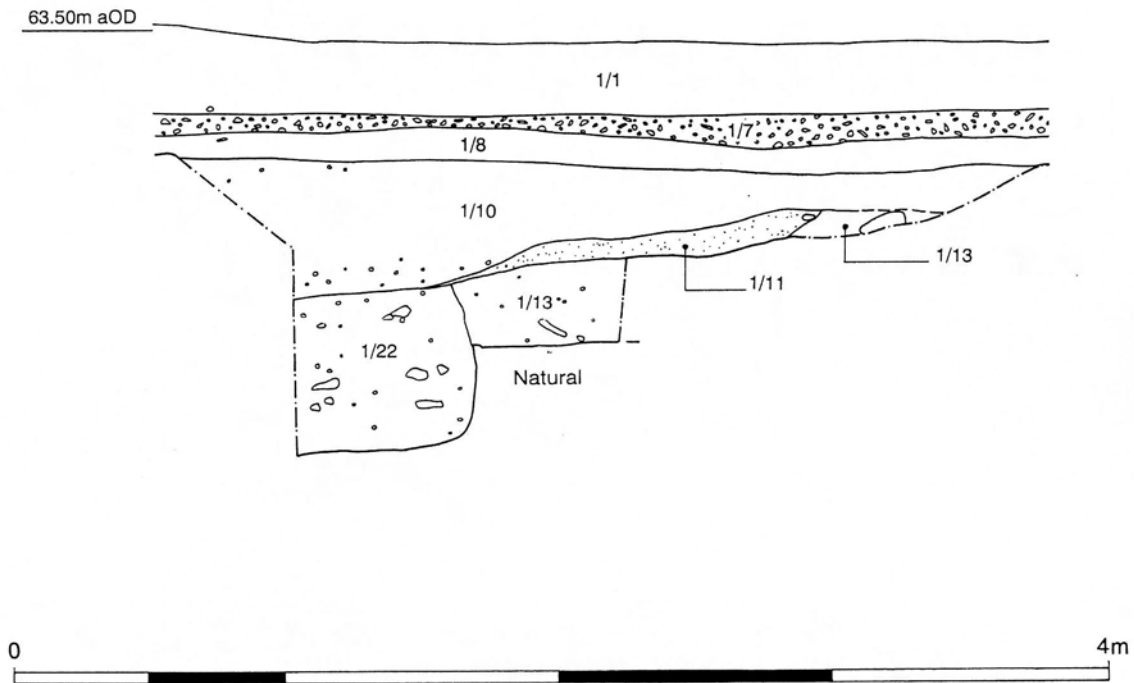
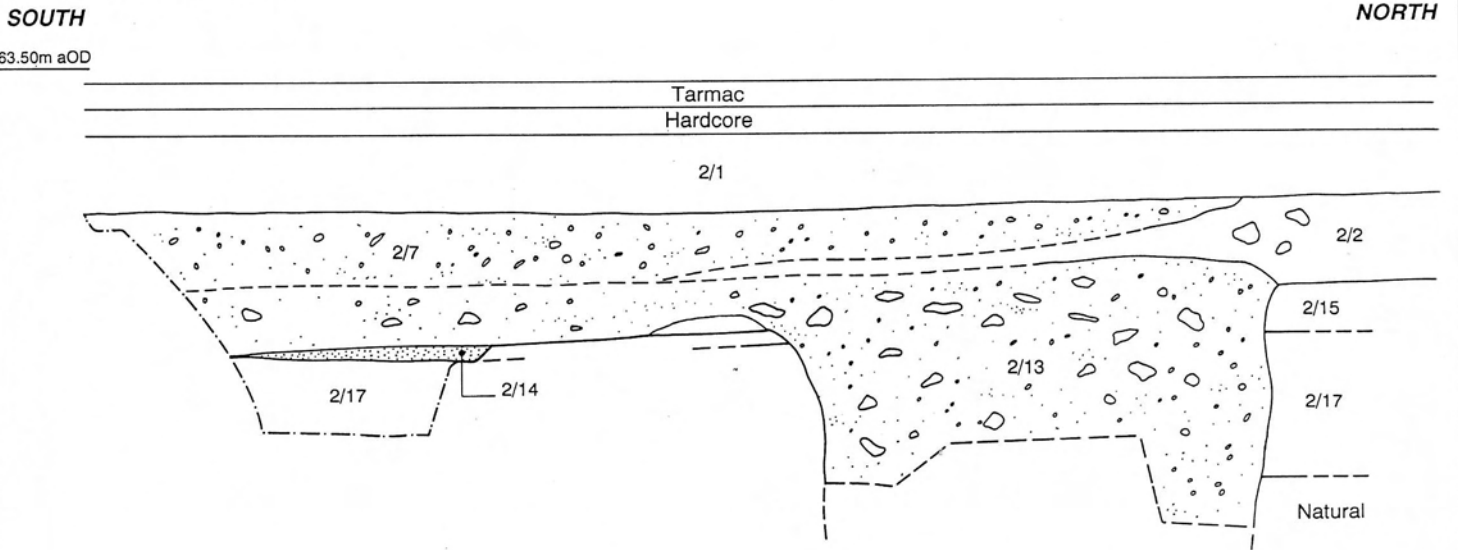
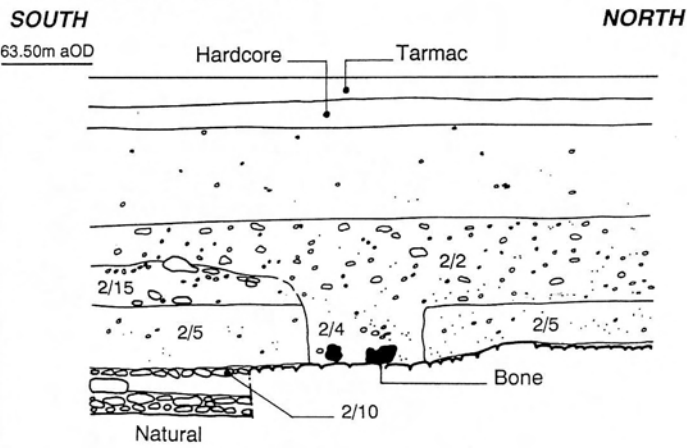


Fig.8

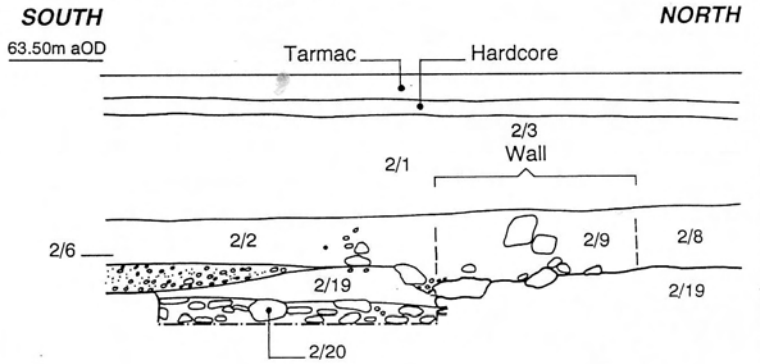
TRENCH 2 – Section 8



TRENCH 2 – Section 7



TRENCH 2 – Section 9



TRENCH 3 – Section 10

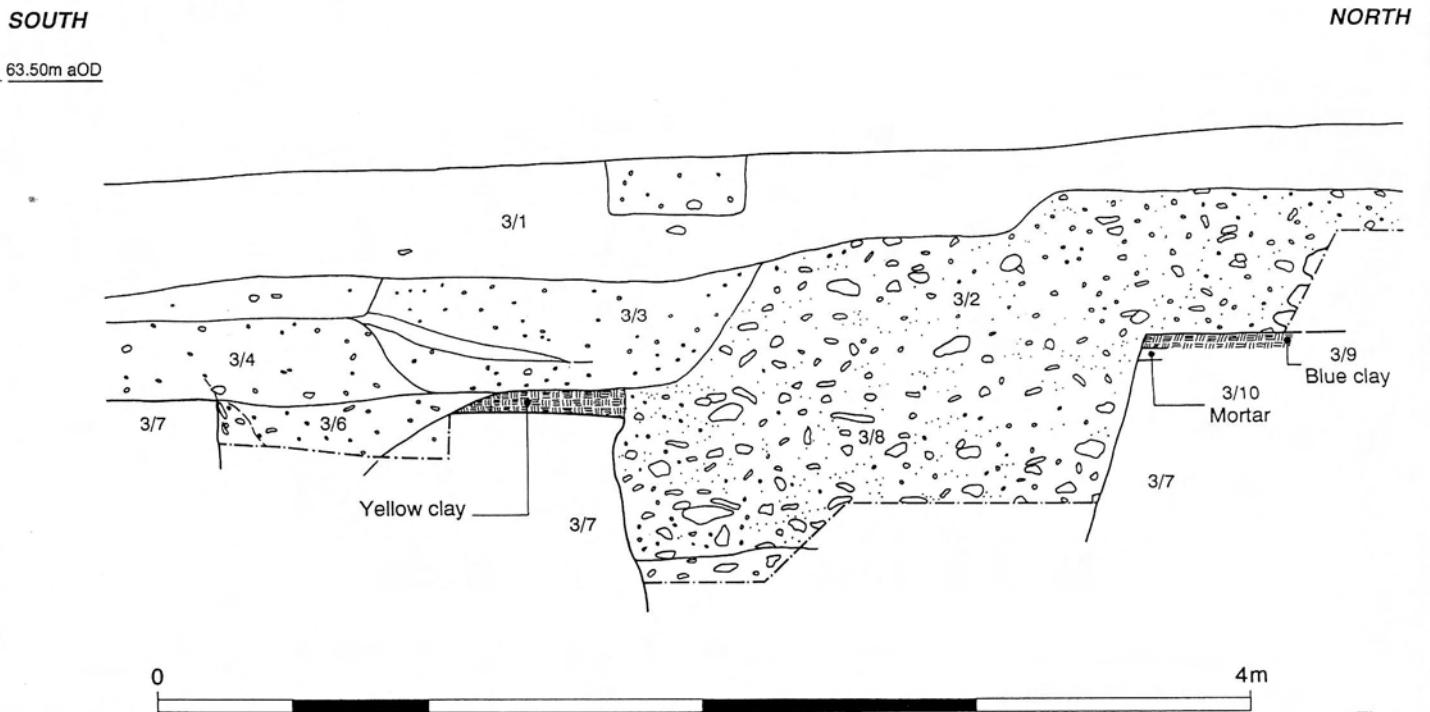
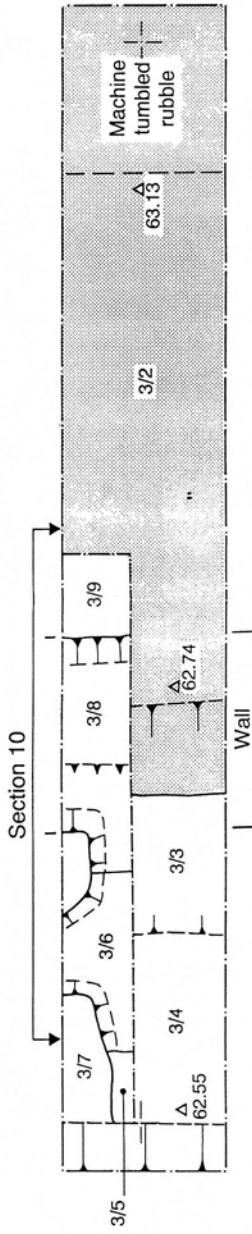
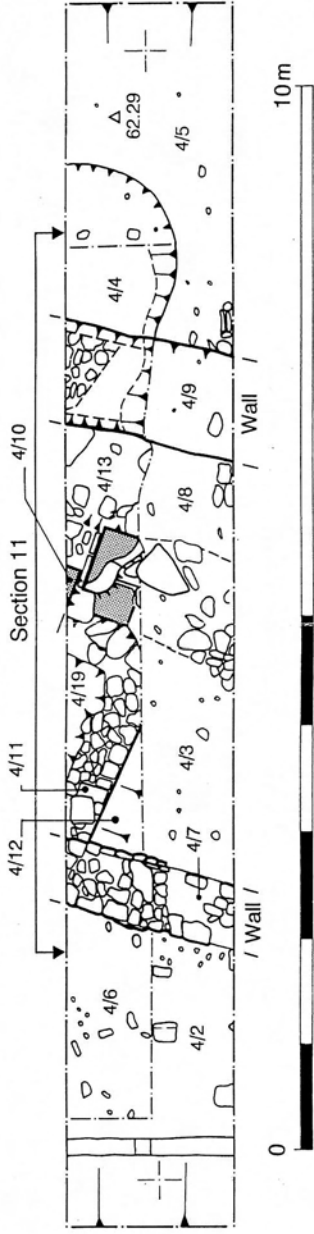


Fig.9

TRENCH 3



TRENCH 4



TRENCH 4 - Section 11

WEST

62.50m aOD

EAST

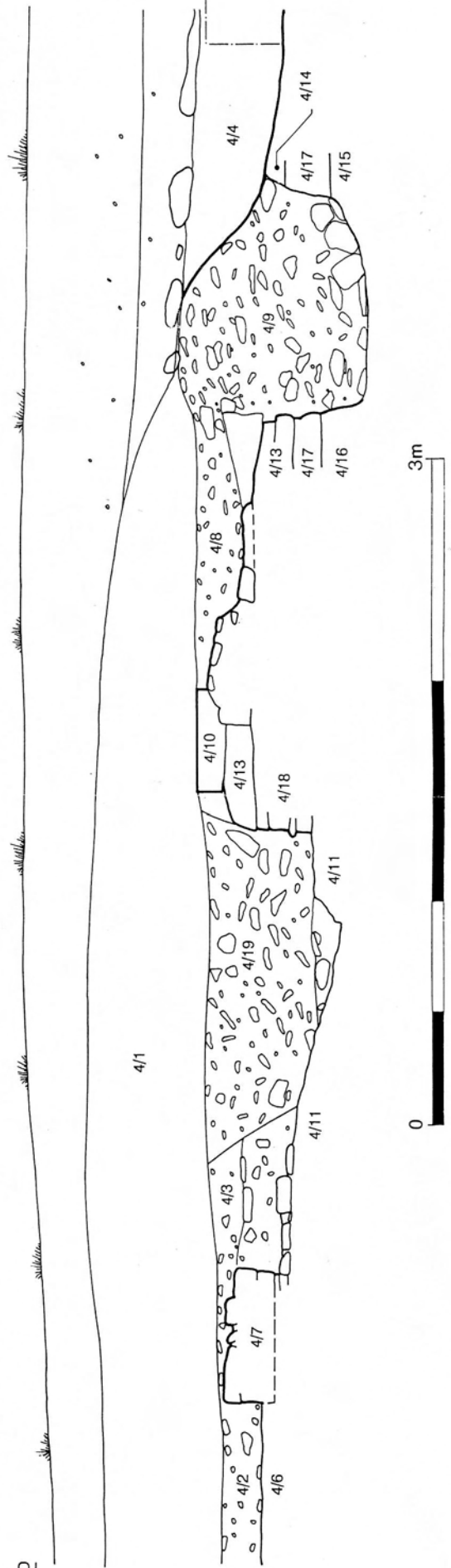
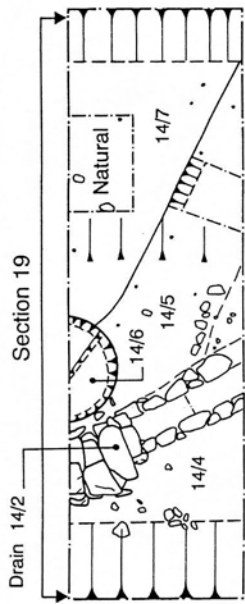
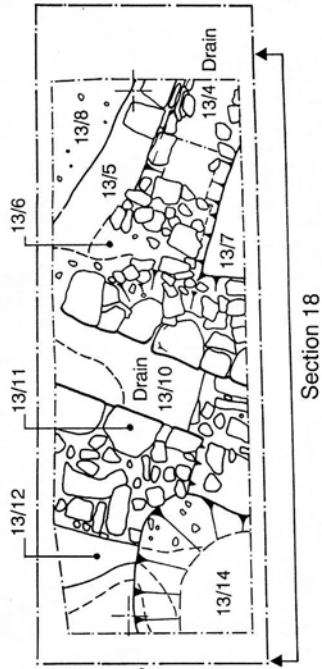


Fig.10

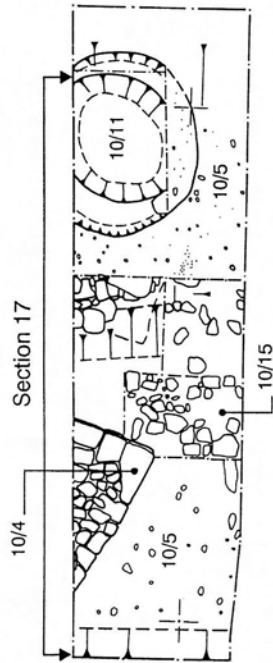
TRENCH 14



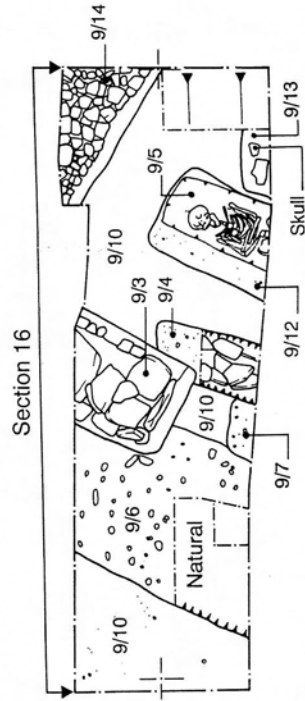
TRENCH 13



TRENCH 10



TRENCH 9



TRENCH 11

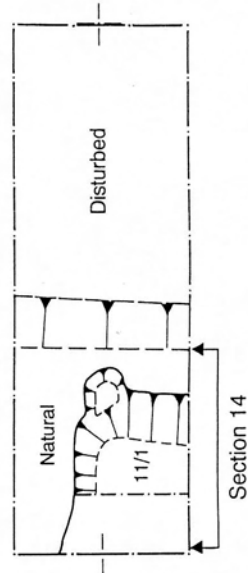
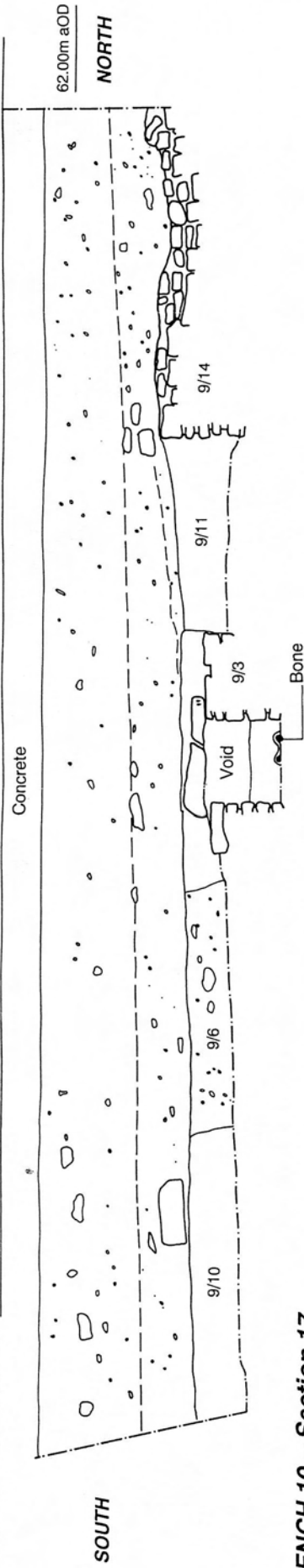
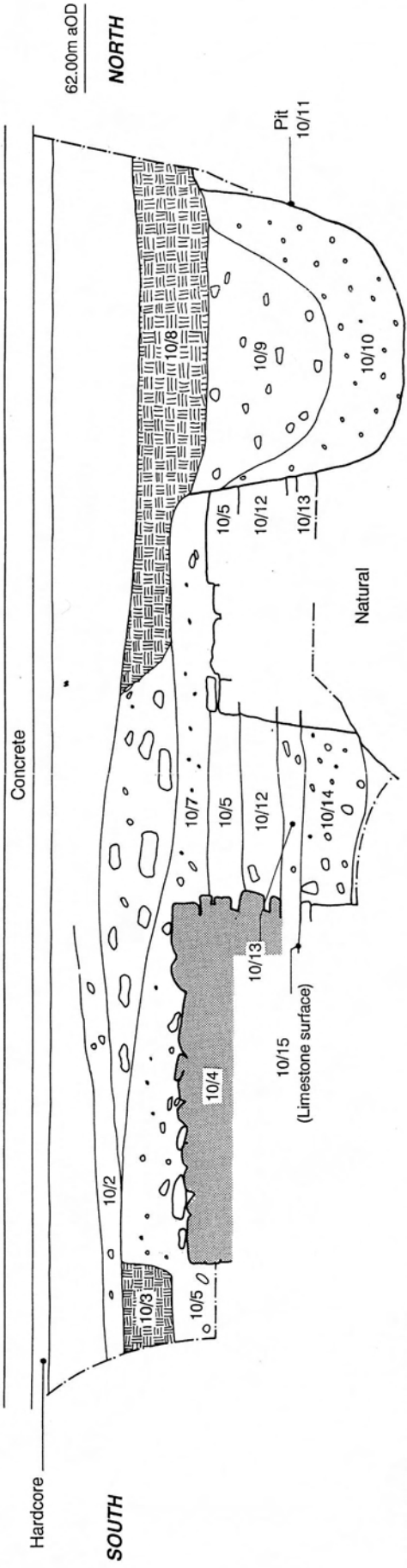


Fig. 11

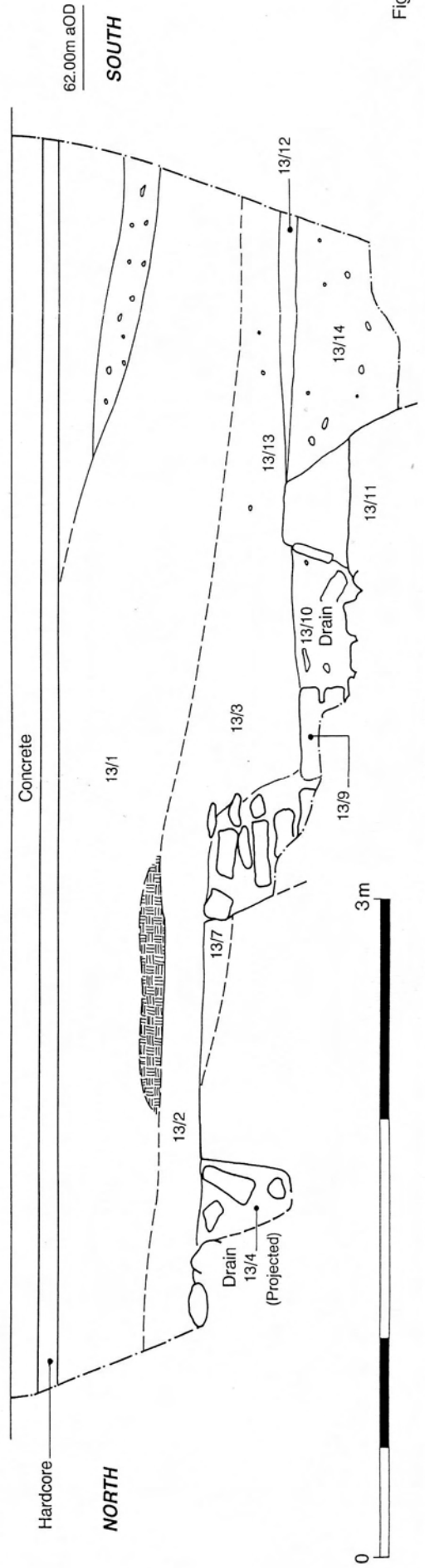
TRENCH 9 – Section 16



TRENCH 10 – Section 17



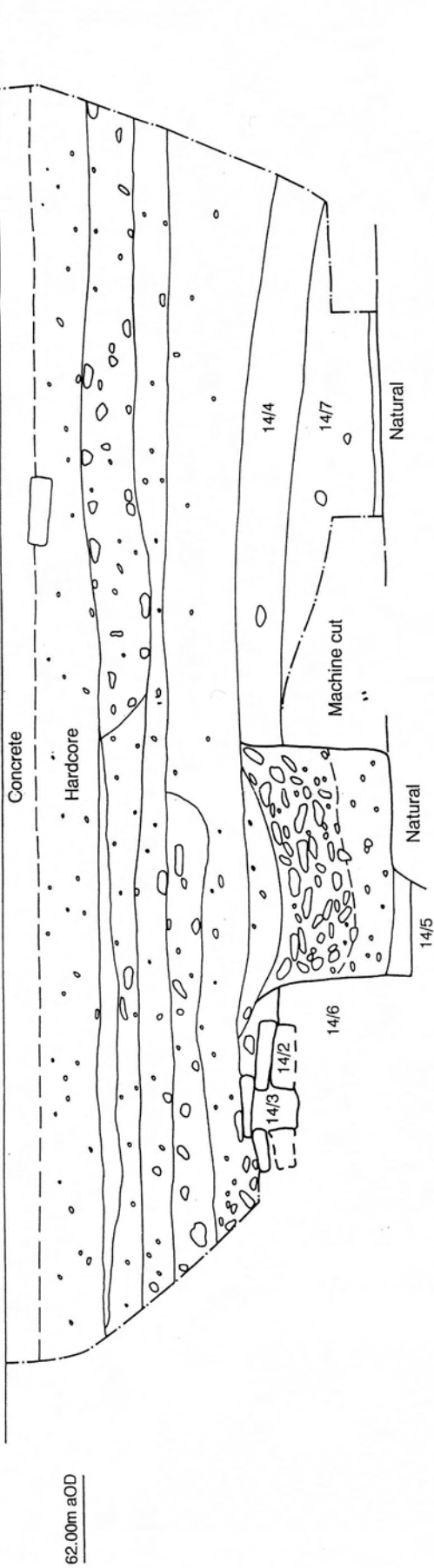
TRENCH 13 – Section 18



TRENCH 14 – Section 19

NORTH

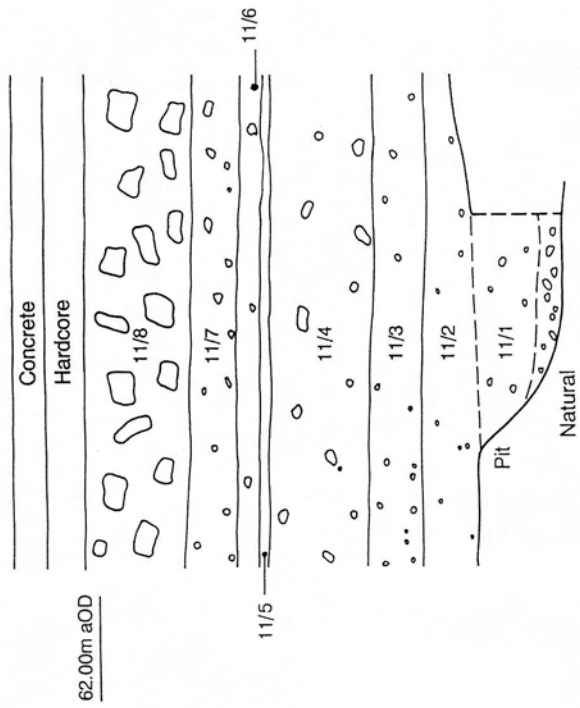
SOUTH



TRENCH 14 – Section 11

NORTH

SOUTH



TRENCH 12 – Section

NORTH

SOUTH



0

10m

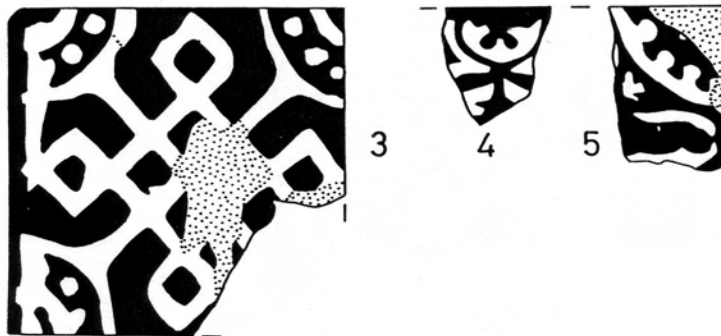
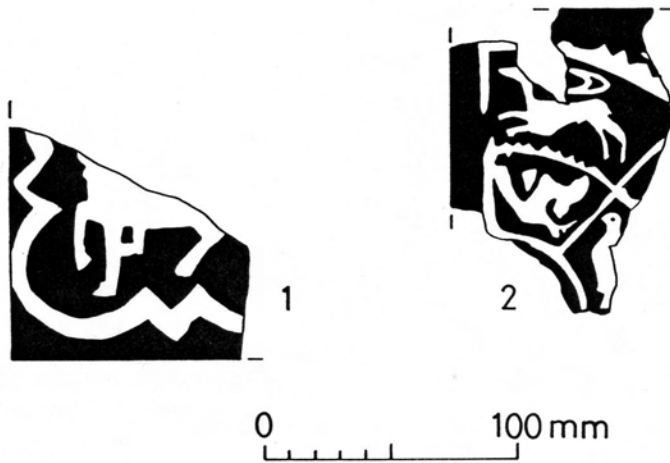


Fig 14: The decorated floor tiles

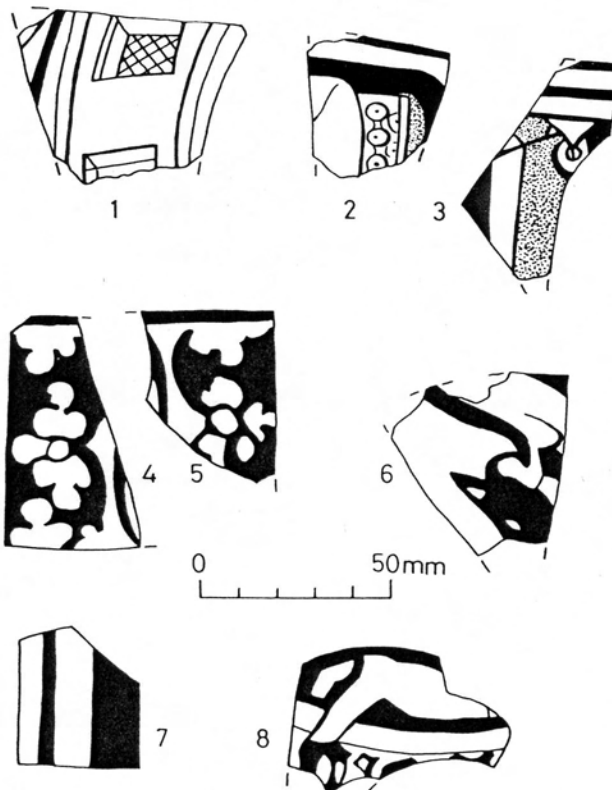


Fig 15: The painted window glass